

UNIVERSITY OF OKLAHOMA
GRADUATE COLLEGE

THE PROTECTIVE EFFECT OF SCHOOL-AGE EXTRACURRICULAR
PARTICIPATION ON DEVIANCE IN LATER LIFE

A DISSERTATION
SUBMITTED TO THE GRADUATE FACULTY
in partial fulfillment of the requirements for the
Degree of
DOCTOR OF PHILOSOPHY

By Jackie Switzer
Norman, Oklahoma

2026

THE PROTECTIVE EFFECT OF SCHOOL-AGE EXTRACURRICULAR
PARTICIPATION ON DEVIANCE IN LATER LIFE

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF SOCIOLOGY

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Data collection and dissemination for Wave VI of Add Health was funded by cooperative agreements U01 AG071448 (PI: Robert A. Hummer) and U01 AG071450 (MPIs: Robert A. Hummer and Allison E. Aiello) from the National Institute on Aging to the University of North Carolina at Chapel Hill, with cooperative funding from five other institutes and offices at the National Institutes of Health: the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute on Minority Health and Health Disparities, the National Institute on Drug Abuse, the Office of Disease Prevention, and the Office of Behavioral and Social Science Research. Waves I-V of Add Health were funded by grant P01 HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Add Health is currently directed by Robert A. Hummer at the University of North Carolina at Chapel Hill. Add Health was designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill.

Acknowledgements

First and foremost, I give thanks to Jesus Christ, whose grace and provision sustained me throughout this journey. In moments of uncertainty, challenge, and doubt, my faith provided a foundation that made this work possible, even when I was not entirely sure how it would all come together.

I am deeply grateful to the family and friends who stood beside me throughout my graduate career, especially during the most difficult periods. Dee Ann and Frank, Ed, Bryan, Adam, Joe, and Carolyn, thank you for the conversations, the encouragement, and the willingness to step in when things became overwhelming. You helped carry me through moments when finishing this dissertation felt far less certain than it does now.

I also wish to extend my sincere appreciation to Adam, Trina, Eric, and Athraa, who stepped in during times of financial strain. Your generosity and willingness to help provided stability when it was most needed, and I am deeply thankful. It is no exaggeration to say that your support helped make the completion of this degree possible.

I am especially thankful to my committee. Dr. Burns, your guidance, patience, and steady leadership were instrumental in bringing this dissertation to completion. Your ability to ask the exact right questions was both challenging and necessary. I am also grateful to Dr. Peck, Dr. Carl, and Dr. Burge for their time, feedback, and thoughtful engagement with my work. Each of you contributed meaningfully to this process, and I appreciate your investment in my development as a scholar.

Finally, I thank my wife, Brynne. Your constant support, encouragement, and belief in me sustained this entire process. You carried more than your share so that I could finish this work, and you did so with patience and strength that I do not take for granted. You have lived this dissertation just as much as I have, and I am endlessly grateful for your love and support.

Abstract

Participation in school-age extracurricular activities may function as a protective factor against deviance and related outcomes across the life course, but prior findings remain mixed, with both protective and risk-enhancing effects by activity type and context. Theorists often treat social bonds and self-regulation as separate explanations. Integrating social control theory with a multidimensional, developmentally contingent conceptualization of self-regulation provides a longitudinal framework for examining these relationships.

Data from the National Longitudinal Study of Adolescent to Adult Health (Add Health) are used to analyze extracurricular participation across developmental stages. Self-regulation functions as both a selection control and a substantive construct, with its organization shifting across developmental stages. In adolescence, self-regulation operates as a second-order construct and follows a directional cascade linking emotional, behavioral, social, and cognitive domains. In emerging adulthood, these domains become more independent, while in young adulthood, self-regulation reorganizes into a higher-order construct emphasizing cognitive and future-oriented processes.

Extracurricular participation demonstrates consistent associations with positive outcomes, particularly during adolescence and in domains related to educational attainment and reduced deviance. Nevertheless, these effects are neither uniform nor universal. Non-sport activities are more reliably linked to positive outcomes, whereas sport participation is associated with both beneficial and adverse effects. Religious participation generally exhibits protective associations. These associations persist, though often in diminished, more selective forms, even after accounting for self-regulation.

Across developmental stages, changes in social bonds correspond with shifts in the organization of self-regulation, forming a developmental cascade that links early experiences to later outcomes. This suggests that the relationship between extracurricular participation and deviance is best conceptualized as a dynamic developmental process shaped by the interaction of social bonds and self-regulation throughout the life course.

Table of Contents

Acknowledgements	v
Abstract	vi
List of Tables	xi
List of Figures	xiii
Chapter 1: Introduction	1
Background.....	1
Problem Statement	2
Purpose of the Study	3
Research Questions and Hypotheses	4
Chapter 2: Literature Review	6
Theoretical Foundations	6
Social Control	6
Self-Regulation and Executive Function	8
Locus of Control and the Role of Perceived Agency	10
Empirical Literature	11
Substance Use and Risk Behavior	11
Academic Achievement and School Engagement	12
Long-Term Outcomes in Adulthood	13
Antisocial Behavior and Delinquency	13
Religious Involvement as a Protective Factor	14
Gaps in the Literature	15
Chapter 3: Wave I	16
Methods	16
Data Source: The National Longitudinal Study of Adolescent to Adult Health	16
Sample Description and Inclusion Criteria	17
Measures and Variable Construction.....	19
Analytic Strategy	26
Structural Equation Model for Wave I.....	33

Treatment of Missing Data	36
Conceptualization of Self-Regulation as a Second-Order Latent Factor	36
Results	37
Educational Outcomes	37
Attachment to School	40
Attachment to Parents and Family	42
Tobacco, Alcohol, and Drug Use Models	45
Delinquency	48
From Direct Associations to Theoretical Processes within Self-Regulation	52
Chapter 4: Wave I Developmental Cascade of Self-Regulation	54
Methods	54
Defining a Developmental Cascade Model of Self-Regulation	55
Internal Pathways of Self-Regulation	57
Developmental Cascade Outcome Model	59
Results	61
Educational Outcomes - Developmental Cascade Models	61
Attachment to School - Developmental Cascade Models	64
Attachment to Parents and Family - Developmental Cascade Models	67
Tobacco, Alcohol, and Drug Use - Developmental Cascade Models	70
Delinquency - Developmental Cascade Models	73
Reconciling Alternative Models of Self-Regulation	76
From Adolescence to Emerging Adulthood	77
Chapter 5: Wave III	79
Methods	81
Measurement Model Development	83
Indicator Pool and Recoding	84
Exploratory Factor Analysis	84
Factor Retention and Item Refinement	84
Confirmatory Factor Analysis	85
Wave III Structural Model	88

Results	91
General Outcomes	93
Criminal Justice Interactions	96
Tobacco, Alcohol, Drugs, and Suicide Risk	99
Civic Engagement and Institutional Trust	103
Developmental Patterns in Emerging Adulthood	107
General Outcomes and the Persistence of Structured Activity Benefits	108
Criminal Justice Interactions and the Centrality of Behavioral Regulation	109
Substance Use, Alcohol-Related Risk, and Divergent Participation Profiles	109
Civic Engagement and Institutional Trust as Downstream Indicators of Integration	110
Core Findings from Wave III Models	111
From Emerging Adulthood to Young Adulthood	112
Chapter 6: Wave IV	114
Methods	116
Measurement Model Development	118
Exploratory Factor Analysis	118
Confirmatory Factor Analysis	119
Wave IV Structural Model	122
Results	127
General Outcomes	127
Interaction with the Criminal Justice System	130
Tobacco, Alcohol, and Drug Use	132
Civic and Religious Participation	138
Developmental Patterns in Young Adult Outcomes	141
Chapter 7: A Developmental Cascade of Self-Regulation	145
Summary of Empirical Findings Across Waves	146
Wave I (Adolescence): Structured Regulation	147
Wave III (Emerging Adulthood): Differentiation and Instability	148
Wave IV (Young Adulthood): Reintegration Under Structure	149

Reconciling Measurement Models Across Developmental Periods	150
Social Control and Self-Regulation as Joint Processes	152
Revisiting Social Control Theory	152
Self-Regulation as Selection and Mechanism	153
The Interaction Between Social Bonds and Self-Regulation	154
A Developmental Cascade of Social Bonds and Self-Regulation	155
Stage 1: Structure	156
Stage 2: Transition	157
Stage 3: Consolidation	158
Synthesis: An Adaptive Developmental Cascade	159
The Role of Extracurricular Participation in the Cascade Process	160
Theoretical Implications	162
Implications for Social Control Theory	163
Implications for Self-Regulation	163
Implications for Developmental Theory	164
Implications for Policy and Practice	165
Limitations	167
Potential Directions for Future Research	169
Conclusion	172
Appendices	174

List of Tables

1	Descriptive Statistics for Wave I Sample ($n = 3,949$)	18
2	Wave I Outcomes	20
3	Extracurricular Groups and Sports	22
4	Wave I Self-Regulation Items	23
5	Standardized Factor Loadings for Wave I Self-Regulation.....	32
6	Exogenous and Latent Variables Used in Wave I SEM.....	35
7	Wave I Educational Outcomes Models	38
8	Wave I Attachment to School Models	41
9	Wave I Attachment to Parents Models	43
10	Wave I Tobacco, Alcohol, and Drug Use	46
11	Wave I Delinquency Models	49
12	Developmental Cascade Model of Self-Regulation	58
13	Wave I Educational Outcomes - Developmental Cascade Models	62
14	Wave I Attachment to School - Developmental Cascade Models.....	65
15	Wave I Attachment to Parents and Family - Developmental Cascade Models	68
16	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade Models ..	71
17	Wave I Delinquency - Developmental Cascade Models	74
18	Descriptive Statistics for Wave III Sample ($n = 2,924$)	82
19	Wave III Selected Indicators for Emerging Adult Self-Regulation	87
20	Exogenous Variables Used in Wave III SEM	90
21	Wave III Outcome Measures and Item Wording	91
22	Wave III General Outcomes Models	94
23	Wave III Criminal Justice Interactions Models	97
24	Wave III Tobacco and Alcohol Models	100
25	Wave III Substance Use and Suicide Risk Models	102
26	Wave III Civic Engagement Behavior Models	104
27	Wave III Civic Participation and Institutional Trust Models.....	106

28	Descriptive Statistics for Wave IV Sample ($n = 3,186$)	117
29	Wave IV Selected Indicators for Young Adult Self-Regulation.....	121
30	Exogenous Variables Used in Wave IV SEM	124
31	Wave IV Outcome Measures and Item Wording	125
32	Wave IV General Outcomes Models.....	128
33	Wave IV Criminal Justice Interaction Models	131
34	Wave IV Tobacco, Alcohol, and Drug Use Models	133
35	Wave IV Alcohol Related Consequences Models	136
36	Wave IV Civic and Religious Participation Models	139

List of Figures

1	Second-Order Confirmatory Factor Model (Wolfe and Hoffmann (2016)) . . .	27
2	Second-Order Confirmatory Factor Model for Self-Regulation	31
3	Wave I Structural Model	34
4	Developmental Cascade Model of Self-Regulation	56
5	Wave I Developmental Cascade Structural Model	60
6	Wave III Confirmatory Factor Model for Self-Regulation	86
7	Wave III Structural Model	89
8	Wave IV Confirmatory Factor Model for Self-Regulation	120
9	Wave IV Structural Model	123

Chapter 1: Introduction

Background

Across decades of youth development and criminological research, there has been a widely held belief that participation in structured extracurricular activities promotes the development of pro-social behaviors and fosters civic engagement. Yet, despite the popularity of this belief, the empirical evidence surrounding such claims remains mixed. Some researchers have found that participation in supervised activities correlates with more favorable social outcomes compared to unstructured or unsupervised environments (Feldman and Matjasko 2005; Fredricks and Eccles 2008; Mahoney and Stattin 2000), particularly for youth at higher risk for problem behaviors (Fredricks and Eccles 2006; Mahoney and Cairns 1997; Mahoney 2000).

Other scholars challenge these optimistic conclusions. For instance, Spreitzer (1994) found no long-term relationship between sports participation and outcomes such as alcohol use or self-esteem. Similarly, studies such as those by Cernkovich and Giordano (1992), Hoffmann (2006), and Hoffmann and Xu (2002) indicate that the developmental impact of extracurricular participation is not uniform; rather, it varies depending on key factors such as type of activity, frequency of participation, and the social or institutional context in which the activity occurs. As such, the question remains: under what conditions, and for whom, does participation in extracurricular activities serve as a protective factor against deviant behavior?

In this study, I respond to that question using longitudinal data to assess the lasting impact of extracurricular participation in adolescence and across multiple points in adulthood. In doing so, I aim to clarify whether structured participation contributes to reducing deviance and promoting pro-social habits not only during periods of adolescent involvement but also into adulthood.

Problem Statement

Researchers across disciplines have examined how adolescents' use of time, mainly through the lens of structured and unstructured activities, influences developmental and behavioral outcomes. Psychology scholars, in particular, have emphasized that youth who engage in highly structured extracurricular activities are less likely to participate in deviant or delinquent behavior (Caldwell and Darling 1999; Mahoney and Stattin 2000). These studies often explain extracurricular participation as a protective factor because it can replace unstructured free time with structured activity, encourage positive social connections, and support emotional and behavioral development.

Criminological explanations such as Routine Activities Theory and theories of situational motivation (Cohen and Felson 1979; Osgood et al. 1996) provide additional support for these findings. These frameworks argue that when youth are involved in structured activities and environments, particularly with adult supervision and limited access to deviant peers, opportunities to engage in deviance are reduced. Such theories, however, tend to focus on short-term behavioral patterns and are not well suited to explaining how structured participation might produce enduring effects that persist into adulthood.

In contrast, theories such as Hirschi's (1995; 2002) Social Bonds emphasize internalized attachments and associated growth in the acceptance of conventional norms, which may help explain long-term patterns. These frameworks propose that behavioral development and the propensity to avoid deviance are supported through strengthened bonds to social institutions, consistent exposure to pro-social norms, and the cultivation of self-regulatory capacities.

This study examines whether the protective benefits of extracurricular participation in adolescence extend across multiple stages of life. I seek to clarify whether participation functions not only as a short-term behavioral control but as a meaningful developmental experience, one that contributes to long-term trajectories of social adjustment and resistance to deviance. By examining these relationships across several waves of longitudinal data, my

aim is to provide evidence that structured participation may have enduring effects beyond adolescence, shaping outcomes well into adulthood.

Purpose of the Study

The purpose of this study is to assess the long-term effects of adolescent extracurricular participation on deviance in later life. Using data from multiple waves of the National Longitudinal Study of Adolescent to Adult Health (Add Health), this research examines whether structured participation during adolescence contributes to sustained social adjustment and lower rates of self-reported deviance in adulthood.

My research is grounded in a theoretical framework drawn from Hirschi's (1995) Social Bonds Theory, which emphasizes the role of attachment to conventional institutions, commitment to normative goals, and involvement in structured activities as sources of informal social control during adolescence. Within this framework, participation in organized activities is expected to strengthen bonds to family, school, and other pro-social institutions, thereby constraining opportunities for deviant behavior and encouraging the internalization of conventional norms. By focusing exclusively on social control processes and accounting for individual differences in self-regulation as a selection factor, this approach provides a coherent explanation for both contemporaneous behavioral outcomes and longer-term patterns.

In addition to advancing theoretical understanding, this study also holds potential value for policy development. Findings may inform decisions about the funding and design of extracurricular programs in schools and communities. If participation in extracurricular activities is shown to produce long-term benefits, it may strengthen arguments for preserving or expanding access to opportunities that support positive youth development. A stronger evidence base demonstrating the protective effects of extracurricular involvement may also support continued or increased policy investment, particularly in light of growing concerns about adolescent delinquency and strain on educational and correctional systems.

Research Questions and Hypotheses

This study utilizes data from waves I, III, and IV of the publicly available National Longitudinal Study of Adolescent to Adult Health (Add Health) to examine the long-term relationship between adolescent extracurricular participation and deviant behavior in adulthood. The following research questions guide this investigation.

1. To what extent do respondents in wave I of Add Health reflect the patterns and outcomes identified in prior research on extracurricular participation and adolescent deviance?
2. What is the relationship between adolescent participation in various categories of structured extracurricular activity and self-reported deviance in adolescence?
3. Do the effects of school-age extracurricular participation on behavior persist into adulthood, as observed in waves III and IV?
4. Are there meaningful differences in the protective effects of extracurricular participation based on activity type, intensity of involvement, or participant demographics?

Hypotheses. To explore how adolescent extracurricular involvement influences deviant and pro-social outcomes throughout the life course, the following hypotheses are examined:

- H1.** Respondents in Wave I of Add Health will demonstrate patterns consistent with existing research. Adolescents who participate more frequently in structured extracurricular activities will report lower levels of deviant behavior and higher levels of pro-social engagement, including stronger school and parental attachment and better academic performance.

- H2.** Participation in structured extracurricular activities, particularly academic clubs, arts, and religious youth groups, will be negatively associated with self-reported deviance during adolescence and positively associated with pro-social outcomes such as school engagement, parental attachment, and grades.
- H3.** Structured extracurricular participation during adolescence will predict lower rates of deviant behavior and higher levels of pro-social behavior in adulthood.
- H4.** The strength and persistence of these effects will vary by both the type of activity and the intensity of participation. Non-sport and religious youth activities will show stronger protective associations than team or individual sports. Adolescents with more frequent or sustained participation will demonstrate stronger long-term outcomes than those with limited or zero involvement.
- H5.** Even after accounting for differences in self-regulation, adolescent participation in structured extracurricular activities will continue to predict lower levels of deviance and higher levels of pro-social behavior.

Chapter 2: Literature Review

Theoretical Foundations

Social Control. As mentioned earlier, theories focused on contemporaneous action and immediate criminological decision-making are not well suited to explaining enduring protective effects stemming from school-age extracurricular participation. In contrast, Hirschi's (2002) theory of social bonds offers a long-range control perspective, incorporating four key elements: attachment, involvement, commitment, and belief that work together to explain why pro-social engagement during adolescence may continue to influence behavior into adulthood.

According to Hirschi (2002), the deterrent effect of the social bond operates in proportion to an individual's connection to conventional society. While each of the four elements functions independently, they are also interrelated. Attachment refers to the strength of emotional and social ties an individual holds with parents, school personnel, peers, and other important figures. A core mechanism behind the effect of attachment is the expectation that these conventional others will disapprove of nonconformity or delinquent behavior (Costello and Laub 2020). As attachment levels increase, individuals may refrain from deviance to preserve the approval and respect of those they care about.

Involvement, as theorized by Hirschi (2002), reflects the time an individual spends engaged in conventional activities. The original hypothesis posits that time spent on schoolwork, sports, clubs, or employment leaves less opportunity for delinquency. However, later critiques have noted that delinquent behavior often requires little time or planning. (Chapple et al. 2005:359) note "Hirschi acknowledges that crime can take just minutes to commit; he suggests that involvement in conventional activities alone is insufficient to deter deviation". Subsequent research has questioned the distinctiveness of involvement, noting that it tends to overlap with commitment and personal investment in goals (Nader and Davies Robinson 2023). Nonetheless, some scholars continue to explore whether the nature and context of involvement, such as doing homework or working at a job, may affect

outcomes differently (Costello and Laub 2020).

Commitment centers on the idea that individuals who are invested in conventional goals and institutions are more likely to avoid behaviors that jeopardize those investments (Hirschi 2002). This component is rooted in Toby's (1957) concept of stake in conformity, which suggests that socioeconomic and community-level factors influence the degree to which individuals perceive they have something to lose. Hirschi (1995) provides the example of a student aspiring to a professional career, such as medicine or law, who may experience stronger deterrence than peers with fewer long-term goals. Similarly, students involved in sports or academic clubs may develop comparable commitments, especially when active participation and good standing can lead to scholarships, leadership roles, or enhanced social capital.

The final element, belief, refers to the internalization of conventional moral norms and social rules. While many criminological theories incorporate belief systems, Hirschi's (2002) control theory takes a unique approach. Within this framework, delinquency is not necessarily the result of opposing or deviant beliefs, but rather of an absence of conviction in the legitimacy or moral relevance of societal norms (Hirschi 1995). In the absence of such belief, behavior becomes governed by expediency rather than internal restraint. (Costello and Laub 2020:5) state that when people "do not feel that laws and rules are morally binding on their behavior . . . [they become] free to deviate from them." Participation in pro-social groups during adolescence may reinforce belief in the value of societal expectations, thereby increasing resistance to future deviance.

Taken together, these four elements, particularly attachment, commitment, and belief, comprise a framework through which extracurricular participation can be understood as not merely a concurrent buffer against deviance, but also as a foundation for lasting behavioral regulation. Structured activities that foster meaningful relationships, aspirational goals, and internalized norms among adolescents can promote a lasting form of social control that persists into adulthood.

Self-Regulation and Executive Function. Gottfredson and Hirschi's (1990) general theory implies that deviance is the outcome of a stable propensity to be risk-seeking, impulsive, and short-sighted. From this view, people exhibiting low levels of self-control would select activities that can be done easily and offer immediate, short-term gratification. This also assumes that deviance is the result of chronic individual differences, rather than either situational or learned motivational states, that influence behavior across situations.

A key, but disputed, element of this approach is the idea that self-control is developed in early childhood, and does not change much after that. Gottfredson and Hirschi's claim is that unsuccessful parenting during this time produces a persistent self-control deficit that cannot be greatly modified by later social influences. Although this assumption has been critical to the development of criminological theory, research has emerged which disputes the concept of immutability. Longitudinal evidence has found that while relative differences in behavioral regulation remain stable over time, capacities for self-regulation are not fixed. For instance, Piquero et al. (2010) describe how change across development can occur as a result of maturation and socialization. Additionally, Burt et al. (2014) and Burt (2020) show that these capacities vary both across the life course and social contexts.

In contrast to a trait-based approach to self-control, the literature in psychology and education has a long history of conceptualizing self-regulation as a more process-oriented, multidimensional construct. Instead of seeing behavioral regulation as a stable trait or characteristic, this literature sees it as "both the conscious and non-conscious processes by which the self controls behavior" (Baumeister and Vohs 2012, p. 182). From this perspective, effective regulation is reflected in an ability to delay gratification, inhibit inappropriate impulses and behaviors, plan and organize one's actions, maintain effort and attention, and adjust in response to feedback (Zimmerman 2000).

A key construct within modern theories of self-regulation is that of executive function. Executive function is broadly conceptualized as a set of higher order cognitive processes that support goal-oriented behavior, such as working memory, inhibitory control, and cognitive

flexibility (Barkley 2012). These allow for monitoring of one's behavior, anticipation of consequences, and behavioral adjustment as needed to fit the demands of a situation. Impairments in executive functioning have been associated with a variety of negative outcomes, including academic underachievement, emotional dysregulation, and engagement in risk and delinquent behaviors (Hofmann and Vohs 2016).

Criminological self-control and psychological self-regulation have developed out of different lines of research, but the behavior both sets of constructs are intended to explain is similar. The personality characteristics classically thought to represent low self-control, such as impulsivity, a present-oriented focus, and a lack of foresight bear a remarkable resemblance to the behavioral phenotype of low executive function. Evidence from developmental studies is also convergent. Moffitt et al. (2011), for instance, show that self-regulatory abilities in childhood have predictive power over many domains of adult functioning, including criminality, health, and socioeconomic success.

Drawing on these theoretical and empirical similarities, this study utilizes a theory-based executive function conceptualization of self-regulation instead of a trait-like view of self-control. In other words, self-regulation is measured as a latent variable including multiple theoretically unique facets of regulatory ability. This type of measurement permits a more theoretically comprehensive assessment of inter-individual variability in the regulation of behavior, and is also consistent with social control theory's focus on constraint, attachment, and commitment.

Incorporating self-regulation into the analytic framework serves a critical methodological purpose. Because self-regulatory capacities influence both engagement in deviant behavior and selection into structured social environments, failing to account for these differences risks conflating the effects of extracurricular participation with pre-existing individual characteristics. Self-regulation is included as a latent control variable to isolate the association between participation and later outcomes, net of baseline differences in regulatory capacity. This strategy allows for a clearer evaluation of whether extracurricular

involvement contributes independently to behavioral regulation and reduced deviance, beyond what can be attributed to individual predispositions.

Locus of Control and the Role of Perceived Agency. A related construct that warrants inclusion in this theoretical discussion is locus of control. First articulated by Rotter (1966), the term describes the degree to which people believe that their actions are the cause of the outcomes they experience. An internal locus of control is indicated by the belief that one's own behavior and actions are the major determinants of the outcomes one experiences, while an external locus of control is indicated by the belief that outcomes are determined by fate, chance, luck or powerful others.

Expanding on Rotter's work, Findley and Cooper (1983) found that students with an internal locus of control were consistently better academic performers than those with an external locus of control. This evidence led Findley and Cooper to argue that belief in one's own agency may be a critical component of engagement, persistence, and success for students. Findley and Cooper's theory of locus of control is closely related to both theories of self-regulation and self-control. If adolescents have little belief in their own agency, then they are less likely to wait for rewards or persist through difficulties, and they will be unlikely to develop internal standards of behavior. If adolescents' success or failure is attributed to outside sources, it may be the case that highly structured environments, with their consistency and external reinforcement, could lead to internal regulation over time.

More recently, Galvin et al. (2018) have called for a re-examination of locus of control within modern educational and psychological frameworks. They also argue that the existing conceptual dichotomy of internal versus external is too simple to describe the complexity of student's perceived control in specific situations. They note perceived control is especially important to consider in the domain of student motivation and self-regulation, which aligns more closely with a definition of locus of control consistent with self-efficacy and adaptive functioning. Their findings support the continued validity of locus of control as a stable psychological construct and highlight the importance of structured experiences in students'

perceived control, such as extracurricular involvement.

In addition to being a factor in educational attainment, locus of control may share some of the same processes through which protective effects of structured extracurricular participation are realized. Interventions that foster skill development, autonomy, and repeated affirmations of effort-based success may facilitate a more internal locus of control, thereby solidifying those pathways associated with adaptive behavior and adjustment.

Empirical Literature

Substance Use and Risk Behavior. Numerous studies have looked at extracurricular participation in relation to adolescent substance use and deviance. In one study, Darling (2005) discovered that participation in school-based extracurricular activities was linked to lower levels of tobacco, marijuana, and illicit drug use, but no significant differences were found in alcohol use. In another study, Moilanen et al. (2014) found that both availability and frequency of extracurricular participation were associated with lower levels of American Indian youth's substance use. Hoffmann (2006) also found that adolescents who participated in non-athletic extracurricular activities were less likely to use alcohol. Other empirical studies have reached the same conclusion regarding participation, mainly for student athletes, predicting varying magnitudes of protective effect (Barnes et al. 2007; Duncan et al. 2002; Zaff et al. 2003).

Research examining athletic participation and risky behavior has led to mixed conclusions. For example, Carr et al. (1990) discovered that male athletes reported significantly higher alcohol use than non-athletes. Crosnoe (2002) found that when using longitudinal academic and health trajectories, male and female athletes had higher initial levels of substance use and a steeper increase in use throughout high school in comparison to non-athletes. In contrast, Vermillion (2007) found that participants in sports were more likely to be non-deviant. Regarding other risk behaviors, Hartmann and Massoglia (2007)) determined that while high school sport participation was associated with less shoplifting, it

was associated with more drunk driving.

Findings such as these suggest that social contexts shape the behavioral outcomes of extracurricular participation. For instance, Norman and Ford (2015) discovered that adolescents who reported higher levels of parent and peer disapproval of ecstasy use were less likely to initiate use. In addition, Urberg (1992) showed that best friends, rather than peer groups in general, had a greater influence on cigarette use. Thus, not all forms of extracurricular participation lead to positive behavioral outcomes. Burton and Marshall (2005) reported that for at-risk youth, sports participation was a risk factor for aggression. The results of these studies show that the type of extracurricular activity adolescents choose, as well as the characteristics of the social environment and peer dynamics that define the setting, and the normative messages that are reinforced in that setting, have important effects on adolescent behavior.

Academic Achievement and School Engagement. Empirical research also provides evidence for a positive relationship between extracurricular activity and academic achievement. A structured literature review by Feldman and Matjasko (2005) yielded the general conclusion that regular participation in extracurricular activities was positively related to higher academic performance and school connectedness but negatively related to delinquency. Fredricks and Eccles (2008) found that middle school students involved in a variety of school activities demonstrated improved academic motivation and fewer behavioral problems, with the exception that sports participation predicted increased problem behaviors.

Mahoney and Cairns (1997) showed that participation in school-sponsored activities significantly reduced the likelihood of early school dropout, especially among students from at-risk backgrounds. Later, Mahoney and Stattin (2000) showed that participation in structured leisure activities was associated with reductions in antisocial behavior and fewer deviant peer friendships. Crosnoe (2001) examined the social positioning of male and female athletes in high school and found that while athletes often enjoyed greater social status, the

effect on improved academic orientation was moderated for male students. Female athletes, by contrast, showed stronger links between sport participation and positive academic achievement.

A research report by Catterall (2012:12) notes that “teenagers and young adults of low socioeconomic status (SES) who have a history of in-depth arts involvement show better academic outcomes than do low-SES youth who have less arts involvement. They earn better grades and demonstrate higher rates of college enrollment and attainment.” In terms of academic adjustment, Hughes et al. (2016) reported that student athletes had more positive perceptions of friends’ pro-social norms, but the same finding was not significant for non-sport participants. Owen et al. (2023) found that both team and individual sport participation contributed to better academic outcomes among youth. Team sport participants were found to have better attention and fewer unexcused absences. Student-athletes in individual sports reported higher literacy and academic performance.

Long-Term Outcomes in Adulthood. Structured participation during adolescence has been associated with long-term benefits extending into adulthood. Jang et al. (2014) found that individuals who participated in structured voluntary settings, such as Scouting, exhibited higher levels of subjective, physical, and relational well-being in adulthood. Similarly, Sabo et al. (1993) reported that high school athletes were more likely to attain higher education and experience greater occupational mobility as adults; however, this effect was observed among White students but not Black students. These longitudinal studies indicate that early pro-social participation within structured contexts may yield enduring benefits into adulthood, although these outcomes may be influenced by factors such as race, gender, participation intensity, and activity type.

Antisocial Behavior and Delinquency. Research has also been conducted on the protective benefits of extracurricular participation on deviant and delinquent behavior. Hoffmann and Xu (2002) discovered that both school and community based activities significantly lowered the rates of delinquency in adolescents, and especially for black

adolescents in high minority schools. Mahoney and Stattin (2000) established that youth participating in both structured and unstructured leisure activities were significantly less likely to become delinquent than youth participating in both structured and unstructured or unstructured only leisure activities. Mahoney (2000) also concluded that participation in extracurricular activities reduced the development of antisocial behavior in high-risk adolescents, particularly in school dropout and criminal arrest. These findings support the idea that increased and structured participation is effective at lowering the chances of deviant development, especially when this participation is surrounded by pro-social peers.

Religious Involvement as a Protective Factor. Participation in religious activity is thought to be a potential protective factor against deviance. Youth who are active in religious communities may be part of social networks that promote conventional norms, structured activities, and contact with adults who model and reinforce expectations for pro-social behavior. Baier and Wright's (2001) meta-analysis of a large body of research demonstrated that religiosity and crime had a consistent, moderately negative relationship, indicating a consistent constraining effect of religiosity on deviance across studies with varying methodologies.

Additional support for these findings is provided by Johnson et al. (2001), who used a latent variable modeling approach to reanalyze longitudinal data from the National Youth Survey. Their results also showed that adolescent religiosity, measured as both behavioral participation and attitudinal commitment, was negatively related to delinquency, even when controlling for social bonding and social learning variables. In addition, they concluded that religiosity had both direct and indirect protective effects.

The claim that religiosity functions as a significant deterrent remains a debated topic among scholars. For example, Hirschi and Stark (1969) argued that religious belief and participation had no significant effects on delinquency once other measures of social control were included in their analyses. The study initiated a lasting discussion about whether observed effects of religiosity are merely coincidental or hold distinct explanatory value.

Although later research has called this conclusion into question, the tension between these two views has continued to influence the interpretation of religiosity effects.

Gaps in the Literature

As indicated above, considerable research has investigated the association between adolescent extracurricular involvement and different types of deviant behavior. A large number of studies have found that participation in sports, academic clubs, and religious youth groups is associated with decreases in substance use, delinquency, and other problem behaviors. Yet, the vast majority of these investigations have focused on short-term associations during the period of involvement. Relatively little attention has been directed towards the question of long-term protective effects after structured involvement has ended.

It remains unclear whether the social, behavioral, and cognitive benefits of participation that persist throughout adolescence continue to remain present during adulthood. We know much less about the role extracurricular participation might play in longer-term developmental pathways once young people move out of school and other adolescent contexts. Do the behaviors and outcomes of emerging and full adults show long-lasting effects?

In particular, it is important to study the effects of various forms of activities, such as sports, academic clubs, and religious groups, to find out if there are differential or common protective mechanisms. Group activities support social integration and self-discipline while fostering enduring internalization of positive social values. If the protective factor is in part due to changes that are internalized in addition to external controls, it may be a more resilient form of protection against deviance.

In addressing these questions, my aim in this study is to address some of the gaps in our understanding of the developmental importance of extracurricular participation. In doing so, I seek to clarify not only whether participation protects against deviance in the short term, but whether those benefits are durable and persistent.

Chapter 3: Wave I

Methods

Data Source: The National Longitudinal Study of Adolescent to Adult Health

This research uses data from the National Longitudinal Study of Adolescent to Adult Health (Add Health), which is the most comprehensive, multidisciplinary, and nationally representative longitudinal study of adolescents ever conducted in the United States. Add Health was designed to explore how social, behavioral, environmental, and biological factors affect health and development from adolescence to adulthood. The program is directed by the Carolina Population Center at the University of North Carolina at Chapel Hill and has been funded by several agencies, including the National Institutes of Health (NIH) (Harris 2013).

Add Health began with an in-school survey in 1994–1995 given to more than 90,000 students in grades 7 through 12 from a stratified random sample of 80 high schools and associated middle or feeder schools across the U.S. (Harris 2013; Harris et al. 2019). From this population, a nationally representative core sample of 20,745 adolescents was selected for in-home interviews, forming the original longitudinal cohort. In addition to the core sample, select demographics including Cuban, Puerto Rican, and Chinese students, individuals with various sibling relationships, adoptees, adolescents with disabilities, and Black students with highly educated parents were oversampled (Chen and Harris 2020; Harris 2013).

The wave I data contains information on health status, nutrition, family and peer networks, school life, sexual behavior, and a number of other domains including delinquency and risk behaviors. Additionally, parent and school administrator questionnaires were included in this wave. In 1996, 14,738 members of the original cohort were re-interviewed. This second wave interview excluded high school seniors who were not part of the genetic or adopted samples. Wave III data was gathered during 2001 and 2002 from members of the original cohort, on information relevant to early adulthood. Respondents were ages 18

through 26 at this time ($n = 15,197$). The original cohort was resurveyed in 2008 and 2009 for wave IV, including information in young adulthood. The age range for wave IV was 24 to 32 ($n = 15,701$). Finally, respondents were surveyed for the wave V data during 2015 through 2017, and were aged 32 to 42. The response rates for Add Health have been impressive, with some respondents continuing in the study even after missing inclusion in prior waves (Harris et al. 2019).

A key feature of the Add Health design is the multiple contexts in which it is embedded. In addition to rich data on individuals' behaviors, health outcomes, educational attainment, psychological characteristics, peer networks, and family characteristics, the data have also been geocoded so that individual level records can be linked to contextual variables at the neighborhood and state levels, including crime statistics, school characteristics, public health and social policies, and physical infrastructure (Harris 2013; Harris et al. 2019). Geocoding and other sensitive data are only available through the restricted-use full data set due to deductive disclosure concerns. The public-use data contains only a subset and not the entire sample which remains restricted.

This study draws primarily on data from Wave I for rates of extracurricular participation, demographics, and self-regulation capacity with longitudinal outcomes assessed using cross-sectional models at Waves III, and IV. The combination of extensive baseline measures and long-term follow-up data makes Add Health particularly well suited to studying the relationships between extracurricular participation and later-life deviance.

Sample Description and Inclusion Criteria

The analytic sample for this study is drawn from Waves I, III, and IV of the Add Health public-use data. Wave I serves as the primary frame for establishing activity participation, self-regulation, baseline demographics, and outcome data while participation is ongoing. Later waves provide outcome data for long-term deviance and other measures, as well as wave specific demographic information, such as educational attainment and

socioeconomic indicators. Wave II is excluded because the measures do not add value within the scope of this study.

Table 1

Descriptive Statistics for Wave I Sample (n = 3,949)

Variable	Min	Max	%	Variable	Min	Max	%
<i>(a) Demographic Indicators</i>				<i>(b) Participation Indicators</i>			
Age (mean)	11	20	15.3	Non-sport participation			
Gender (Female = 1)	0	1	52.0	No participation (Ref.)	0	1	44.3
Race^a				Moderate participation ^f	0	1	41.6
White (Ref.)	0	1	60.0	High participation ^g	0	1	14.1
Black	0	1	25.0	Sport Participation			
Other ^b	0	1	6.0	No participation (Ref.)	0	1	39.5
Ethnicity (Hispanic) ^c	0	1	9.0	Moderate participation ^h	0	1	43.7
SES ^d (mean)	0	7	4.6	High participation ⁱ	0	1	16.9
Dwelling Condition^e				Religious youth activity			
Very well kept (Ref.)	0	1	60.1	Never (Ref.)	0	1	47.7
Fairly well kept	0	1	27.7	Less than once per month	0	1	13.6
Poorly kept	0	1	8.1	Once per month or more			
Very poorly kept	0	1	4.1	but less than once per week	0	1	15.5
Neighborhood Condition^e				Once per week or more	0	1	23.2
Very well kept (Ref.)	0	1	37.7				
Fairly well kept	0	1	24.8				
Poorly kept	0	1	5.9				
Very poorly kept	0	1	2.0				
Rural area	0	1	29.6				

^a Respondents who marked Black were eliminated from any subsequent categories in the original Add Health data.

^f 1 - 2 groups.

^g 3 or more groups.

^b American Indian or Native American, Asian or Pacific Islander, and Other were collapsed for analyses.

^h 1 - 2 teams or sports.

ⁱ 3 or more teams or sports.

^c Hispanic ethnicity or Latin origin is treated as a distinct race category.

^d Highest parental educational attainment is substituted as a proxy for socioeconomic status.

^e Dwelling and neighborhood condition were assessed by the interviewer.

Respondents from Wave I were included in the analytic sample if they met several data completeness criteria. First, participants must have completed the Wave I in-home interview and provided valid data on the primary predictors of interest, specifically extracurricular participation and self-regulatory capacity. Second, respondents were required to complete both the in-school questionnaire and the parent interview. Third, respondents needed to report information on all covariates used in the analyses, including age, sex, race or ethnicity, and parental educational attainment, which served as a proxy for SES. Finally, cases with missing or out-of-range values for any covariates included in the primary models were excluded from the analytic sample.

A few cases had unrealistic participation data, such as marking that the respondent either currently participated in, or planned to participate in every possible academic group and sport team. These respondents were removed from the sample to reduce bias from careless or invalid responses. The final analytic sample contains 3,949 cases, but varies slightly across models depending on outcome availability. All models retain a robust subset of Wave I participants, reflecting a population diverse in gender, race/ethnicity, and other demographic contexts.

Measures and Variable Construction

This section outlines the key variables used in the wave I models, including outcome variables, indicators, and relevant covariates. Each variable was constructed using data from the Add Health dataset and selected based on both theoretical significance and alignment with existing research. The subsections below describe how these measures were operationalized, with attention to ensuring consistency and clarity in their application throughout the wave I analyses.

Outcomes for Wave I. The outcome variables in this study reflect a range of behavioral, educational, and civic indicators that help assess adolescent adjustment. While delinquent behaviors are a core focus, I also examine positive outcomes including academic

achievement as well as school and parent attachment. Taken together, these provide a better picture of how participation in structured extracurricular activities may shape youth development, both in the short term and over time.

Table 2
Wave I Outcomes

Item Wording / Description		<i>n</i>
Educational Outcomes and Achievement		
Model 1	Item constructed by averaging last reported subject grades in English/language arts, mathematics, science, and social studies/history.	^a 3,156
Model 2	During this school year, how many times have you skipped school for a full day without an excuse?	^b 3,943
Model 3	Have you ever received an out-of-school suspension?	^c 3,949
Model 4	Have you ever been expelled from school?	^c 3,949
Attachment to School		
Model 1	How much do you agree or disagree with the following statement: You feel close to people at your school.	^d 3,948
Model 2	How much do you agree or disagree with the following statement: You feel like you are a part of your school.	^d 3,949
Model 3	How much do you agree or disagree with the following statement: You feel safe in your school.	^d 3,948
Model 4	Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?	^e 3,949
Attachment to Parents and Family		
Model 1	How much do you feel that your parents care about you?	^f 3,941
Model 2	How much do you feel that people in your family understand you?	^f 3,945
Model 3	How much do you feel that your family pays attention to you?	^f 3,945
Model 4	How much do you feel that you want to leave home?	^f 3,923
Tobacco, Alcohol, and Drug Use		
Model 1	Have you ever smoked cigarettes regularly, that is, at least 1 cigarette every day for 30 days?	^c 3,948
Model 2	Over the past 12 months, on how many days did you drink 5 or more drinks in a row?	^g 3,942
Model 3	During your life, how many times have you used marijuana?	^h 3,695
Model 4	Have you ever driven while drunk?	^c 3,948
Delinquency		

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Item Wording / Description	<i>n</i>
Model 1 In the past 12 months, how often did you lie to your parents ^{<i>i</i>} or guardians about where you had been or whom you were with?	3,938
Model 2 In the past 12 months, how often did you run away from home?	^{<i>i</i>} 3940
Model 3 In the past 12 months, how often did you steal something worth less than \$50?	^{<i>i</i>} 3,937
Model 4 In the past 12 months, how often did you get into a serious physical fight?	^{<i>i</i>} 3,938
^{<i>a</i>} Original responses coded as: D or lower (1), C (2), B (3), A (4). Averaged grade with range of 1 to 4.	
^{<i>b</i>} Never (0), 1 or 2 times (1), 3 to 10 times (2), More than 10 times (3)	
^{<i>c</i>} Not marked / No (0), Marked / Yes (1)	
^{<i>d</i>} Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly agree (5)	
^{<i>e</i>} Never (0), Just a few times (1), About once a week (2), Almost every day (3), Every day (4)	
^{<i>f</i>} Not at all (1), Very little (2), Somewhat (3), Quite a bit (4), Very much (5)	
^{<i>g</i>} Never (0), 1 or 2 days in the past 12 months (1), Once a month or less (3-12 times in the past 12 months) (2), 2 or 3 days a month (3), 1 or 2 days a week (4), 3 to 5 days a week (5), Every day or almost every day (6)	
^{<i>h</i>} Never (0) , 1 to 5 times (1), 6 to 20 times (2), 21 to 100 times (3), More than 100 times (4)	
^{<i>i</i>} Never (0) , 1 or 2 times (1), 3 or 4 times (2), 5 or more times (3)	

Key Predictors: Participation and Self-Regulation. The Add Health wave I in-school questionnaire included an item that asked students to indicate their current or anticipated participation in a wide range of school-based extracurricular activities. The prompt read, “Are you participating/Do you plan to participate in the following clubs, organizations and teams (check all that apply):” (Harris 2018) followed by a list of specific options. These included academic and special interest groups such as Debate Team, Honor Society, Science Club, Student Council, and various language and arts-based clubs, such as band and choir. Athletic opportunities were also well represented, including team and individual sports such as basketball, track, football, wrestling, and others. To ensure inclusivity, an option was also provided for students to indicate if they did not participate in any extracurricular activities by selecting, “If you do not participate in any clubs, organizations, or teams at school, fill in this oval.” (Harris 2018)

Table 3
Extracurricular Groups and Sports

Academic and Non-Sport Groups		
Band	Book Club	Chorus / Choir
Computer Club	Debate Team	Drama Club
French Club	Future Farmers	German Club
History Club	Honor Society	Latin Club
Math Club	Newspaper	Orchestra
Science Club	Spanish Club	Student Council
Yearbook	Other Club or Org.	
Individual and Team Sports		
Baseball / Softball	Basketball	Cheer / Dance
Field Hockey	Football	Ice Hockey
Soccer	Swimming	Tennis
Track	Volleyball	Wrestling
Other Sport		

To capture meaningful patterns in participation, responses were tallied separately for academic / non-sport groups and for school sports teams / individual sports. For each category, a count was generated based on the number of activities the student selected. These counts were then recoded into ordinal categories to reflect the intensity of participation: None (0 groups or teams), Moderate (1–2), and High (3 or more). This coding scheme allows for the preservation of both breadth and depth in extracurricular involvement while maintaining consistency across group types. By distinguishing between types of participation and applying the same ordinal structure to both domains, this approach provides an interpretable measure of students’ engagement in structured extracurricular participation.

Religious youth group participation was also included as a key variable. The Add Health Wave I in-home interview asked respondents: “Many churches, synagogues, and other places of worship have special activities for teenagers—such as youth groups, Bible classes, or choir. In the past 12 months, how often did you attend such youth activities?” (Harris 2018) Responses were recorded on a four-point scale: never, less than once a month, once a month or more but less than once a week, and once a week or more. These frequency-based responses are utilized to reflect levels of engagement. Including this variable allows for the

examination of whether participation in religious youth activities offers a unique protective effect beyond that of secular extracurricular involvement. This approach is supported by a robust body of research showing that religious involvement during adolescence is associated with reductions in delinquency, substance use, and other risk behaviors (Baier and Wright 2001; Johnson et al. 2001).

Measures of self-regulation were drawn from a larger set of items included in the Wave I in-home interview component of Add Health. Items are drawn from a variety of question sets on topics including emotion regulation, interpersonal functioning, decision-making, and self-concept, and were chosen both for their theoretical appropriateness and for prior applications in the literature. A large proportion of items are phrased as self-assessments or retrospective accounts of behavior in the form of Likert-type response items.

Table 4
Wave I Self-Regulation Items

	Item Wording (from Add Health Instruments)	
SR1	All things considered, how is {NAME}'s life going?	<i>a p</i>
SR2	How often would it be true for you to make each of the following statements about NAME? You get along well with (him/her).	<i>b p</i>
SR3	How often would it be true for you to make each of the following statements about {NAME}? You feel you can really trust (him/her).	<i>b p</i>
SR4	Does {NAME} have a bad temper?	<i>c p</i>
SR5	Do you agree or disagree with the following statement? You never argue with anyone	<i>d</i>
SR6	Do you agree or disagree with the following statement? You never get sad.	<i>d</i>
SR7	Do you agree or disagree with the following statement? You never criticize other people.	<i>d</i>
SR8	Do you agree or disagree with the following statement? You usually go out of your way to avoid having to deal with problems in your life.	<i>d x</i>
SR9	Do you agree or disagree with the following statement? When making decisions, you usually go with your "gut feeling" without thinking too much about the consequences of each alternative.	<i>d x</i>

Continued on next page

Item Wording (from Add Health Instruments)

- SR10 Do you agree or disagree with the following statement? When^d you have a problem to solve, one of the first things you do is get as many facts about the problem as possible.
- SR11 Do you agree or disagree with the following statement? When^d you are attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible.
- SR12 Do you agree or disagree with the following statement? When^d making decisions, you generally use a systematic method for judging and comparing alternatives.
- SR13 Do you agree or disagree with the following statement? After^d carrying out a solution to a problem, you usually try to analyze what went right and what went wrong.
- SR14 Do you agree or disagree with the following statement? You^d like yourself just the way you are.
- SR15 Do you agree or disagree with the following statement? You^d feel like you are doing everything just about right.
- SR16 Do you agree or disagree with the following statement? You^d feel socially accepted.
- SR17 Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?^{e x}
- SR18 Since school started this year/During the 1994-1995 school year, how often have you had trouble paying attention in school?^{e x}
- SR19 How often was the following true during the past week? You^{f x} had trouble keeping your mind on what you were doing
- SR20 Since school started this year/During the 1994-1995 school year, how often have you had trouble getting your homework done?^{e x}
- SR21 Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with other students?^{e x}
-

^a Not well at all (1), Not so well (2), Fairly well (3), Very Well (4)

^b Never (1), Seldom (2), Sometimes (3), Often (4), Always (5)

^c Yes (1), No (2)

^d Strongly Disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5)

^e Every day (1), Almost every day (2), About once a week (3), Just a few times (4), Never (5)

^f Most / all of the time (1), A lot of the time (2), Sometimes (3), Never or rarely (4)

^p Included in parent questionnaire.

^x This item was not retained in the final models.

For example, respondents were asked to indicate how often they had difficulty getting along with others, staying attentive in school, or completing homework assignments, as well as the extent to which they agreed with various statements about their emotional stability, sense of

self-worth, and decision-making processes. Some of the items were asked of the respondent's parents.

The structure of the self-regulation measure used in this study builds upon the framework proposed by Wolfe and Hoffmann (2016), who demonstrated the viability of modeling self-control in Add Health as a multidimensional latent construct. While details of the analytic model are presented later, it is worth noting here that the selected items align well with the trait-based view of self-control articulated by Gottfredson and Hirschi (1990), particularly their emphasis on impulsivity, risk-taking, and a preference for immediate gratification, as well as the developmental aspects of self-regulation found within the psychology and education literature.

A number of items were discarded from those originally considered due to poor analytical performance or lack of conceptual clarity. Items retained offer a broad yet coherent perspective on how adolescents regulate their behavior and emotions, and the data are well-suited for examining the role of self-regulation in long-term developmental outcomes. Response categories shown in Table 4 reflect the final analytic coding, with higher values indicating higher levels of self-regulation.

Control Variables. Several demographic and contextual control variables are included in the analyses to account for baseline differences in socioeconomic status, household and neighborhood environment, and key characteristics. Age is treated as a continuous variable, ranging from 11 to 20 in the analytic sample. Gender is included as a binary variable, with female coded as 1. Race and ethnicity were operationalized using Add Health Wave I self-reports and recoded for analysis in a manner consistent with Add Health documentation (Harris 2018). Hispanic ethnicity was treated as a distinct analytic category; respondents indicating Hispanic or Latino origin were classified as Hispanic and not assigned to additional racial categories. Respondents who selected Black or African American were classified as Black even when additional racial categories were endorsed. Remaining respondents were classified as White (reference) or Other, with American Indian or Native

American, Asian or Pacific Islander, and other responses collapsed into the Other category. Each category was dummy coded with White as the reference group.

Socioeconomic status is measured using the highest level of educational attainment achieved by either parent, with values ranging from 0 to 7, and treated continuously. Both dwelling and neighborhood conditions were assessed based on interviewer observation with the categories of very well kept, fairly well kept, poorly kept, and very poorly kept, as well as rural area for neighborhood. These measures were dummy coded and referenced against very well kept.

Although age is included as a control variable in all models, a quadratic term for age was not retained. In preliminary models, age squared was tested to account for the possibility of a curvilinear relationship between age and the outcome variables. However, the addition of this term consistently failed to improve model fit and produced no meaningful changes in parameter estimates. The sample is relatively narrow in age range which limited the utility of higher-order age terms, additionally there is limited theoretical basis to expect meaningful curvature in the age-outcome relationship of such a range, which was confirmed by exploratory analyses.

Analytic Strategy

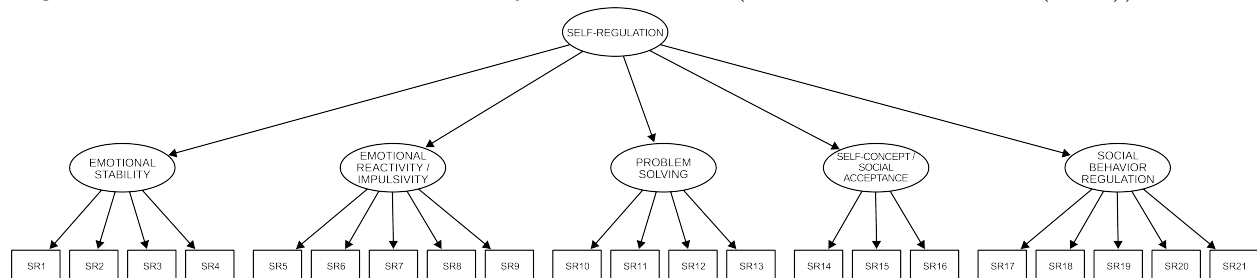
The following section outlines the analytic approach used to evaluate the relationships between extracurricular participation during adolescence and later outcomes across three waves of data versus deviance, delinquency, and pro-social behaviors. Analyses were conducted using structural equation modeling (SEM) to account for measurement error and to model latent constructs, particularly self-regulation, within a theoretically grounded framework. The Wave I models serve to validate the measurement structure and test cross-sectional associations. Subsequent models, using Waves III and IV, examine how early participation predicts outcomes in early adulthood and beyond. While the structure of each model remains largely consistent, some adaptations were necessary due to differences in

available measures across waves. Model fit across all analyses were evaluated using scaled CFI, TLI, and RMSEA based on the Satorra–Bentler corrected χ^2 statistic.

Exploratory and Confirmatory Factor Analyses. An exploratory factor analysis (EFA) was conducted prior to confirmatory modeling as a partial replication, to evaluate the dimensional structure of the self-regulation indicators and assess the suitability of the factor configuration specified by Wolfe and Hoffmann (2016). Because the indicators are ordinal, polychoric correlations were estimated and factor extraction was performed on the resulting correlation matrix using oblique (geomin) rotation. A five-factor solution demonstrated acceptable model fit (Scaled RMSEA = .044, 90% CI [.041, .047]; Scaled TLI = .937; RMSR = .02), with low item complexity (mean = 1.1) and moderate correlations among factors, supporting the use of an oblique structure. Most indicators loaded strongly on their expected factors, providing empirical support for the theorized subdomains. Two items (SR8 and SR9) failed to load meaningfully on any factor and exhibited unstable or counterintuitive patterns across alternative specifications. These items were marked for potential exclusion during the confirmatory analysis phase.

The measurement structure of the Self-Regulation construct was evaluated using confirmatory factor analysis (CFA), specifying a second-order latent factor with five first-order subdomains: Emotional Stability, Emotional Reactivity / Impulsivity, Problem Solving, Self-Concept / Social Acceptance, and Social Behavior Regulation.

Figure 1. Second-Order Confirmatory Factor Model (Wolfe and Hoffmann (2016))



Model Fit Statistics

Fit Index	Scaled CFI	Scaled TLI	Scaled RMSEA	90% CI	SRMR	<i>n</i>
Value	0.928	0.918	0.054	[0.051, 0.057]	0.053	3,943

Each of the five subfactors were represented by three to five observed indicators. This model follows the second-order model suggested by Wolfe and Hoffmann (2016). The second order factor names in Figure 1 relate to the theoretical domains that comprise the framework of my self-regulation model. Two items initially included as indicators of self-regulation, SR8 (“You usually go out of your way to avoid having to deal with problems in your life”) and SR9 (“When making decisions, you usually go with your ‘gut feeling’ without thinking too much about the consequences of each alternative”), failed to demonstrate meaningful loadings on any of the proposed subfactors. When assigned to the emotional reactivity/impulsivity factor, both items exhibited near-zero standardized loadings and residual variances exceeding .90, indicating that the latent factor explained virtually none of their variance. These results suggest that the two items are not capturing the same underlying latent regulatory capacity as the other indicators and likely reflect a distinct process not aligned with the conceptualization of self-regulation used in this study. In line with best practices for confirmatory factor analysis, because they fail to meaningfully contribute to the latent structure they were removed to improve both model fit and interpretability. Descriptions and wording for the observed variables can be found in Table 4.

The first-order factor labeled emotional stability captures external perceptions of respondents’ overall life satisfaction and their capacity to form and maintain trusting relationships. Items used in this factor are based on parent-reported measures, assessing characteristics such as how well respondents get along with others (SR2), perceived trustworthiness (SR3), and overall life satisfaction as observed by the parent (SR1). Conceptually, this factor aligns closely with self-regulation frameworks emphasizing the role of emotional and interpersonal regulation in supporting positive social relationships. Research on self-regulation suggests that individuals with stronger regulatory capacities are better able to manage affect, maintain stable interpersonal bonds, and engage consistently with pro-social norms, thereby reducing the likelihood of impulsive or deviant behavior (Moffitt et al. 2011; Vohs and Baumeister 2016).

The second factor, emotional reactivity and impulsivity, represents core elements common to both criminological self-control theory and psychological theories of self-regulation. Indicators selected for this factor assess behaviors such as arguing with others (SR5), experiencing sadness (SR6), and making impulsive decisions to criticize others (SR7). These items directly reflect emotional responsiveness and impulsive behaviors central to developmental perspectives.

Items within the third factor assess respondents' problem-solving abilities. Specifically, these indicators measure whether respondents approach problems systematically (SR12), make deliberate efforts to gather relevant information before decision-making (SR10), and analyze outcomes following actions taken (SR13). Research on self-regulation emphasizes that deliberate, analytical problem-solving processes support effective decision-making by reducing impulsive responses and promoting consideration of potential consequences (Baumeister and Vohs 2007).

The fourth factor represents respondents' self-concept and perceived social acceptance, both critical aspects within self-regulation theory. Individuals with higher levels of self-esteem and positive self-concept are more likely to demonstrate effective regulation, particularly in social contexts. Enhanced perceptions of social acceptance facilitate adherence to social norms (Rathbone et al. 2023). Items measuring this factor include self-esteem (SR14), perceived personal competence (SR15), and feelings of social acceptance (SR16).

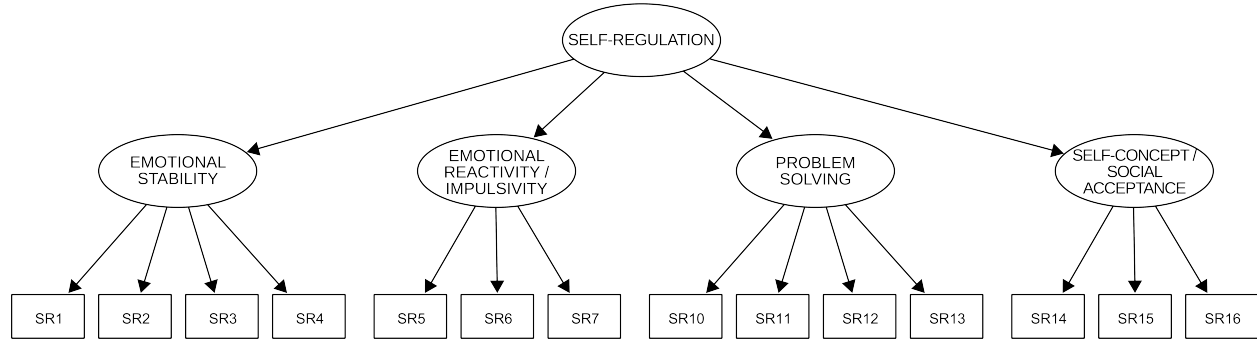
The final factor addresses behavioral regulation within social contexts, including how often respondents have trouble interacting with teachers (SR17), maintaining attention during school activities (SR18), completing homework (SR20), and interacting appropriately with peers (SR21). Research on executive function emphasizes that difficulties with behavioral regulation, attentional control, and impulse management are associated with poorer social functioning and an elevated risk of engaging in maladaptive or risky behaviors Barkley (2012). These regulatory processes are central to successful navigation of structured social environments such as schools, where sustained attention and behavioral compliance

are routinely demanded.

Including Social Behavior Regulation (SBR) as a fifth subfactor initially appeared consistent with the broader self-regulation framework, as these items (difficulty getting along with teachers, peers, or completing schoolwork) reflect externally observable consequences of poor regulation. However, both theoretical and empirical considerations supported its removal from the final model. Theoretically, SBR captures behavioral outcomes that are likely downstream effects of executive function deficits rather than core regulatory processes themselves. Including such downstream behaviors within the measurement model risks conflating regulatory capacity with its consequences, obscuring potential causal ordering in subsequent structural analyses. In contrast, the remaining subfactors, emotional stability, emotional reactivity / impulsivity, problem-solving, and self-concept / social acceptance, are more closely aligned with the internalized capacities emphasized in developmental conceptualizations of self-regulation.

Empirically, adding SBR reduced model parsimony and weakened the higher-order factor structure. While the SBR subfactor loaded at an acceptable level on the second-order factor, its inclusion resulted in higher residual variance at both the subfactor and item levels. Model fit also declined slightly, with the scaled CFI and TLI dropping and RMSEA increasing when SBR was retained. In contrast, removing SBR improved global fit indices and produced stronger, more consistent loadings for the remaining subfactors on the higher-order construct. These results indicate that SBR overlaps conceptually and statistically with the other subfactors but contributes limited unique variance, diluting the clarity of the higher-order latent construct. For these reasons, SBR was excluded from the final measurement model. The revised four-subfactor solution more accurately reflects the underlying latent self-regulation capacity and produces a more stable and interpretable structure for subsequent modeling.

Figure 2. Second-Order Confirmatory Factor Model for Self-Regulation



Model Fit Statistics

Fit Index	Scaled CFI	Scaled TLI	Scaled RMSEA	90% CI RMSEA	SRMR	<i>n</i>
Value	0.984	0.980	0.042	[0.037, 0.047]	0.033	3,949

The model was estimated through the lavaan package in R using weighted least squares with mean and variance adjustment (WLSMV) estimation, which is appropriate for categorical indicators and complex survey data. Wave I grand sample weights were applied to account for the complex survey design and a small number of outlier cases with unusually high group and sport participation values were excluded.

The CFA model demonstrated strong overall fit, with a scaled CFI of .984 and TLI of .980, well above conventional cutoff values. The Scaled RMSEA was .042, with a 90% confidence interval ranging from .037 to .047, and the SRMR was .033, both indicating acceptable fit. As anticipated, the χ^2 statistic was large and statistically significant; however, this test is well known to be highly sensitive to sample size, often producing significant results in large samples even when model fit is adequate.

The results indicate that the four first-order factors are distinct but meaningfully related components of the broader self-regulation construct. The strongest pathway was from self-concept / social acceptance to self-regulation (0.81), suggesting that feelings of social acceptance and positive self-concept are central to the overall self-regulation framework. In contrast, emotional stability, which was derived from parent-reported items, showed the weakest association with the overarching construct (0.33). This weaker loading may reflect the narrower and more situational nature of emotional stability, as reported by

parents, compared to self-reports contained within the other domains. The factor for emotional stability has been retained due to the theoretical importance of the indicators.

Table 5
Standardized Factor Loadings for Wave I Self-Regulation

Latent Factor	Indicator	Std. Loading
Emotional Stability		0.332
	SR1	0.661
	SR2	0.693
	SR3	0.630
Emotional Reactivity / Impulsivity	SR4	0.531
		0.554
	SR5	0.658
	SR6	0.663
Problem Solving	SR7	0.571
		0.508
	SR10	0.745
	SR11	0.741
Self-Concept / Social Acceptance	SR12	0.710
	SR13	0.688
		0.809
	SR14	0.803
	SR15	0.824
	SR16	0.700

Note. All standardized factor loadings were significant at $p < 0.001$.

At the first-order level, all standardized loadings exceeded the recommended 0.50 threshold (Hair et al. 2019). Problem solving and self-concept / social acceptance demonstrated particularly strong and stable loadings, ranging from 0.688 to 0.824, indicating these domains were well-defined and closely tied to the latent factors. Emotional reactivity / impulsivity also displayed acceptable loadings (0.571 to 0.663), though slightly lower than the problem-solving and self-concept indicators. The lowest individual loading was observed for SC4 (0.531) within emotional stability, suggesting this parent-reported indicator contributes modestly compared to other items in the same domain.

Overall, the pattern of loadings supports the hierarchical structure of self-regulation, where self-concept and problem-solving emerge as the most stable and central dimensions,

while emotional stability and reactivity capture more peripheral but still meaningful aspects of the construct. A full listing for the CFA can be found in Appendix A. These results support the multidimensional nature of developmental self-regulation and provide empirical justification for its treatment as a second-order construct in the subsequent structural models. Observed predictors include demographic characteristics (age, sex, race/ethnicity, and SES), dwelling and neighborhood conditions, and a set of dummy-coded variables for extracurricular and religious participation. Descriptions are provided in Table 6. Each exogenous variable is specified as a direct predictor of the outcome.

Structural Equation Model for Wave I

The wave I structural equation model was developed to estimate the influence of self-regulation and a set of covariates on multiple adolescent outcomes. Although each outcome is examined separately, the overall structure of the model remains consistent across outcomes. The model includes the previously identified second-order latent construct for self-regulation, which reflects four theoretically grounded first-order factors and is measured by 14 ordinal indicators. The WLSMV estimator is used for all analyses to accommodate the ordered categorical nature of the observed indicators and dependent variables.

All outcomes from Wave I are modeled using the same structural framework, and estimated independently, denoted as OUTCOME. For example, one model may use unexcused absences as the dependent variable, while another estimates associations with suspensions or other behavioral indicators. Model fit is evaluated using scaled RMSEA, as well as scaled CFI and TLI values, consistent with recommendations for models estimated using WLSMV (Kline 2023).

Figure 3. Wave I Structural Model

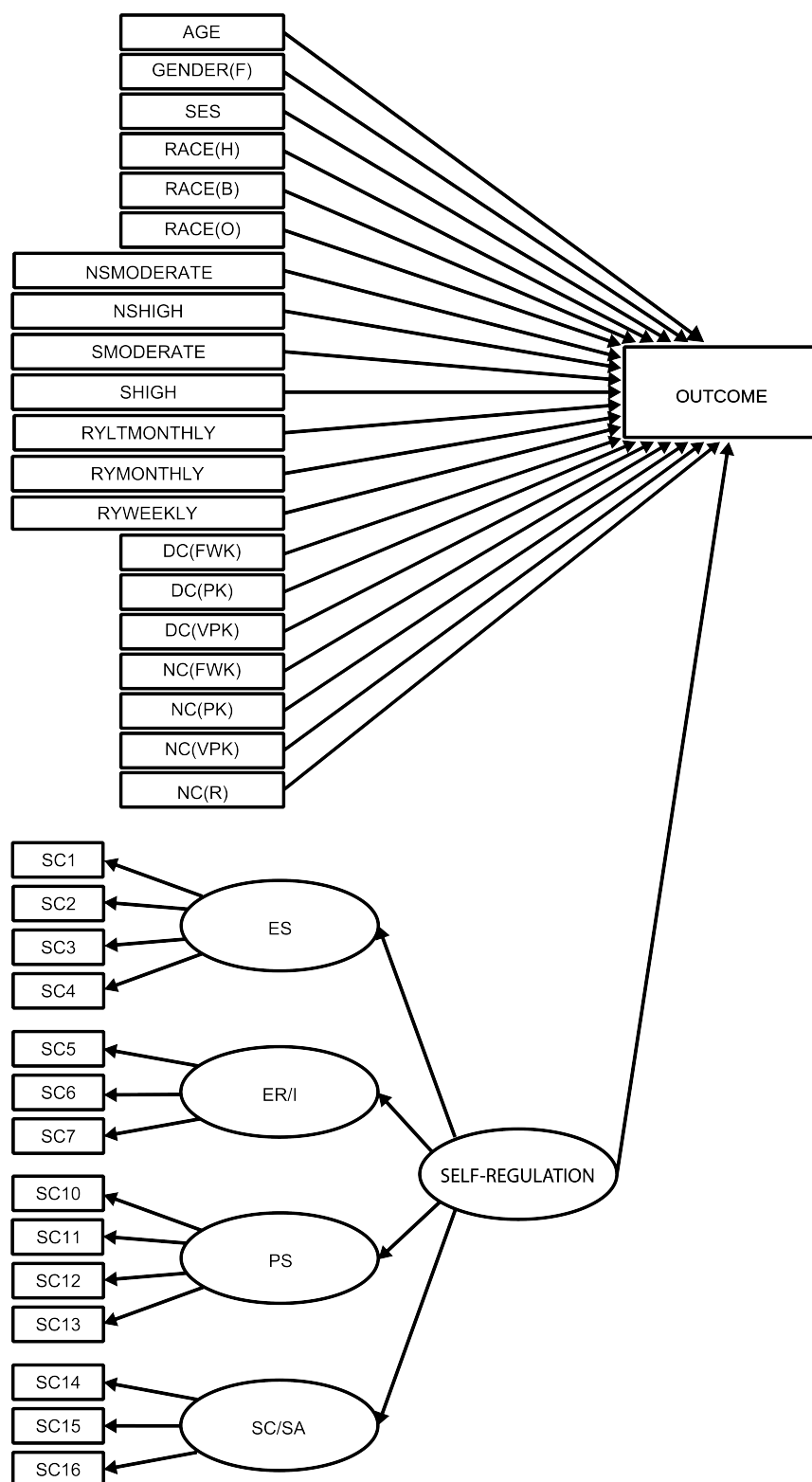


Table 6
Exogenous and Latent Variables Used in Wave I SEM

Label	Description
<i>(a) Demographic Indicators</i>	
AGE	Respondent age in years
GENDER(F)	Gender
SES	SES ^a
Race	
RACE(H)	Hispanic or Latino ^b
RACE(B)	Black or African American
RACE(O)	Other races
Dwelling Condition	
DC(FWK)	Fairly well kept
DC(PK)	Poorly kept
DC(VPK)	Very poorly kept
Neighborhood Condition	
NC(FWK)	Fairly well kept
NC(PK)	Poorly kept
NC(VPK)	Very poorly kept
NC(R)	Rural area
<i>(b) Participation Indicators</i>	
Non-sport participation	
NSMODERATE	Moderate participation
NSHIGH	High participation
Sport participation	
SMODERATE	Moderate participation
SHIGH	High participation
Religious Youth Activity	
RYLTMONTHLY	Less than once per month
RYMONTHLY	Once per month or more, but less than once per week
RYWEEKLY	Once per week or more
<i>(c) Latent Factors</i>	
ES	Emotional Stability
ER/I	Emotional Reactivity / Impulsivity
PS	Problem Solving
SC/SA	Self-Concept / Social Acceptance

^a Highest parent educational attainment substituted as proxy for SES

^b Following recommendations in the Add Health documentation, Hispanic ethnicity is treated as a distinct racial category in all models. (Harris 2018)

Treatment of Missing Data

Missing data were handled in two stages. First, listwise deletion was applied to any case with missing values on one or more of the observed exogenous predictors. This ensured that all retained cases had complete data for every predictor variable included in the model. However, this restriction was not applied to the observed indicators used to estimate the self-regulation construct, allowing partial information to contribute to the measurement model.

Second, the use of WLSMV in the R lavaan package handles missing data through pairwise estimation, enabling the inclusion of cases with any incomplete data on the observed self-regulation items. This approach helps retain more participants in the estimation of the latent factor, provided enough data are available to compute correlations among the indicators (Brown 2015).

Finally, because each structural model includes a different outcome variable, and some participants have missing data on one or more of those outcomes, the analytic sample size varies slightly across models. Each model reflects the subset of cases with complete data on all predictors and observed covariates for the relevant outcome variable. Some outcomes are also age limited, such as respondents under the age of 16 being excluded from the driving while drunk item.

Conceptualization of Self-Regulation as a Second-Order Latent Factor

Self-regulation is conceptualized as a second-order latent factor in this dissertation, reflecting a capacity-based perspective that emphasizes coordinated regulatory processes rather than a fixed trait. Within this framework, self-regulation represents an overarching construct that organizes multiple interrelated first-order dimensions capturing emotional, cognitive, and behavioral regulatory capacities. Wolfe and Hoffmann (2016) provide empirical support for modeling regulatory capacities using a higher-order structure, demonstrating that distinct yet related subdomains can be coherently represented by a

second-order latent factor. Parallel evidence from psychological research further supports the utility of hierarchical measurement models for regulatory constructs. For example, meta-analytic work by Duckworth and Kern (2011) identifies multiple lower-order dimensions, including impulsivity, task persistence, and attentional control, that collectively reflect broader self-regulatory functioning. Although grounded in psychological rather than criminological theory, these findings reinforce both the conceptual coherence and empirical advantages of employing a second-order latent structure. This measurement approach reflects self-regulation theory while retaining the structural benefits of hierarchical modeling validated across disciplinary contexts.

Results

The outcome variables identified for use in Wave I are grouped according to thematic domains identified through theoretical and empirical literature as relevant to adolescent deviance and pro-social behavior. Each domain is presented separately, beginning with an overview provided in multi-model tables that summarize key findings across outcomes. Complete SEM tables, containing detailed parameter estimates and fit statistics for each individual model, are provided in the appendices. Results from the wave I models show relationships between extracurricular participation, self-regulation, and reported behaviors while the respondents are still in a period of active or potential participation.

Educational Outcomes

Table 7 presents results from models examining the relationships among self-regulation, extracurricular participation, and educational outcomes, including grade point average, unexcused absences, out-of-school suspensions, and expulsions. Across the four outcomes, model fit was consistently strong. Scaled CFI values ranged from .940 to .947, scaled TLI values exceeded .980, and scaled RMSEA estimates fell between .025 and .027, with SRMR values at or below .043.

Table 7
Wave I Educational Outcomes Models

	Grade Average (Constructed)	Unexcused Absences	Out-of-School Suspension	Expulsion
Non-Sport Participation				
Mod. participation	0.155 (0.020) ^{***}	-0.091 (0.025) ^{***}	-0.074 (0.026) ^{**}	0.010 (0.057)
High participation	0.186 (0.020) ^{***}	-0.063 (0.025) [*]	-0.074 (0.027) ^{**}	-0.031 (0.053)
Sport Participation				
Mod. participation	0.020 (0.020)	-0.017 (0.024)	-0.033 (0.025)	-0.051 (0.050)
High participation	0.038 (0.022) [†]	-0.033 (0.027)	0.011 (0.027)	0.049 (0.053)
Religious Youth Participation				
< Once per month	0.045 (0.019) [*]	-0.004 (0.023)	-0.045 (0.024) [†]	-0.062 (0.054)
≥ Once per month	0.059 (0.019) ^{**}	-0.058 (0.024) [*]	-0.051 (0.025) [*]	-0.099 (0.052) [†]
≥ Once per week	0.080 (0.020) ^{***}	-0.110 (0.025) ^{***}	-0.094 (0.025) ^{***}	0.012 (0.048)
Self-Regulation				
	0.177 (0.023) ^{***}	-0.226 (0.026) ^{***}	-0.196 (0.030) ^{***}	-0.206 (0.042) ^{***}
Age	-0.060 (0.019) ^{**}	0.332 (0.022) ^{***}	0.068 (0.025) ^{**}	0.039 (0.053)
Female	0.124 (0.019) ^{***}	-0.006 (0.023)	-0.241 (0.023) ^{***}	-0.269 (0.052) ^{***}
SES	0.197 (0.019) ^{***}	-0.059 (0.025) [*]	-0.201 (0.024) ^{***}	-0.135 (0.046) ^{**}
Hispanic	-0.034 (0.018) [†]	0.031 (0.022)	0.043 (0.022) [†]	0.079 (0.041) [†]
Black	-0.094 (0.017) ^{***}	-0.033 (0.021)	0.205 (0.020) ^{***}	0.183 (0.040) ^{***}
Other Race	-0.001 (0.018)	0.031 (0.021)	0.064 (0.023) ^{**}	-0.063 (0.050)
Dwelling Condition				
Fairly well kept	-0.111 (0.021) ^{***}	0.058 (0.027) [*]	0.101 (0.027) ^{***}	0.102 (0.054) [†]
Poorly kept	-0.077 (0.020) ^{***}	0.076 (0.025) ^{**}	0.083 (0.024) ^{***}	0.014 (0.048)
Very poorly kept	-0.054 (0.023) [*]	0.010 (0.026)	0.068 (0.026) ^{**}	0.072 (0.043) [†]
Neighborhood Condition				
Fairly well kept	-0.019 (0.024)	0.013 (0.030)	0.009 (0.031)	0.016 (0.057)
Poorly kept	-0.012 (0.024)	0.030 (0.027)	0.042 (0.028)	0.046 (0.043)
Very poorly kept	0.027 (0.022)	0.054 (0.026) [*]	0.008 (0.027)	0.045 (0.038)
Rural area	-0.042 (0.022) [†]	-0.010 (0.028)	0.018 (0.028)	-0.024 (0.055)
Scaled χ^2 (df)	1194.950 (366) ^{***}	1290.190 (366) ^{***}	1358.210 (366) ^{***}	1267.400 (366) ^{***}
Scaled CFI	0.940	0.946	0.942	0.947
Scaled TLI	0.983	0.985	0.983	0.985
Scaled RMSEA	0.027	0.025	0.026	0.025
SRMR	0.040	0.035	0.043	0.040
<i>n</i>	3156	3943	3949	3949

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Item constructed from last reported grades in English / Language Arts, Math, Science, and Social Studies / History subjects.

^b During this school year, how many times have you skipped school for a full day without an excuse?

^c Have you ever received an out-of-school suspension?

^d Have you ever been expelled from school?

Taken together, these indices indicate that the models provide an adequate representation of the observed data while accounting for the complex survey design.

Self-regulation was consistently meaningful across all outcomes. Higher levels of self-regulation were associated with higher grades and lower rates of unexcused absences, suspensions, and expulsions. In several cases, the magnitude of the self-regulation coefficients was comparable to, and in some cases larger than, those observed for key structural covariates such as socioeconomic status. This pattern suggests that self-regulation plays an important role in shaping early educational trajectories.

Extracurricular participation further differentiated academic and disciplinary outcomes, though effects varied by activity type. Participation in non-sport activities was generally protective, with both moderate and high levels associated with higher grades and a reduced likelihood of unexcused absences and out-of-school suspension. Sport participation was less consistent across outcomes, with most coefficients near zero, although high sport participation showed a marginal positive association with grade average. Higher levels of involvement in religious youth activities was associated with stronger academic performance and lower rates of absenteeism and suspension, although associations with expulsion were less consistent.

Demographic and contextual controls largely behaved as expected. Girls and students from higher-SES backgrounds had better outcomes and were less involved in disciplinary actions. There were still race differences in outcomes even after controlling for self-regulation and participation, particularly for suspension and expulsion, where Black students were at significantly higher risk. Measures of dwelling condition were more consistently related to disciplinary outcomes than neighborhood condition, suggesting that household environments may be especially relevant for understanding adolescent school behavior.

These four models point to a coherent pattern in which self-regulation functions as a central protective factor across multiple dimensions of educational functioning. At the same time, structured extracurricular participation, particularly in non-sport and religious

contexts, appears to provide additional benefits beyond those attributable solely to regulatory capacity.

Attachment to School

Building on the patterns observed for educational outcomes, the models in Table 8 shift the focus to students' perceptions of belonging, safety, and fairness within their school environment. These indicators of school attachment represent an important dimension of adolescent adjustment, capturing how connected, valued, and secure students feel in their educational setting. Using the same format as prior outcomes, these models assess both individual and structural factors, highlighting the combined influence of demographics, home and neighborhood conditions, extracurricular participation, and self-regulation.

Overall model fit remained strong across all four attachment outcomes, with scaled CFI values consistently at or exceeding .945, scaled TLI values above .98, and scaled RMSEA remaining low. The results demonstrate a nuanced pattern of predictors. Self-regulation once again emerged as a reliable positive factor in fostering stronger school connections. Both sport and non-sport extracurricular activities as well as religious youth activity showed modest but consistent associations with positive perceptions of school climate, suggesting that structured engagement outside the classroom may enhance feelings of belonging and support.

Both moderate and high sport participation were positively associated with feeling close to people at school, feeling like part of the school, and feeling safe at school. In contrast, high sport participation was also associated with greater reported trouble with teachers. This combination of results suggests that sport involvement may strengthen belonging-oriented aspects of school attachment while also increasing exposure to contexts in which authority conflict is more likely, particularly among highly involved youth. Non-sport participation was consistently associated with positive belonging-oriented attachment outcomes, while moderate participation was also linked to fewer reported difficulties with

Table 8
Wave I Attachment to School Models

	Feel Close to People at School ^a	Feel Like a Part of School ^b	Feel Safe in School ^c	Trouble With Teachers ^d
Non-Sport Participation				
Mod. participation	0.044 (0.022)*	0.058 (0.022)**	0.020 (0.022)	-0.052 (0.023)*
High participation	0.069 (0.020)***	0.102 (0.020)***	0.059 (0.021)**	-0.031 (0.022)
Sport Participation				
Mod. participation	0.100 (0.021)***	0.164 (0.021)***	0.089 (0.022)***	0.029 (0.022)
High participation	0.096 (0.022)***	0.152 (0.022)***	0.087 (0.022)***	0.068 (0.023)**
Religious Youth Participation				
< Once per month	0.043 (0.020)*	0.028 (0.020)	0.009 (0.021)	0.003 (0.022)
≥ Once per month	0.040 (0.021) [†]	0.053 (0.021)*	0.005 (0.021)	-0.022 (0.021)
≥ Once per week	0.059 (0.020)**	0.079 (0.021)***	0.041 (0.021) [†]	-0.066 (0.022)**
Self-Regulation	0.344 (0.022)***	0.420 (0.022)***	0.311 (0.023)***	-0.339 (0.024)***
Age	-0.048 (0.020)*	-0.049 (0.020)*	0.028 (0.021)	-0.089 (0.021)***
Female	-0.017 (0.020)	-0.010 (0.021)	-0.022 (0.021)	-0.133 (0.021)***
SES	-0.014 (0.021)	0.002 (0.021)	0.059 (0.022)**	-0.051 (0.022)*
Hispanic	0.030 (0.020)	-0.009 (0.020)	-0.028 (0.020)	-0.028 (0.021)
Black	-0.036 (0.017)*	-0.013 (0.018)	-0.083 (0.018)***	0.044 (0.018)*
Other Race	0.014 (0.018)	-0.022 (0.019)	-0.053 (0.020)**	0.008 (0.020)
Dwelling Condition				
Fairly well kept	-0.095 (0.024)***	-0.078 (0.024)**	-0.050 (0.024)*	0.059 (0.025)*
Poorly kept	-0.071 (0.022)**	-0.082 (0.023)***	-0.021 (0.022)	0.043 (0.023) [†]
Very poorly kept	-0.081 (0.024)***	-0.048 (0.026) [†]	-0.002 (0.024)	0.033 (0.023)
Neighborhood Condition				
Fairly well kept	0.039 (0.025)	0.006 (0.026)	0.021 (0.026)	-0.017 (0.027)
Poorly kept	0.038 (0.023) [†]	0.027 (0.025)	-0.029 (0.024)	-0.008 (0.025)
Very poorly kept	-0.006 (0.025)	0.004 (0.025)	-0.025 (0.024)	0.006 (0.024)
Rural area	0.017 (0.023)	-0.004 (0.023)	0.011 (0.024)	0.010 (0.024)
Scaled χ^2 (df)	1326.440 (366)***	1337.320 (366)***	1268.450 (366)***	1297.430 (366)***
Scaled CFI	0.945	0.945	0.947	0.946
Scaled TLI	0.984	0.984	0.985	0.984
Scaled RMSEA	0.026	0.026	0.025	0.025
SRMR	0.033	0.034	0.031	0.033
<i>n</i>	3948	3949	3948	3949

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a How much do you agree or disagree with the following statement: You feel close to people at your school.

^b How much do you agree or disagree with the following statement: You feel like you are a part of your school.

^c How much do you agree or disagree with the following statement: You feel safe in your school.

^d Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?

teachers, indicating a pattern of school integration that does not carry the same authority-related tradeoffs observed for sport participation. Participation in religious youth activities once per week or more corresponded with increased feelings of closeness, belonging, and safety, while also protecting against negative interactions with teachers. Moderate participation in structured non-sport activities can provide a balance of social support and adult oversight, reducing teacher/student tension. Similarly, the cooperative and community-oriented nature of religious youth activities may help strengthen peer relationships, while also reducing conflict with authority figures.

Demographic disparities were evident across several models. Black students and those residing in less well-maintained homes tended to report weaker attachment, indicating the persistent influence of structural and environmental factors. Meanwhile, the protective effect of higher SES appeared to be effective only in perceptions of safety and student/teacher relationships. This could be an artifact of students with higher SES attending better provisioned schools, but the lack of geo-coding and school identifiers in the public version of Add Health make testing the assumption difficult. Female students showed lower conflict with teachers, but had otherwise non-significant results. Overall, the results indicate that while self-regulation and extracurricular participation positively work to buffer students against disconnection from school, broader social conditions continue to shape how adolescents experience their educational environments.

Attachment to Parents and Family

After examining attachment to school, the subsequent models evaluate attachment to parents and family. These outcomes reflect adolescents' perceptions of parental care, family understanding, parental attention, and desire to leave home. Consistent with the school attachment models, overall model fit was strong across all outcomes. Scaled CFI values ranged from .941 to .948, scaled TLI values exceeded .98, and scaled RMSEA estimates clustered around .025 to .026, with SRMR values below .045. These indices demonstrate that

Table 9
Wave I Attachment to Parents Models

	Parental Care ^a	Family Understanding ^b	Family Pays Attention ^c	Desire to Leave Home ^d
Non-Sport Participation				
Mod. participation	0.036 (0.030)	−0.019 (0.021)	0.020 (0.022)	0.001 (0.021)
High participation	0.012 (0.031)	−0.023 (0.021)	0.006 (0.021)	0.001 (0.021)
Sport Participation				
Mod. participation	0.023 (0.031)	0.035 (0.021) [†]	0.044 (0.022) [*]	−0.014 (0.021)
High participation	0.018 (0.031)	0.044 (0.022) [*]	0.052 (0.022) [*]	−0.063 (0.021) ^{**}
Religious Youth Participation				
< Once per month	0.002 (0.030)	0.004 (0.019)	0.002 (0.021)	−0.006 (0.020)
≥ Once per month	−0.015 (0.029)	0.045 (0.021) [*]	0.022 (0.021)	−0.033 (0.020)
≥ Once per week	0.091 (0.030) ^{**}	0.129 (0.020) ^{***}	0.081 (0.021) ^{***}	−0.063 (0.021) ^{**}
Self-Regulation	0.366 (0.032) ^{***}	0.559 (0.020) ^{***}	0.494 (0.021) ^{***}	−0.375 (0.022) ^{***}
Age	−0.113 (0.030) ^{***}	−0.119 (0.020) ^{***}	−0.083 (0.021) ^{***}	0.326 (0.018) ^{***}
Female	−0.018 (0.029)	−0.096 (0.020) ^{***}	−0.023 (0.021)	0.022 (0.020)
SES	0.070 (0.030) [*]	−0.042 (0.021) [*]	0.069 (0.021) ^{**}	0.028 (0.021)
Hispanic	0.036 (0.029)	0.012 (0.019)	0.008 (0.019)	−0.030 (0.020)
Black	0.025 (0.026)	0.006 (0.017)	−0.002 (0.018)	0.054 (0.017) ^{**}
Other Race	−0.051 (0.025) [*]	−0.020 (0.018)	−0.039 (0.020) [*]	0.020 (0.020)
Dwelling Condition				
Fairly well kept	−0.043 (0.033)	−0.077 (0.024) ^{**}	−0.059 (0.025) [*]	0.032 (0.023)
Poorly kept	−0.089 (0.030) ^{**}	−0.031 (0.022)	−0.044 (0.022) [*]	0.079 (0.021) ^{***}
Very poorly kept	−0.036 (0.033)	−0.044 (0.024) [†]	−0.040 (0.025)	0.068 (0.026) ^{**}
Neighborhood Condition				
Fairly well kept	0.026 (0.036)	−0.027 (0.026)	0.006 (0.027)	0.003 (0.025)
Poorly kept	0.077 (0.035) [*]	−0.024 (0.024)	0.005 (0.024)	−0.001 (0.024)
Very poorly kept	0.061 (0.038)	−0.004 (0.024)	0.018 (0.025)	−0.040 (0.025)
Rural area	0.002 (0.033)	−0.014 (0.023)	0.007 (0.024)	0.025 (0.023)
Scaled χ^2 (df)	1371.420 (366) ^{***}	1289.480 (366) ^{***}	1304.220 (366) ^{***}	1320.440 (366) ^{***}
Scaled CFI	0.941	0.948	0.947	0.944
Scaled TLI	0.983	0.985	0.985	0.984
Scaled RMSEA	0.026	0.025	0.025	0.026
SRMR	0.044	0.033	0.034	0.036
<i>n</i>	3941	3945	3945	3923

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standardized coefficients with scaled fit indices.

^a How much do you feel that your parents care about you?

^b How much do you feel that people in your family understand you?

^c How much do you feel that your family pays attention to you?

^d How much do you feel that you want to leave home?

the models provide an adequate representation of the data while accounting for the complex survey design.

Self-regulation consistently emerged as a central predictor across all four family attachment outcomes. Higher self-regulation was associated with stronger perceptions of parental care, greater feelings of being understood by family members, and increased perceived parental attention. Conversely, self-regulation was negatively associated with the desire to leave home, indicating that adolescents with stronger regulatory capacities were less likely to report wanting to leave their family environment. The magnitude of these associations was substantial and, in several cases, exceeded those observed for demographic and contextual controls. This pattern indicates that internal regulatory capacities are closely linked to how adolescents experience and evaluate their family relationships.

Age demonstrated a consistent pattern across outcomes. Older adolescents reported lower levels of parental care, family understanding, and parental attention, as well as a stronger desire to leave home. These associations align with developmental expectations and likely reflect increasing autonomy and distancing from family relationships during adolescence. Gender differences were less pronounced, though female adolescents reported significantly lower perceived family understanding. SES showed modest but generally positive associations with parental care and attention, while its relationship with family understanding was negative.

Racial and contextual factors displayed more selective associations. Black students reported an increased desire to leave home, even after adjusting for self-regulation and other covariates. Adolescents classified as other race reported slightly lower levels of perceived parental care and attention. Measures of dwelling condition were more consistently related to family attachment than were measures of neighborhood condition. Compared to very well kept dwellings, living in fairly, poorly, or very poorly kept dwellings showed a negative pattern across several statistically significant findings for parental care, family understanding, and attention. Additionally, poorly and very poorly kept dwellings increased the desire to

leave home, suggesting that proximal household environments may shape family relationships more directly than broader neighborhood contexts.

Extracurricular participation demonstrated relatively limited associations with family attachment outcomes, especially in comparison to the school attachment models. Non-sport participation was unrelated to all outcomes. Sport participation showed modest positive associations with family understanding and parental attention, particularly at higher levels of involvement, and was also linked to a lower desire to leave home among highly involved youth. Participation in religious youth activity exhibited the most consistent pattern, with frequent participation associated with higher perceived parental care, stronger family understanding, greater parental attention, and a lower desire to leave home. These findings suggest that religious involvement may reinforce family-oriented norms and relational bonds more directly than other forms of extracurricular activity, particularly at higher levels of engagement.

These findings indicate that attachment to parents and family is shaped primarily by adolescents' self-regulatory capacities and immediate household conditions, while extracurricular participation plays a more limited and outcome-specific role. In contrast to attachment to school, where participation patterns were more consistently predictive, family attachment appears to be more strongly rooted in internal regulatory processes and proximal family environments.

Tobacco, Alcohol, and Drug Use Models

Following the analysis of educational outcomes, four models were estimated to examine self-reported involvement in substance use behaviors, including cigarette smoking, binge drinking, marijuana use, and drunk driving. These outcomes represent a range of adolescent risk behaviors and allow for assessment of whether the protective associations of self-regulation and extracurricular participation extend beyond relational and attitudinal domains to overt behavioral outcomes.

Table 10
Wave I Tobacco, Alcohol, and Drug Use

	Cigarette Smoking ^a	Binge Drinking ^b	Marijuana Use ^c	Drunk Driving ^d
Non-Sport Participation				
Mod. participation	-0.054 (0.027)*	-0.032 (0.025)	-0.026 (0.029)	-0.019 (0.048)
High participation	-0.054 (0.027)*	-0.042 (0.024) [†]	-0.052 (0.028) [†]	0.001 (0.045)
Sport Participation				
Mod. participation	-0.052 (0.027) [†]	0.070 (0.024)**	0.033 (0.028)	0.077 (0.049)
High participation	-0.097 (0.029)***	0.024 (0.025)	0.016 (0.029)	0.009 (0.044)
Religious Youth Participation				
< Once per month	-0.040 (0.025)	-0.021 (0.022)	-0.049 (0.026) [†]	-0.007 (0.041)
≥ Once per month	-0.076 (0.027)**	-0.051 (0.024)*	-0.138 (0.028)***	-0.021 (0.045)
≥ Once per week	-0.203 (0.028)***	-0.204 (0.025)***	-0.179 (0.030)***	-0.173 (0.050)***
Self-Regulation	-0.274 (0.031)***	-0.197 (0.026)***	-0.271 (0.030)***	-0.226 (0.053)***
Age	0.234 (0.027)***	0.329 (0.022)***	0.239 (0.027)***	0.240 (0.045)***
Female	0.032 (0.026)	-0.045 (0.023) [†]	-0.021 (0.028)	-0.169 (0.046)***
SES	-0.066 (0.028)*	-0.026 (0.025)	0.016 (0.028)	0.086 (0.046) [†]
Hispanic	-0.117 (0.026)***	-0.021 (0.022)	0.015 (0.025)	-0.060 (0.055)
Black	-0.240 (0.026)***	-0.163 (0.022)***	-0.003 (0.026)	-0.230 (0.053)***
Other Race	-0.033 (0.024)	-0.040 (0.022) [†]	0.006 (0.024)	-0.006 (0.037)
Dwelling Condition				
Fairly well kept	0.049 (0.031)	0.041 (0.026)	0.017 (0.031)	-0.023 (0.053)
Poorly kept	0.060 (0.029)*	0.052 (0.024)*	0.001 (0.029)	-0.022 (0.049)
Very poorly kept	0.021 (0.032)	-0.012 (0.024)	0.012 (0.030)	-0.050 (0.060)
Neighborhood Condition				
Fairly well kept	-0.016 (0.035)	-0.024 (0.030)	-0.013 (0.034)	0.009 (0.057)
Poorly kept	-0.030 (0.033)	0.049 (0.026) [†]	0.046 (0.030)	-0.052 (0.060)
Very poorly kept	0.015 (0.031)	0.018 (0.024)	0.007 (0.027)	-0.018 (0.053)
Rural area	-0.007 (0.030)	-0.003 (0.027)	-0.045 (0.031)	0.056 (0.048)
Scaled χ^2 (df)	1397.930 (366)***	1319.090 (366)***	1220.450 (366)***	804.800 (366)***
Scaled CFI	0.940	0.944	0.947	0.953
Scaled TLI	0.983	0.984	0.985	0.986
Scaled RMSEA	0.027	0.026	0.025	0.025
SRMR	0.047	0.038	0.039	0.042
<i>n</i>	3948	3942	3695	1853

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Have you ever smoked cigarettes regularly, that is, at least 1 cigarette every day for 30 days?

^b Over the past 12 months, on how many days did you drink 5 or more drinks in a row?

^c During your life, how many times have you used marijuana?

^d Have you ever driven while drunk?

Overall model fit was strong and consistent across outcomes. Scaled CFI values ranged from .940 to .953, scaled TLI values exceeded .98 in all models, while scaled RMSEA clustered tightly between .025 and .027. SRMR values remained low, indicating acceptable fit.

Self-regulation again consistently emerged as a central protective factor across all four outcomes. Elevated self-regulation levels were significantly associated with reduced likelihoods of cigarette smoking, binge drinking, marijuana use, and drunk driving. Furthermore, the stability of self-regulation coefficients across behaviors of increasing severity highlights the broad significance of regulatory capacity in mitigating adolescent risk behaviors.

Patterns of extracurricular participation varied by activity type. Non-sport participation was modestly associated with reduced cigarette smoking at both moderate and high levels of involvement, but demonstrated weaker and less consistent associations with alcohol and marijuana use. In contrast, sport participation revealed a more complex relationship. Although higher levels of sport participation correlated with lower cigarette smoking, moderate involvement in sports was linked to increased binge drinking. This divergence indicates that sport involvement may discourage certain health-compromising behaviors while simultaneously fostering social environments where alcohol use is more normative. Additionally, prior research has shown that participation in organized sports can increase exposure to peer norms that promote alcohol use in both social and competitive athletic settings (Crosnoe 2002; Hoffmann 2006).

Religious participation among youth demonstrated the most consistent protective associations across all measured substance use outcomes. Adolescents engaging in weekly or more frequent participation exhibited significantly lower levels of cigarette smoking, binge drinking, marijuana use, and drunk driving. The graded pattern of these associations suggests that increased involvement is associated with progressively lower substance use, even after controlling for self-regulation, demographic variables, and contextual factors.

Demographic and contextual controls yielded results consistent with expectations. Substance use increased with age across all measured outcomes. Female students were significantly less likely to report drunk driving. Black adolescents reported lower levels of cigarette smoking, binge drinking, and drunk driving, while racial differences in marijuana use were not statistically significant. Measures of dwelling condition were more predictive than those of neighborhood condition, with poorer housing quality associated with higher rates of cigarette smoking and binge drinking.

These findings are best interpreted through the framework of social bonds theory. Participation does not uniformly reduce risk; rather, it confers benefits when it reinforces attachments to conventional institutions and normative expectations. Involvement in certain structured activities may strengthen social bonds associated with reduced engagement in high-risk behaviors, whereas other forms of participation, such as sports, do not consistently exhibit the same protective effect.

Delinquency

Building on the findings for substance use, four additional models were estimated to examine self-reported delinquent behaviors: lying to parents, running away from home, minor theft, and serious physical fighting. These outcomes represent a spectrum of non-substance-related delinquent behaviors differing in severity and visibility, enabling evaluation of whether the protective mechanisms identified in previous models also apply to more overt forms of rule violation and behavioral misconduct.

Model fit was strong and consistent across all four delinquency outcomes. Scaled CFI values ranged from .944 to .946, scaled TLI values exceeded .98 in every model, and scaled RMSEA values clustered tightly between .025 and .026. SRMR values remained low, indicating adequate representation of the observed data.

Self-regulation again emerged as the most robust predictor across all delinquency outcomes. Higher levels of self-regulation were associated with substantially lower likelihoods

Table 11
Wave I Delinquency Models

	Lying to Parents ^a	Running Away from Home ^b	Minor Theft ^c	Serious Fighting ^d
Non-Sport Participation				
Mod. participation	0.017 (0.022)	-0.066 (0.041)	0.014 (0.028)	-0.065 (0.024)**
High participation	0.002 (0.021)	-0.102 (0.039)**	-0.003 (0.027)	-0.096 (0.025)***
Sport Participation				
Mod. participation	0.077 (0.022)***	0.069 (0.041) [†]	0.058 (0.027)*	0.028 (0.024)
High participation	0.059 (0.023)*	0.045 (0.042)	0.003 (0.028)	0.060 (0.024)*
Religious Youth Participation				
< Once per month	0.026 (0.020)	-0.008 (0.038)	0.014 (0.025)	-0.009 (0.023)
≥ Once per month	-0.008 (0.021)	0.003 (0.038)	-0.041 (0.027)	-0.002 (0.023)
≥ Once per week	-0.048 (0.022)*	-0.061 (0.041)	-0.092 (0.027)***	-0.031 (0.025)
Self-Regulation				
	-0.375 (0.024)***	-0.399 (0.037)***	-0.355 (0.030)***	-0.222 (0.027)***
Age	0.144 (0.021)***	0.062 (0.040)	-0.027 (0.028)	-0.132 (0.023)***
Female	0.064 (0.021)**	0.065 (0.038) [†]	-0.133 (0.025)***	-0.237 (0.022)***
SES	0.031 (0.022)	-0.051 (0.040)	0.046 (0.028)	-0.135 (0.023)***
Hispanic	0.037 (0.021) [†]	-0.043 (0.036)	0.100 (0.025)***	0.061 (0.021)**
Black	-0.005 (0.020)	-0.012 (0.034)	-0.009 (0.025)	0.102 (0.020)***
Other Race	0.045 (0.019)*	0.044 (0.031)	0.047 (0.023)*	0.018 (0.023)
Dwelling Condition				
Fairly well kept	-0.016 (0.025)	0.139 (0.043)**	0.091 (0.030)**	0.104 (0.026)***
Poorly kept	0.052 (0.023)*	0.126 (0.039)**	0.028 (0.028)	0.041 (0.023) [†]
Very poorly kept	-0.018 (0.025)	0.103 (0.040)**	0.005 (0.028)	0.034 (0.025)
Neighborhood Condition				
Fairly well kept	-0.023 (0.027)	-0.052 (0.048)	-0.064 (0.033) [†]	0.006 (0.029)
Poorly kept	-0.024 (0.025)	-0.047 (0.049)	-0.008 (0.031)	0.013 (0.026)
Very poorly kept	-0.009 (0.026)	-0.059 (0.044)	-0.039 (0.026)	0.007 (0.024)
Rural area	-0.057 (0.024)*	-0.068 (0.045)	-0.074 (0.030)*	0.003 (0.027)
Scaled χ^2 (df)	1311.400 (366)***	1289.100 (366)***	1280.630 (366)***	1306.170 (366)***
Scaled CFI	0.945	0.946	0.946	0.944
Scaled TLI	0.984	0.984	0.985	0.984
Scaled RMSEA	0.026	0.025	0.025	0.026
SRMR	0.035	0.041	0.035	0.038
<i>n</i>	3938	3940	3937	3938

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?

^b In the past 12 months, how often did you run away from home?

^c In the past 12 months, how often did you steal something worth less than \$50?

^d In the past 12 months, how often did you get into a serious physical fight?

of lying to parents, running away from home, engaging in minor theft, and participating in serious physical altercations. The strength of these associations surpassed those identified in the substance use models, especially for behaviors involving deception and autonomy from parental authority. These findings indicate that self-regulation is particularly central in constraining behaviors that challenge family, school, and community authority, aligning with social control perspectives that emphasize internalized regulation as foundational for conformity.

Extracurricular participation exhibited varied associations with different delinquency outcomes, indicating that such involvement does not consistently reduce risk. Participation in non-sport activities showed a modest protective effect against more severe or externally observable behaviors. Adolescents with high levels of non-sport participation were significantly less likely to report running away from home or engaging in serious physical fighting, while moderate participation was also linked to reduced involvement in fighting. These results indicate that sustained engagement in structured, non-sport activities may strengthen connections to conventional institutions and foster social environments that discourage overt behavioral misconduct.

In contrast, sport participation demonstrated a more complex pattern, and in some instances, an opposing one. Both moderate and high levels of sport participation were associated with an increased likelihood of lying to parents. Moderate sport participation was positively associated with minor theft, and high sport participation was linked to a greater likelihood of serious physical fighting. These findings parallel patterns observed in the substance use models and suggest that sport involvement may provide structure but also expose adolescents to peer environments where certain forms of rule-breaking or aggression are more common. Thus, sport participation does not function as a uniformly protective context but instead confers mixed effects that differ by behavioral domain.

Religious youth participation exhibited limited yet meaningful protective associations. Weekly or more frequent participation correlated with reduced levels of minor theft, whereas

associations with other delinquent behaviors were weaker and less consistent. These findings indicate that religious involvement may most strongly influence behaviors related to moral norms and adherence to property rules, rather than more severe or emotionally driven actions such as running away or engaging in physical altercations.

Demographic and contextual covariates exhibited anticipated patterns. Age showed a positive association with lying to parents and a negative association with serious physical fighting, indicating developmental transitions from overt aggression to more covert rule violations. Female adolescents reported lower levels of minor theft and fighting, though they were somewhat more likely to report lying to parents. Racial disparities remained evident for certain outcomes, especially serious fighting, even after controlling for self-regulation and participation patterns. Dwelling conditions were more consistently linked to delinquency than neighborhood condition measures, highlighting the importance of immediate household environments in influencing adolescent behavior.

Collectively, these findings extend the substance use results by demonstrating that self-regulation serves as a central protective factor across various forms of delinquency. The effects of extracurricular participation, however, depend on both the type of activity and the specific behavioral domain. From a social bonds perspective, participation appears most protective when it reinforces conventional norms and strengthens attachments to structured, pro-social institutions. In contrast, certain forms of participation, particularly sports, may expose adolescents to peer dynamics that increase the likelihood of specific delinquent behaviors. These results underscore the need to differentiate between activity types when assessing the developmental consequences of extracurricular involvement and emphasize the significance of internalized regulatory capacity as a key mechanism linking participation to behavioral outcomes.

From Direct Associations to Theoretical Processes within Self-Regulation

The results in this chapter indicate that early social experiences, demographic characteristics, and structured activity participation are associated with measurable differences in academic performance, substance use, and various delinquent behaviors, thus reinforcing two central themes in adolescent behavioral development. First, self-regulation consistently emerges as a significant predictor across nearly all domains, even after controlling for a wide range of contextual factors. Second, the effects of extracurricular participation are not uniform; their impact depends on the type of activity, the level of engagement, and the social norms within each context. These results extend previous research by highlighting that participation settings differ in peer culture and adult supervision, which subsequently influence the skills and expectations internalized by youth.

While these models improve understanding of the relationship between participation, social environments, and adolescent outcomes, they also raise a theoretical question about mechanism. The current analyses treat self-regulation as a unified latent construct. However, the measurement work in earlier sections demonstrates that self-regulation is multifaceted, and it is defined and operationalized differently across criminology, psychology, and developmental science. In criminology, self-control is often conceptualized as a single, relatively stable trait linked to impulsivity, risk-taking, and a preference for immediate gratification, as theorized by Gottfredson and Hirschi (1990). In contrast, psychological and developmental perspectives conceptualize self-regulation as a multidimensional system encompassing emotional reactivity, executive functioning, behavioral monitoring, and social confidence, with these capacities often developing at different rates across adolescence (Moilanen and DeLong 2018; Muraven and Baumeister 2000; Vohs and Baumeister 2016).

Models that assume a single pathway from background factors to self-regulation and from self-regulation to outcomes may overlook the construct's internal dynamics. Theories of self-regulation, executive function, and cognitive control commonly propose developmental processes in which emotional stability supports more effective regulation of negative

reactivity, reduced negative reactivity facilitates social acceptance and self-concept, and these social resources support deliberate problem-solving and engagement with pro-social peers. These developmental processes align with integrated criminological perspectives, such as the Social Development Model (Catalano and Hawkins 1996) and the broader literature on skill accumulation during adolescence. In these frameworks, self-regulatory capacities develop through repeated interactions among emotional, cognitive, and social dimensions, with growth in one area potentially influencing others in ways not captured by a single higher-order factor.

The evidence presented in this chapter strongly motivates further examination of these internal pathways. Investigating whether the lower-order components of self-regulation reinforce one another, form a developmental sequence, or exhibit indirect relations may clarify why self-regulation is such a powerful predictor across diverse behavioral domains. Understanding the structure and direction of these within-construct relations has implications that extend beyond the current analyses. This approach provides a framework for refining the conceptualization, measurement, and integration of self-regulation into longitudinal models of adolescent development.

Although the Wave I results are cross-sectional, the strong and consistent associations observed here provide a clear empirical basis for testing theoretically motivated within-construct pathways in the next stage of modeling. In the following chapter I expand the structural models to incorporate relations among the four components of self-regulation. This approach enables a more comprehensive analysis of the interactions among emotional, cognitive, and social processes within individuals, as well as the influence of these dynamics on broader patterns of participation and risk behavior during adolescence. By directly addressing these processes, the models in Chapter 4 offer a more complete theoretical and empirical foundation for understanding the mechanisms underlying self-regulation and its protective role against harmful outcomes in youth.

Chapter 4: Wave I Developmental Cascade of Self-Regulation

Understanding behavior during adolescence requires more than identifying which individual or contextual factors are in play; it also requires examining how the underlying processes interact within the adolescent period itself. The previous chapter demonstrated that self-regulation is a consistent and meaningful predictor across academic, substance use, and other risk outcomes. Yet the models used to this point treat self-regulation as a unified latent variable, with little consideration for how each factor affects the others.

The measurement work and substantive findings in Chapter 3 make it clear that this assumption is potentially overly restrictive. Emotional stability, problem-solving capacity, impulsivity, and self-concept are related yet distinct elements of self-regulation. Theories across developmental psychology, cognitive science, and criminology suggest that these components do not operate independently or in a linear fashion. Instead, they develop in tandem, influencing each other over time (Blair 2016; Burt 2020; Muraven and Baumeister 2000; Pratt and Cullen 2000; Vohs and Baumeister 2016).

Methods

Pathways in the Development of Self-Regulation

In this chapter, I present an enhanced structural model designed to test these internal pathways. Rather than treating self-regulation as a single mechanism used to control for overall influence, the models presented here examine the relations among the four components. This approach allows for the possibility that self-regulation can further develop in conjunction with lived experience, that strengths in one domain may compensate for weaknesses in another, and that developmental change during adolescence may follow a sequence rather than a simple accumulation of skills. By explicitly modeling this process, a more detailed account is provided of how self-regulation is organized within individuals, how its components work together, and how these internal dynamics contribute to both risk and resilience.

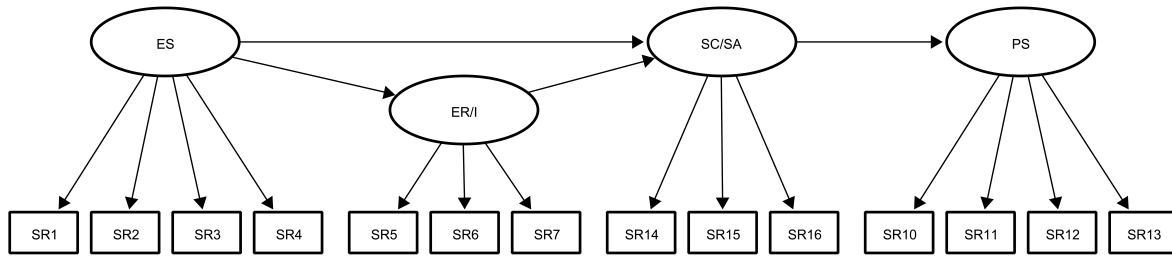
The subsequent models constitute the most theoretically ambitious step in this dissertation. They build upon previous research by conceptualizing self-regulation not only as a predictor of behavioral outcomes but also as a system of interdependent processes influenced by emotional, cognitive, and social development, offering a deeper empirical foundation for understanding how self-regulatory capacities emerge, interact, and ultimately protect youth from harmful trajectories.

Defining a Developmental Cascade Model of Self-Regulation

The developmental cascade model presented in Figure 4 represents a deliberate departure from the measurement and structural approach adopted in Chapter 3. In the prior chapter, self-regulation was modeled as a higher-order latent construct and incorporated into outcome models as a unified predictor. That approach was appropriate for establishing the overall relevance of self-regulation across educational, relational, and behavioral domains. However, it imposed a simplifying assumption that the internal components of self-regulation operate simultaneously and exert their influence through a single, aggregated mechanism.

The models estimated in this chapter relax that assumption. Rather than treating self-regulation as a monolithic trait, the cascade framework explicitly models the interrelationships among its constituent components. Emotional stability (ES), emotional reactivity and impulsivity (ER/I), self-concept and social acceptance (SC/SA), and problem solving (PS) are specified as distinct latent constructs with theoretically ordered pathways linking them. Each set of indicators retains the coding structure established in Chapter 3, such that larger values reflect greater regulatory capacity. This specification reflects the developmental literature suggesting that emotional regulation provides a foundational context for later cognitive and social regulatory processes, which in turn shape adolescents' capacity for deliberate problem solving and behavioral control (Eisenberg et al. 2010; Meyer et al. 2025).

Figure 4. Developmental Cascade Model of Self-Regulation



Structurally, the cascade model replaces the second-order latent factor used in Chapter 3 with a sequence of directional paths among latent variables. ES is specified as a latent construct with an initial position in the self-regulation system, reflecting its close alignment with early affective regulation and relational security, as well as the parental source of responses. ER/I is modeled as partially dependent on ES, consistent with theories emphasizing the role of affective stability in constraining impulsive responses. SC/SA is then modeled as a function of both ES and ER, capturing the idea that adolescents' self-perceptions and perceived social standing are shaped by both emotional regulation and behavioral responsiveness. Finally, PS is positioned as the most downstream regulatory component, influenced by SC/SA, reflecting its reliance on both emotional control and social-cognitive confidence. Importantly, this cascade specification does not imply strict developmental determinism or a rigid temporal sequence. Rather, it provides a theoretically informed approximation of dominant pathways through which regulatory capacities may interact during adolescence.

The only difference between the Chapter 3 and Chapter 4 specifications regards how self-regulation is modeled. The Chapter 4 models break down self-regulation into distinct elements before estimating directional links between them instead of treating it as one higher-order latent predictor. As such, emotional stability, emotional reactivity/impulsivity, self-concept/social acceptance, and problem solving capacity load on and predict each other in a developmental cascade, while all other structural paths from exogenous predictors to outcomes are held consistent with Chapter 3.

This revised specification extends the Chapter 3 framework by shifting the analytic

emphasis from whether self-regulation matters to how its internal components work together. By modeling self-regulation as a system of interdependent processes rather than a single latent trait, the cascade approach provides a more developmentally nuanced account of regulatory functioning during adolescence and establishes a foundation for examining how these internal dynamics relate to subsequent behavioral outcomes.

Internal Pathways of Self-Regulation

The developmental cascade model estimated in this chapter provides strong empirical support for conceptualizing self-regulation as a system of interdependent processes rather than a single, unitary trait. As shown in Table 12, the model demonstrates excellent fit to the Wave I data (scaled CFI = .981, scaled TLI = .976, scaled RMSEA = .043, SRMR = .036), indicating that the proposed structure adequately captures the relations among the four latent components of self-regulation.

At the foundation of the cascade, emotional stability occupies an upstream position within the regulatory system. Higher levels of emotional stability are associated with lower emotional reactivity and impulsivity, consistent with theoretical perspectives emphasizing the role of affective regulation in constraining reactive behavior. Emotional stability also exhibits a direct association with self-concept and perceived social acceptance, suggesting that adolescents' emotional regulation capacities shape their self-perceptions and social confidence beyond their influence on impulsive responding alone.

Emotional reactivity and impulsivity are in turn highly related to self-concept and feeling socially accepted. Adolescents who report being better able to control impulsive and emotional behaviors also score higher on self-report measures of positive self-evaluations and feeling connected to others. This corresponds with developmental models that describe the social self as a product of these repeated emotional and behavioral experiences with peers and family.

Problem solving is positioned as the most downstream component of the cascade and

is strongly predicted by self-concept and social acceptance. This pattern suggests that effective problem-solving capacity is not solely a cognitive skill but is closely tied to adolescents' confidence, emotional regulation, and perceived social competence. Rather than operating independently, problem solving ability appears to draw upon emotional and social resources established earlier in the system.

Table 12
Developmental Cascade Model of Self-Regulation

Structural Path	β	<i>SE</i>	<i>z</i>	<i>p</i>
ER/I $\leftarrow$ ES	0.196	0.029	6.65	< .001
SC/SA $\leftarrow$ ER/I	0.443	0.032	16.77	< .001
SC/SA $\leftarrow$ ES	0.199	0.032	7.44	< .001
PS $\leftarrow$ SC/SA	0.441	0.020	20.32	< .001
Model Fit Indices				
Scaled CFI				0.981
Scaled TLI				0.976
Scaled RMSEA			0.043	[0.038, 0.048]
SRMR				0.036
<i>n</i>				3,949

Note. Entries report standardized coefficients from the self-regulation cascade model estimated using WLSMV with sampling weights. Only latent structural pathways are shown for clarity. Full measurement model results, thresholds, and residual variances are reported in Appendix E.

This specification does not imply a rigid or deterministic developmental sequence. The model is intended to represent dominant pathways through which regulatory capacities are organized and interrelated during adolescence, rather than fixed stages of development. Nevertheless, the strength and consistency of the estimated paths provide clear evidence that the internal structure of self-regulation is meaningfully ordered and that its components operate in a coordinated manner.

These results justify the use of the cascade framework in subsequent outcome models. By disaggregating self-regulation into its constituent processes and modeling their interrelationships directly, the Chapter 4 models move beyond demonstrating that self-regulation matters and begin to clarify how its internal dynamics contribute to variation

in adolescent behavior.

Developmental Cascade Outcome Model

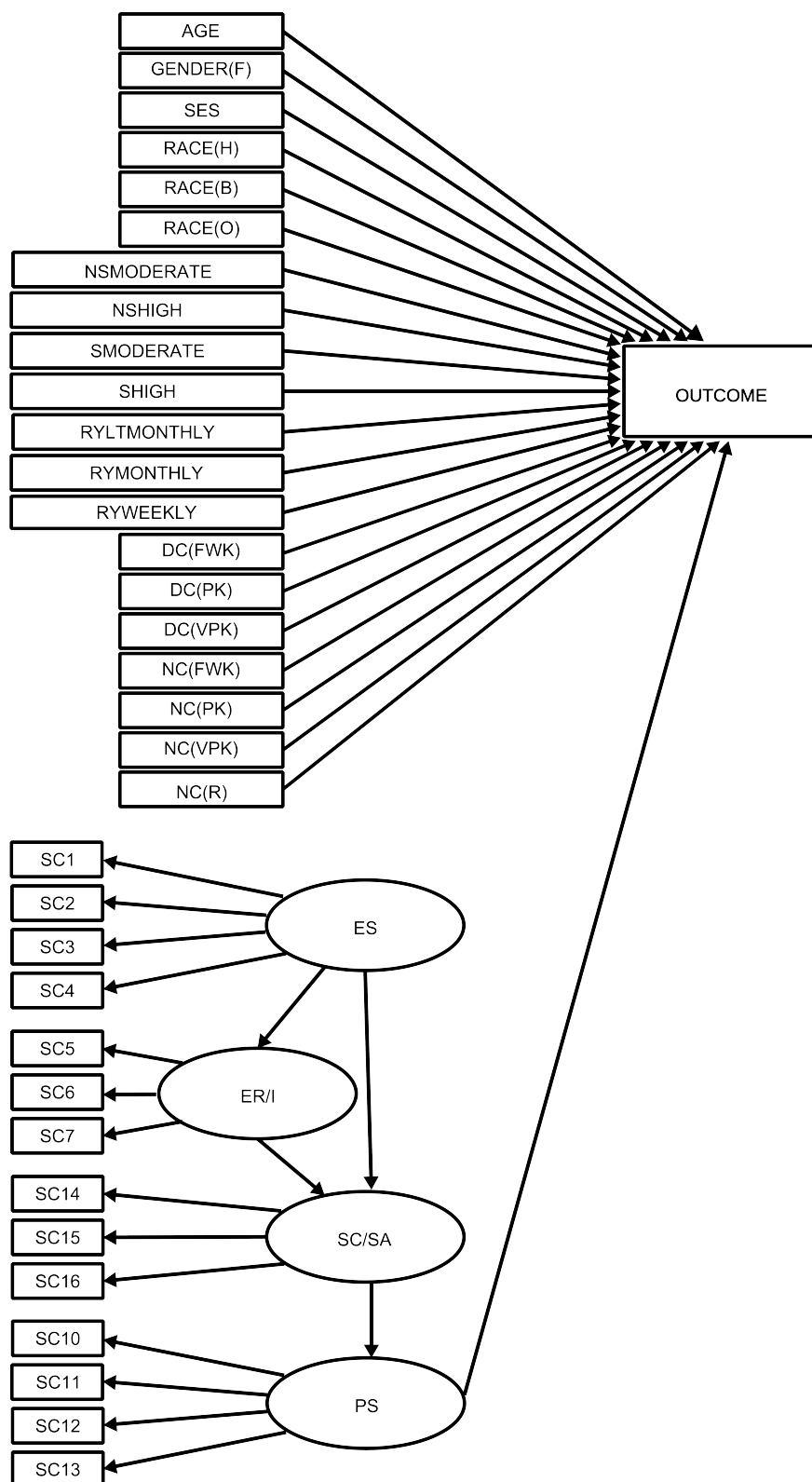
The outcome models estimated in Chapter 4 are specified to align as closely as possible with those presented in Chapter 3. This continuity is intentional. The analytic goal of this chapter is not to introduce new predictors, alter the structural relations among exogenous variables, or revise the measurement of substantive outcomes. Instead, the Chapter 4 models are designed to isolate the consequences of modeling self-regulation as a system of interrelated processes rather than as a single higher-order latent construct.

Accordingly, all outcome models retain the same set of exogenous predictors used in Chapter 3, including demographic characteristics, dwelling and neighborhood conditions, and indicators of structured extracurricular participation. Estimation procedures are likewise unchanged. All models are estimated using WLSMV to accommodate ordinal indicators and incorporate Add Health sampling weights. Outcome variables and coding decisions are held constant across chapters. An explanation of the labels used within Figure 5 can be found in Table 6.

No additional covariances or cross-loadings are introduced in the Chapter 4 models. Latent constructs are measured using the same indicator sets established in Chapter 3, and relationships among exogenous predictors are left unspecified, allowing associations to be absorbed through their shared influence on downstream latent variables and outcomes. This approach preserves parsimony and ensures that the structural interpretation of model parameters remains comparable across chapters.

The sole modification introduced in Chapter 4 concerns the internal representation of self-regulation. In place of the second-order latent self-regulation factor used previously, the Chapter 4 models embed the developmental cascade structure described above. Emotional stability, emotional reactivity and impulsivity, self-concept and social acceptance, and problem solving are specified as distinct latent constructs connected by directional pathways.

Figure 5. Wave I Developmental Cascade Structural Model



These latent components jointly transmit the influence of exogenous predictors to the outcomes, replacing the aggregated self-regulation pathway used in Chapter 3.

Figure 5 illustrates the full structural specification for the Wave I Developmental Cascade outcome models. By holding all other aspects of the model constant, this design allows for a direct comparison between the Chapter 3 and Chapter 4 results and ensures that any differences in estimated effects can be attributed to the internal organization of self-regulation rather than to broader changes in model structure.

Results

Educational Outcomes - Developmental Cascade Models

The developmental cascade models presented in Table 13 build directly upon the Wave I educational outcome models introduced in Chapter 3. As expected, the overall pattern of demographic, contextual, and participation effects remains highly consistent across specifications. This similarity reflects the fact that the same outcome measures, covariates, extracurricular participation indicators, and latent measurement structure are retained. Consequently, differences between the two sets of models are attributable not to changes in model inputs, but to the internal organization of self-regulatory processes.

In Chapter 3, self-regulation is conceptualized as a second-order latent construct exerting direct influence on educational outcomes. Self-regulation exhibited strong associations across all four outcomes, including higher grade averages and reduced incidences of unexcused absences, out-of-school suspension, and expulsion. The developmental cascade models preserve these principal findings while decomposing self-regulation into a theoretically sequenced set of regulatory processes. Instead of serving as a single predictor, self-regulation is represented as a cascade encompassing emotional stability, emotional reactivity and impulsivity, self-concept and social acceptance, and problem-solving skills. This restructuring does not modify the covariate structure, but it does clarify how regulatory capacities are developmentally connected to educational outcomes.

Table 13

Wave I Educational Outcomes - Developmental Cascade Models

	Grade Average (Constructed)	Unexcused Absences	Out-of-School Suspension	Expulsion
Non-Sport Participation				
Mod. participation	0.155 (0.020) ^{***}	-0.091 (0.025) ^{***}	-0.074 (0.026) ^{**}	0.010 (0.057)
High participation	0.186 (0.020) ^{***}	-0.063 (0.025) [*]	-0.074 (0.027) ^{**}	-0.031 (0.053)
Sport Participation				
Mod. participation	0.020 (0.020)	-0.017 (0.024)	-0.033 (0.025)	-0.051 (0.050)
High participation	0.038 (0.022) [†]	-0.033 (0.027)	0.011 (0.027)	0.049 (0.053)
Religious Youth Participation				
< Once per month	0.045 (0.019) [*]	-0.004 (0.023)	-0.045 (0.024) [†]	-0.062 (0.054)
≥ Once per month	0.059 (0.019) ^{**}	-0.058 (0.024) [*]	-0.051 (0.025) [*]	-0.099 (0.052) [†]
≥ Once per week	0.080 (0.020) ^{***}	-0.110 (0.025) ^{***}	-0.094 (0.025) ^{***}	0.012 (0.048)
ES → ER/I	0.229 (0.032) ^{***}	0.204 (0.028) ^{***}	0.205 (0.028) ^{***}	0.205 (0.028) ^{***}
ES → SC/SA	0.166 (0.030) ^{***}	0.178 (0.026) ^{***}	0.179 (0.026) ^{***}	0.176 (0.026) ^{***}
ER/I → SC/SA	0.445 (0.027) ^{***}	0.439 (0.023) ^{***}	0.439 (0.023) ^{***}	0.439 (0.023) ^{***}
SC/SA → PS	0.457 (0.021) ^{***}	0.445 (0.019) ^{***}	0.443 (0.019) ^{***}	0.441 (0.019) ^{***}
Problem Solving	0.110 (0.021) ^{***}	-0.162 (0.023) ^{***}	-0.118 (0.027) ^{***}	-0.134 (0.039) ^{***}
Age	-0.060 (0.019) ^{**}	0.332 (0.022) ^{***}	0.068 (0.025) ^{**}	0.039 (0.053)
Female	0.124 (0.019) ^{***}	-0.006 (0.023)	-0.241 (0.023) ^{***}	-0.269 (0.052) ^{***}
SES	0.197 (0.019) ^{***}	-0.059 (0.025) [*]	-0.201 (0.024) ^{***}	-0.135 (0.046) ^{**}
Hispanic	-0.034 (0.018) [†]	0.031 (0.022)	0.043 (0.022) [†]	0.079 (0.041) [†]
Black	-0.094 (0.017) ^{***}	-0.033 (0.021)	0.205 (0.020) ^{***}	0.183 (0.040) ^{***}
Other Race	-0.001 (0.018)	0.031 (0.021)	0.064 (0.023) ^{**}	-0.063 (0.050)
Dwelling Condition				
Fairly well kept	-0.111 (0.021) ^{***}	0.058 (0.027) [*]	0.101 (0.027) ^{***}	0.102 (0.054) [†]
Poorly kept	-0.077 (0.020) ^{***}	0.076 (0.025) ^{**}	0.083 (0.024) ^{***}	0.014 (0.048)
Very poorly kept	-0.054 (0.023) [*]	0.010 (0.026)	0.068 (0.026) ^{**}	0.072 (0.043) [†]
Neighborhood Condition				
Fairly well kept	-0.019 (0.024)	0.013 (0.030)	0.009 (0.031)	0.016 (0.057)
Poorly kept	-0.012 (0.024)	0.030 (0.027)	0.042 (0.028)	0.046 (0.043)
Very poorly kept	0.027 (0.022)	0.054 (0.026) [*]	0.008 (0.027)	0.045 (0.038)
Rural area	-0.042 (0.022) [†]	-0.010 (0.028)	0.018 (0.028)	-0.024 (0.055)
Scaled χ^2 (df)	1298.690 (366) ^{***}	1400.480 (366) ^{***}	1463.720 (366) ^{***}	1341.340 (366) ^{***}
Scaled CFI	0.932	0.940	0.936	0.943
Scaled TLI	0.981	0.983	0.982	0.984
Scaled RMSEA	0.028	0.027	0.028	0.026
SRMR	0.046	0.042	0.050	0.047
<i>n</i>	3156	3943	3949	3949

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Item constructed from last reported grades in English / Language Arts, Math, Science, and Social Studies / History subjects.^b During this school year, how many times have you skipped school for a full day without an excuse?^c Have you ever received an out-of-school suspension?^d Have you ever been expelled from school?

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Across all four outcomes, higher emotional stability is associated with lower emotional reactivity and impulsivity and with stronger self-concept and social acceptance. These pathways are statistically robust and stable across models, indicating that emotional stability functions as a foundational regulatory capacity rather than a proximal determinant of school performance or behavior. This finding refines the Chapter 3 results by demonstrating that the effects previously attributed to global self-regulation originate upstream in emotional functioning.

Emotional reactivity and impulsivity occupy a transitional position within the cascade. The path from emotional reactivity and impulsivity to self-concept and social acceptance is large and highly consistent across outcomes, exceeding the direct path from emotional stability to self-concept and social acceptance. This pattern suggests that dysregulated emotional responding exerts its primary influence by undermining adolescents' perceptions of themselves and their social standing, rather than through direct effects on academic or disciplinary outcomes.

Self-concept and social acceptance emerge as the central gateway linking emotional regulation to problem-solving capacity. The association between self-concept and social acceptance and problem solving is one of the strongest paths in the model and is remarkably stable across outcomes. This finding indicates that effective problem-solving skills are closely intertwined with adolescents' social and self-evaluative processes, rather than functioning as purely cognitive competencies. In Chapter 3, problem solving appeared as a direct regulatory predictor; the cascade models suggest that its development is contingent upon earlier emotional and social regulation.

Problem solving assumes the role of a proximal predictor of educational outcomes. Greater problem-solving capacity correlates with higher grade averages and a reduced likelihood of unexcused absences, suspensions, and expulsions. The magnitude and direction of these effects are consistent with findings reported in Chapter 3, suggesting that the cascade specification maintains the substantive conclusions of previous models while offering

a more developmentally informed explanation.

The effects of extracurricular participation remain largely consistent with the findings presented in Chapter 3. Non-sport participation and religious youth involvement continue to demonstrate protective associations with academic performance and behavioral outcomes, even after controlling for the full range of self-regulatory processes. In contrast, the associations for sport participation are weaker and less consistent. The persistence of these effects indicates that extracurricular participation is not solely a proxy for internal self-regulation, but also functions in parallel with regulatory development through mechanisms aligned with social bonding and institutional attachment.

Collectively, the developmental cascade models extend, rather than contradict, the findings presented in Chapter 3. By decomposing self-regulation into a sequence of interrelated emotional, social, and cognitive processes, the cascade specification elucidates the developmental pathways through which regulatory capacity influences educational outcomes. This approach maintains parsimony at the outcome level and provides a more precise theoretical account of self-regulation as a dynamic, multistage process.

Attachment to School - Developmental Cascade Models

Table 14 presents the Wave I attachment to school models estimated using the developmental cascade specification. Again, the analytic approach maintains the structural specification from Chapter 3 but replaces the single self-regulation concept with a sequential cascade of emotional stability, emotional reactivity/impulsivity, self-concept and social acceptance, and problem solving. Covariates, participation indicators, outcome definitions, and estimation procedures are the same as for the baseline attachment models reported in Chapter 3.

Across all four attachment outcomes, the cascade pathways are stable in both magnitude and statistical significance. Emotional stability shows a positive correlation with emotional reactivity/impulsivity along with self-concept/social acceptance. Self-concept and

Table 14

Wave I Attachment to School - Developmental Cascade Models

	Feel Close to People at School ^a	Feel Like a Part of School ^b	Feel Safe in School ^c	Trouble With Teachers ^d
Non-Sport Participation				
Mod. participation	0.044 (0.022)*	0.058 (0.022)**	0.020 (0.022)	-0.052 (0.023)*
High participation	0.069 (0.020)***	0.102 (0.020)***	0.059 (0.021)**	-0.031 (0.022)
Sport Participation				
Mod. participation	0.100 (0.021)***	0.164 (0.021)***	0.089 (0.022)***	0.029 (0.022)
High participation	0.096 (0.022)***	0.152 (0.022)***	0.087 (0.022)***	0.068 (0.023)**
Religious Youth Participation				
< Once per month	0.043 (0.020)*	0.028 (0.020)	0.009 (0.021)	0.003 (0.022)
≥ Once per month	0.040 (0.021) [†]	0.053 (0.021)*	0.005 (0.021)	-0.022 (0.021)
≥ Once per week	0.059 (0.020)**	0.079 (0.021)***	0.041 (0.021) [†]	-0.066 (0.022)**
ES → ER/I	0.205 (0.028)***	0.205 (0.028)***	0.206 (0.028)***	0.205 (0.028)***
ES → SC/SA	0.179 (0.026)***	0.181 (0.026)***	0.177 (0.026)***	0.180 (0.026)***
ER/I → SC/SA	0.440 (0.023)***	0.436 (0.023)***	0.441 (0.023)***	0.446 (0.023)***
SC/SA → PS	0.467 (0.019)***	0.483 (0.019)***	0.460 (0.019)***	0.459 (0.019)***
Problem Solving	0.256 (0.021)***	0.333 (0.021)***	0.228 (0.021)***	-0.227 (0.022)***
Age	-0.048 (0.020)*	-0.049 (0.020)*	0.028 (0.021)	-0.089 (0.021)***
Female	-0.017 (0.020)	-0.010 (0.021)	-0.022 (0.021)	-0.133 (0.021)***
SES	-0.014 (0.021)	0.002 (0.021)	0.059 (0.022)**	-0.051 (0.022)*
Hispanic	0.030 (0.020)	-0.009 (0.020)	-0.028 (0.020)	-0.028 (0.021)
Black	-0.036 (0.017)*	-0.013 (0.018)	-0.083 (0.018)***	0.044 (0.018)*
Other Race	0.014 (0.018)	-0.022 (0.019)	-0.053 (0.020)**	0.008 (0.020)
Dwelling Condition				
Fairly well kept	-0.095 (0.024)***	-0.078 (0.024)**	-0.050 (0.024)*	0.059 (0.025)*
Poorly kept	-0.071 (0.022)**	-0.082 (0.023)***	-0.021 (0.022)	0.043 (0.023) [†]
Very poorly kept	-0.081 (0.024)***	-0.048 (0.026) [†]	-0.002 (0.024)	0.034 (0.023)
Neighborhood Condition				
Fairly well kept	0.039 (0.025)	0.006 (0.026)	0.021 (0.026)	-0.017 (0.027)
Poorly kept	0.038 (0.023) [†]	0.027 (0.025)	-0.029 (0.024)	-0.008 (0.025)
Very poorly kept	-0.006 (0.025)	0.004 (0.025)	-0.025 (0.024)	0.006 (0.024)
Rural area	0.017 (0.023)	-0.004 (0.023)	0.011 (0.024)	0.010 (0.024)
Scaled χ^2 (df)	1589.830 (366)***	1664.180 (366)***	1478.270 (366)***	1552.710 (366)***
Scaled CFI	0.929	0.926	0.935	0.931
Scaled TLI	0.980	0.979	0.981	0.980
Scaled RMSEA	0.029	0.030	0.028	0.029
SRMR	0.045	0.048	0.042	0.047
<i>n</i>	3948	3949	3948	3949

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^aHow much do you agree or disagree with the following statement: You feel close to people at your school.^bHow much do you agree or disagree with the following statement: You feel like you are a part of your school.^cHow much do you agree or disagree with the following statement: You feel safe in your school.^dSince school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

social acceptance significantly predicts problem solving ability which is associated with each attachment outcome in the expected direction. The strength of these internal pathways is notably similar across outcomes, suggesting that the developmental ordering of regulatory processes operates consistently regardless of the specific dimension of school attachment being considered.

Relative to the Chapter 3 models, the direct effect of problem solving on attachment outcomes remains substantial and statistically significant, indicating that higher-order regulatory capacity continues to play a central role in shaping students' affective and relational connections to school. Importantly, the cascade clarifies how this influence emerges through earlier emotional and self-concept processes rather than treating self-regulation as a single undifferentiated construct. Despite this added structural complexity, overall model fit remains acceptable across all outcomes, with fit indices comparable to, though modestly lower than, those observed in the Chapter 3 models.

Substantively, the inclusion of the developmental cascade does not alter the broader pattern of associations observed for demographic characteristics, contextual conditions, or extracurricular participation. Non-sport and sport participation maintain the directional associations with indicators of school attachment observed in Chapter 3, while disadvantaged dwelling conditions are still consistently associated with weaker attachment. These parallels reinforce that the cascade specification refines the interpretation of self-regulatory processes without changing conclusions regarding the role of extracurricular involvement or structural disadvantage.

The developmental cascade models demonstrate that the associations between self-regulation and attachment to school observed in Chapter 3 are robust to a more theoretically explicit specification of regulatory development. Rather than replacing the earlier findings, the cascade framework provides additional insight into the internal organization of self-regulatory capacities that underlie adolescents' emotional and relational engagement with school.

Attachment to Parents and Family - Developmental Cascade Models

Table 15 presents the developmental cascade models examining attachment to parents and family across four indicators: perceived parental care, family understanding, family attention, and adolescents' desire to leave home. Model fit was acceptable across all specifications, with scaled CFI values ranging from .910 to .929 and scaled TLI values ranging from .974 to .980. Absolute fit indices similarly indicated adequate model performance, with scaled RMSEA values between .029 and .033 and SRMR values between .052 and .059. Taken together, these results indicate that the cascade structure generalizes well across multiple dimensions of parent and family attachment.

The developmental cascade exhibited a high degree of stability across all four outcomes. Emotional stability was consistently associated with lower emotional reactivity and impulsivity, and emotional reactivity and impulsivity, in turn, was strongly associated with self-concept and social acceptance. The direct path from emotional stability to self-concept and social acceptance remained statistically significant in each model, indicating that emotional stability contributes to adolescents' self-evaluations both indirectly through emotional reactivity and directly through the path to self-concept and social acceptance. Self-concept and social acceptance was, in turn, a strong predictor of problem solving across all specifications. The consistency of these pathways suggests that the developmental ordering of self-regulatory processes observed in earlier Wave I models extends to the parent and family attachment domain without meaningful alteration.

Variation across models emerged primarily in the association between problem solving and the attachment outcomes. Higher levels of problem solving were positively associated with parental care, family understanding, and family attention, with the strongest associations observed for family understanding and family attention. In contrast, problem solving was negatively associated with adolescents' desire to leave home. This reversal in direction is conceptually consistent, and indicates that higher self-regulatory competence is associated with reduced inclination to disengage from the home environment.

Table 15

Wave I Attachment to Parents and Family - Developmental Cascade Models

	Parental Care ^a	Family Understanding ^b	Family Pays Attention ^c	Desire to Leave Home ^d
Non-Sport Participation				
Mod. participation	0.036 (0.030)	-0.019 (0.021)	0.020 (0.022)	0.001 (0.021)
High participation	0.012 (0.031)	-0.023 (0.021)	0.006 (0.021)	0.001 (0.021)
Sport Participation				
Mod. participation	0.023 (0.031)	0.035 (0.021) [†]	0.044 (0.022) [*]	-0.014 (0.021)
High participation	0.018 (0.031)	0.044 (0.022) [*]	0.052 (0.022) [*]	-0.063 (0.021) ^{**}
Religious Youth Participation				
< Once per month	0.002 (0.030)	0.004 (0.019)	0.002 (0.021)	-0.006 (0.020)
≥ Once per month	-0.015 (0.029)	0.045 (0.021) [*]	0.022 (0.021)	-0.033 (0.020)
≥ Once per week	0.091 (0.030) ^{**}	0.129 (0.020) ^{***}	0.081 (0.021) ^{***}	-0.063 (0.021) ^{**}
ES → ER/I	0.204 (0.028) ^{***}	0.204 (0.028) ^{***}	0.204 (0.028) ^{***}	0.197 (0.028) ^{***}
ES → SC/SA	0.185 (0.026) ^{***}	0.195 (0.025) ^{***}	0.193 (0.026) ^{***}	0.192 (0.026) ^{***}
ER/I → SC/SA	0.435 (0.023) ^{***}	0.444 (0.023) ^{***}	0.435 (0.023) ^{***}	0.443 (0.023) ^{***}
SC/SA → PS	0.454 (0.019) ^{***}	0.523 (0.018) ^{***}	0.494 (0.019) ^{***}	0.469 (0.019) ^{***}
Problem Solving	0.255 (0.029) ^{***}	0.427 (0.019) ^{***}	0.395 (0.019) ^{***}	-0.243 (0.021) ^{***}
Age	-0.113 (0.030) ^{***}	-0.119 (0.020) ^{***}	-0.083 (0.021) ^{***}	0.326 (0.018) ^{***}
Female	-0.018 (0.029)	-0.096 (0.020) ^{***}	-0.023 (0.021)	0.022 (0.020)
SES	0.070 (0.030) [*]	-0.042 (0.021) [*]	0.069 (0.021) ^{**}	0.028 (0.021)
Hispanic	0.036 (0.029)	0.012 (0.019)	0.008 (0.019)	-0.030 (0.020)
Black	0.025 (0.026)	0.006 (0.017)	-0.002 (0.018)	0.054 (0.017) ^{**}
Other Race	-0.051 (0.025) [*]	-0.020 (0.018)	-0.039 (0.020) [*]	0.020 (0.020)
Dwelling Condition				
Fairly well kept	-0.043 (0.033)	-0.077 (0.024) ^{**}	-0.059 (0.025) [*]	0.032 (0.023)
Poorly kept	-0.089 (0.030) ^{**}	-0.031 (0.022)	-0.044 (0.022) [*]	0.079 (0.021) ^{***}
Very poorly kept	-0.036 (0.033)	-0.044 (0.024) [†]	-0.040 (0.025)	0.068 (0.026) ^{**}
Neighborhood Condition				
Fairly well kept	0.026 (0.036)	-0.027 (0.026)	0.006 (0.027)	0.003 (0.025)
Poorly kept	0.077 (0.035) [*]	-0.024 (0.024)	0.005 (0.024)	-0.001 (0.024)
Very poorly kept	0.061 (0.038)	-0.004 (0.024)	0.018 (0.025)	-0.040 (0.025)
Rural area	0.002 (0.033)	-0.014 (0.023)	0.007 (0.024)	0.025 (0.023)
Scaled χ^2 (df)	1570.680 (366) ^{***}	1980.970 (366) ^{***}	1717.600 (366) ^{***}	1703.980 (366) ^{***}
Scaled CFI	0.929	0.910	0.923	0.922
Scaled TLI	0.980	0.974	0.978	0.978
Scaled RMSEA	0.029	0.033	0.031	0.031
SRMR	0.057	0.059	0.052	0.054
<i>n</i>	3941	3945	3945	3923

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a How much do you feel that your parents care about you?^b How much do you feel that people in your family understand you?^c How much do you feel that your family pays attention to you?^d How much do you feel that you want to leave home?

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

The magnitude of the problem solving coefficient varied across outcomes, suggesting that different dimensions of parent and family attachment are differentially sensitive to adolescents' regulatory capacities.

Of the demographic covariates, age was the most consistent. Age demonstrated a negative correlation with the three positive attachment indicators while showing a strong positive correlation with desire to leave home. This pattern indicates that the measure captures a distinct developmental orientation that intensifies with age, even after accounting for self-regulation and contextual conditions. Female was associated with lower reported family understanding but was not a significant predictor of the other attachment indicators. SES showed modest but inconsistent associations across models, with positive effects for parental care and family attention and a negative association for family understanding. This divergence suggests that the attachment indicators reflect related but nonidentical aspects of family relationships.

Contextual conditions were more consistently related to attachment outcomes. Poorer dwelling conditions were associated with lower levels of family understanding and family attention and with higher desire to leave home. Neighborhood condition indicators were largely attenuated once dwelling conditions were included, indicating that household conditions are more salient for adolescents' perceptions of family relationships than broader neighborhood context at Wave I. Race effects were limited in scope, with Black students reporting a higher desire to leave home relative to White students.

Extracurricular and religious participation exhibited small but patterned associations. Non-sport participation was not significantly related to any attachment outcome. Sport participation was modestly associated with higher family attention and was associated with lower desire to leave home at higher levels of participation. Religious youth participation displayed the most consistent pattern, with weekly participation positively associated with parental care, family understanding, and family attention, and negatively associated with desire to leave home. These associations are consistent with a social bonding interpretation

in which regular participation in structured, value-oriented contexts coincides with stronger perceived family support and reduced orientation toward leaving the home environment.

Tobacco, Alcohol, and Drug Use - Developmental Cascade Models

Across substance use outcomes, the developmental cascade models demonstrated consistent and acceptable fit. Scaled CFI ranged from 0.932 to 0.947, scaled TLI ranged from 0.981 to 0.985, scaled RMSEA remained between 0.027 and 0.028, and SRMR ranged from 0.045 to 0.056. These indices show the cascade structure is not dependent on a single outcome and performs similarly across each indicator of risk behavior.

Age was a consistent predictor across all outcomes. In all models, older students reported higher levels of cigarette smoking, binge drinking, marijuana use, and drunk driving. Sex differences were marginal for binge drinking, and most pronounced for drunk driving, where female students were substantially less likely to report driving while drunk. Because the drunk driving model was estimated on a restricted age-eligible subsample, comparisons to larger sample outcomes should be made cautiously, but the direction of the coefficient aligns with the broader risk profile of this behavior.

SES was modestly protective for cigarette smoking and otherwise near zero, with marginal evidence of a positive association with drunk driving. Racial differences were more clearly concentrated in cigarette smoking and alcohol use than in marijuana use. Hispanic and Black respondents reported lower likelihood of cigarette smoking. Black students reported lower binge drinking and drunk driving. In contrast, marijuana use showed no statistical evidence of racial differences within this specification. Dwelling and neighborhood condition indicators were generally weak predictors, with only poorly kept dwelling condition positively associated with cigarette smoking and binge drinking.

Table 16

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade Models

	Cigarette Smoking ^a	Binge Drinking ^b	Marijuana Use ^c	Drunk Driving ^d
Non-Sport Participation				
Mod. participation	-0.054 (0.027)*	-0.032 (0.025)	-0.026 (0.029)	-0.019 (0.048)
High participation	-0.054 (0.027)*	-0.042 (0.024) [†]	-0.052 (0.028) [†]	0.001 (0.045)
Sport Participation				
Mod. participation	-0.052 (0.027) [†]	0.070 (0.024)**	0.033 (0.028)	0.077 (0.049)
High participation	-0.097 (0.029)***	0.024 (0.025)	0.016 (0.029)	0.009 (0.044)
Religious Youth Participation				
< Once per month	-0.040 (0.025)	-0.021 (0.022)	-0.049 (0.026) [†]	-0.007 (0.041)
≥ Once per month	-0.076 (0.027)**	-0.051 (0.024)*	-0.138 (0.028)***	-0.021 (0.045)
≥ Once per week	-0.203 (0.028)***	-0.204 (0.025)***	-0.179 (0.030)***	-0.173 (0.050)***
ES → ER/I	0.204 (0.028)***	0.205 (0.028)***	0.210 (0.029)***	0.171 (0.038)***
ES → SC/SA	0.183 (0.026)***	0.177 (0.026)***	0.164 (0.027)***	0.202 (0.036)***
ER/I → SC/SA	0.437 (0.023)***	0.440 (0.023)***	0.435 (0.024)***	0.388 (0.030)***
SC/SA → PS	0.444 (0.019)***	0.444 (0.019)***	0.441 (0.020)***	0.408 (0.028)***
Problem Solving	-0.179 (0.028)***	-0.114 (0.024)***	-0.193 (0.027)***	-0.116 (0.046)*
Age	0.234 (0.027)***	0.329 (0.022)***	0.239 (0.027)***	0.240 (0.045)***
Female	0.032 (0.026)	-0.045 (0.023) [†]	-0.021 (0.028)	-0.169 (0.046)***
SES	-0.066 (0.028)*	-0.026 (0.025)	0.016 (0.028)	0.086 (0.046) [†]
Hispanic	-0.117 (0.026)***	-0.021 (0.022)	0.015 (0.025)	-0.060 (0.055)
Black	-0.240 (0.026)***	-0.163 (0.022)***	-0.003 (0.026)	-0.230 (0.053)***
Other Race	-0.033 (0.024)	-0.040 (0.022) [†]	0.007 (0.024)	-0.006 (0.037)
Dwelling Condition				
Fairly well kept	0.049 (0.031)	0.041 (0.026)	0.017 (0.031)	-0.023 (0.053)
Poorly kept	0.060 (0.029)*	0.052 (0.024)*	0.001 (0.029)	-0.021 (0.049)
Very poorly kept	0.021 (0.032)	-0.012 (0.024)	0.012 (0.030)	-0.050 (0.060)
Neighborhood Condition				
Fairly well kept	-0.016 (0.035)	-0.024 (0.030)	-0.013 (0.034)	0.009 (0.057)
Poorly kept	-0.030 (0.033)	0.049 (0.026) [†]	0.046 (0.030)	-0.052 (0.060)
Very poorly kept	0.015 (0.031)	0.018 (0.024)	0.007 (0.027)	-0.018 (0.053)
Rural area	-0.007 (0.030)	-0.003 (0.027)	-0.045 (0.031)	0.056 (0.048)
Scaled χ^2 (df)	1528.270 (366)***	1442.480 (366)***	1333.850 (366)***	855.380 (366)***
Scaled CFI	0.932	0.937	0.940	0.947
Scaled TLI	0.981	0.982	0.983	0.985
Scaled RMSEA	0.028	0.027	0.027	0.027
SRMR	0.056	0.045	0.048	0.051
<i>n</i>	3948	3942	3695	1853

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Have you ever smoked cigarettes regularly, that is, at least 1 cigarette every day for 30 days?^b Over the past 12 months, on how many days did you drink 5 or more drinks in a row?^c During your life, how many times have you used marijuana?^d Have you ever driven while drunk?

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Participation patterns varied by activity domain and outcome. Non-sport participation showed a consistent protective pattern for cigarette smoking, where both moderate and high participation were associated with lower smoking risk. Non-sport participation also trended protective for marijuana use and binge drinking, but these associations were marginal. Sport participation was protective for smoking at high levels of involvement. For binge drinking, moderate sport participation was associated with increased risk. This contrast is consistent with the position that participation is not uniformly protective, and that certain activity contexts may be linked to exposure or peer norms that elevate alcohol use risk. Religious youth participation produced the clearest and most consistent protective pattern across the outcomes. Weekly or more frequent participation was associated with lower risk across cigarette smoking, binge drinking, marijuana use, and drunk driving. Monthly participation also demonstrated protective associations for cigarette smoking, binge drinking, and marijuana use, but not for drunk driving.

The cascade structure was stable across the tobacco, alcohol, and drug use outcomes. In all models, emotional stability was positively associated with emotional reactivity and impulsivity and with self-concept and social acceptance. Emotional reactivity and impulsivity remained a strong predictor of self-concept and social acceptance, which in turn, strongly predicted problem solving. Net of these pathways, problem solving was consistently protective across all outcomes, with the strongest associations for marijuana use and cigarette smoking. The results of the tobacco, alcohol, and drug use models suggests that the developmental cascade appears to be consistent across different forms of substance-related risk behaviors. Meanwhile, differences in participation coefficients suggest that not all activities affect students similarly, with non-sport and religious participation exhibiting more stable protective effects than sport participation, particularly for alcohol outcomes.

Overall, these results indicate that the cascade framework may be useful for studying behaviors that differ socially and normatively across adolescence. The following section extends this framework to delinquent behaviors, which differ from substance use in their overt

violation of social norms and formal rules. Thus providing a more stringent test of whether the same developmental processes operate across distinct forms of adolescent deviance.

Delinquency - Developmental Cascade Models

Across the four delinquency outcomes, the developmental cascade models remain highly stable, both in overall fit and in the internal structure of the self-regulation construct. Fit is consistent across outcomes (scaled CFI = .928 to .938; scaled TLI = .979 to .982; scaled RMSEA = .027 to .029; SRMR = .045 to .055), and the cascade paths are nearly identical in magnitude. This matters for interpretation because it means that, within Wave I, variation across delinquency outcomes is not being driven by measurement instability or by a shifting regulatory structure. Instead, the differences across delinquency items show up where they should, in the outcome-specific associations with context and participation, and in the strength of the final problem solving link to each behavior.

Problem solving negatively predicts each of the four delinquency outcomes. Although effect sizes vary, the association is consistently negative, demonstrating that higher problem solving ability is associated with lower levels of delinquency. This holds true for lying to parents, running away, minor theft, and serious fighting.

Demographic associations differ across delinquency outcomes. Age is positively associated with lying to parents and negatively associated with serious fighting, while it is not significantly related to running away or minor theft. Female respondents report higher levels of lying to parents but lower levels of minor theft and serious fighting. SES is not significantly associated with lying, running away, or minor theft, but is negatively associated with serious fighting. Race and ethnicity were outcome specific: Hispanic respondents engaged in higher rates of minor theft and serious fighting while Black respondents engaged in higher rates of serious fighting only.

Table 17
Wave I Delinquency - Developmental Cascade Models

	Lying to Parents ^a	Running Away from Home ^b	Minor Theft ^c	Serious Fighting ^d
Non-Sport Participation				
Mod. participation	0.017 (0.022)	-0.066 (0.041)	0.014 (0.028)	-0.065 (0.024)**
High participation	0.002 (0.021)	-0.102 (0.039)**	-0.003 (0.027)	-0.096 (0.025)***
Sport Participation				
Mod. participation	0.077 (0.022)***	0.069 (0.041) [†]	0.058 (0.027)*	0.028 (0.024)
High participation	0.059 (0.023)*	0.045 (0.042)	0.003 (0.028)	0.060 (0.024)*
Religious Youth Participation				
< Once per month	0.026 (0.020)	-0.008 (0.038)	0.014 (0.025)	-0.009 (0.023)
≥ Once per month	-0.008 (0.021)	0.003 (0.038)	-0.041 (0.027)	-0.002 (0.023)
≥ Once per week	-0.048 (0.022)*	-0.061 (0.041)	-0.092 (0.027)***	-0.031 (0.025)
ES → ER/I	0.203 (0.028)***	0.203 (0.028)***	0.203 (0.028)***	0.203 (0.028)***
ES → SC/SA	0.186 (0.026)***	0.182 (0.026)***	0.182 (0.026)***	0.179 (0.026)***
ER/I → SC/SA	0.442 (0.023)***	0.437 (0.023)***	0.437 (0.023)***	0.439 (0.023)***
SC/SA → PS	0.459 (0.019)***	0.447 (0.019)***	0.447 (0.019)***	0.443 (0.020)***
Problem Solving	-0.256 (0.022)***	-0.294 (0.035)***	-0.277 (0.026)***	-0.148 (0.025)***
Age	0.144 (0.021)***	0.062 (0.040)	-0.027 (0.028)	-0.132 (0.023)***
Female	0.064 (0.021)**	0.065 (0.038) [†]	-0.133 (0.025)***	-0.237 (0.022)***
SES	0.031 (0.022)	-0.051 (0.040)	0.046 (0.028)	-0.135 (0.023)***
Hispanic	0.037 (0.021) [†]	-0.043 (0.036)	0.100 (0.025)***	0.061 (0.021)**
Black	-0.005 (0.020)	-0.012 (0.034)	-0.009 (0.025)	0.102 (0.020)***
Other Race	0.045 (0.019)*	0.044 (0.031)	0.047 (0.023)*	0.018 (0.023)
Dwelling Condition				
Fairly well kept	-0.016 (0.025)	0.139 (0.043)**	0.091 (0.030)**	0.104 (0.026)***
Poorly kept	0.052 (0.023)*	0.126 (0.039)**	0.028 (0.028)	0.041 (0.023) [†]
Very poorly kept	-0.018 (0.025)	0.103 (0.040)**	0.005 (0.028)	0.034 (0.025)
Neighborhood Condition				
Fairly well kept	-0.023 (0.027)	-0.052 (0.048)	-0.064 (0.033) [†]	0.006 (0.029)
Poorly kept	-0.024 (0.025)	-0.047 (0.049)	-0.008 (0.031)	0.013 (0.026)
Very poorly kept	-0.009 (0.026)	-0.059 (0.044)	-0.039 (0.026)	0.007 (0.024)
Rural area	-0.057 (0.024)*	-0.068 (0.045)	-0.074 (0.030)*	0.003 (0.027)
Scaled χ^2 (df)	1591.120 (366)***	1432.050 (366)***	1415.710 (366)***	1428.370 (366)***
Scaled CFI	0.928	0.937	0.938	0.937
Scaled TLI	0.979	0.982	0.982	0.982
Scaled RMSEA	0.029	0.027	0.027	0.027
SRMR	0.050	0.055	0.045	0.046
<i>n</i>	3938	3940	3937	3938

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?

^b In the past 12 months, how often did you run away from home?

^c In the past 12 months, how often did you steal something worth less than \$50?

^d In the past 12 months, how often did you get into a serious physical fight?

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Household context shows more consistent associations than neighborhood context. Dwelling condition is positively associated with running away across all dwelling categories and is also positively associated with minor theft and serious fighting in select categories. Neighborhood condition indicators are largely unrelated to delinquency outcomes, with the exception of rural residence, which is negatively associated with lying and minor theft. These results suggest that immediate household conditions are more salient for delinquency outcomes than broader neighborhood characteristics in these models.

Participation effects vary by activity type and outcome. Non-sport participation is negatively associated with running away at high levels of participation and negatively associated with serious fighting at both moderate and high levels. Non-sport participation is not significantly related to lying to parents or minor theft. Sport participation shows positive associations with lying to parents at both moderate and high levels and with minor theft at moderate levels. High sport participation is also positively associated with serious fighting. Religious youth participation shows limited associations, with weekly participation negatively associated with lying to parents and minor theft, and no significant associations with running away or serious fighting.

When compared to the tobacco, alcohol, and drug use models, two points are notable. First, the developmental cascade itself operates similarly across both domains, with near-identical pathway coefficients and comparable model fit. Second, participation effects differ in systematic ways. Religious youth participation shows broader protective associations in the substance use models than in the delinquency models, while non-sport participation appears more consistently protective for certain delinquency outcomes. Sport involvement is positively associated with delinquency more frequently than drug use. Considering these findings together, it appears that although development of self-regulation follows a stable cascade, effects of extracurricular activities on outcomes are not global, but domain-specific.

Reconciling Alternative Models of Self-Regulation

In Chapters 3 and 4, I address the same substantive questions regarding the role of extracurricular participation and self-regulation in adolescent outcomes, with differences between the chapters reflecting alternative measurement and modeling strategies for self-regulation rather than conceptual differences in developmental theory. In Chapter 3, self-regulation is treated as a second-order construct that directly predicts academic, attachment, and behavioral outcomes. That approach provides a clear assessment of the overall association between self-regulatory capacity and adolescent functioning, while allowing participation variables to be interpreted primarily as predictors net of self-regulation.

In Chapter 4, I extend this framework by explicitly modeling the internal structure of self-regulation as a developmental cascade. Rather than treating self-regulation as a single higher-order predictor, the cascade models specify an ordered sequence linking emotional stability, emotional reactivity and impulsivity, self-concept and social acceptance, and problem solving. This approach highlights the theoretical ordering implied by developmental and executive function perspectives. Importantly, the cascade structure is highly stable across outcomes, mirroring the strong and consistent measurement properties observed in Chapter 3.

Despite these structural differences, the substantive conclusions drawn from the models in Chapters 3 and 4 are largely consistent. In both chapters, higher levels of self-regulation are associated with more favorable outcomes across academic, substance use, and delinquency domains. Participation effects also show similar patterns across chapters, particularly the protective associations of non-sport participation for select outcomes and the more mixed or risk-associated patterns observed for sport participation. Where Chapter 4 adds nuance is in demonstrating that these participation effects operate net of a sequential regulatory process rather than a single latent capacity, reinforcing the interpretation that extracurricular participation is associated with outcomes above and beyond self-regulatory

capacity.

Substantively, the results of Chapters 3 and 4 converge. In both modeling frameworks, self-regulation is strongly associated with academic outcomes, substance use, and delinquency, and participation effects remain largely consistent across specifications. Variation between outcome domains is driven primarily by differences in the size of the direct effects on observed outcomes, as opposed to differences in the architecture of self-regulation. This points to meaningful convergence between the second-order factor from Chapter 3 and the factor structure explored in Chapter 4; the former appears to assess the same underlying regulatory capacity as the latter with little loss of information.

From Adolescence to Emerging Adulthood

Together, the results from Chapters 3 and 4 establish both the empirical utility and the conceptual validity of modeling self-regulation as a higher-order latent construct. Chapter 3 demonstrates that a second-order factor provides a parsimonious summary of regulatory capacity, while Chapter 4 shows that this summary reflects a stable and theoretically grounded developmental structure. The consistency of the cascade across outcomes provides direct evidence that the second-order specification is not merely convenient, but appropriate.

In Chapter 5, I build directly on this foundation by shifting the focus to emerging adulthood. Using Wave III data, I introduce updated models that replace select Wave I covariates with analogous and developmentally appropriate Wave III counterparts and re-specify the self-regulation latent construct to reflect contemporaneous regulatory capacity. Participation measures from Wave I are retained, allowing for an assessment of how earlier extracurricular involvement relates to later outcomes through both enduring and updated self-regulatory processes. This transition marks a shift from cross-sectional developmental patterns to a longitudinal perspective whereby early participation in structured activities is hypothesized to have a continuing protective effect. In the following chapters, the question

becomes, do the same participation mechanisms that shape adolescent behavior affect adult behavioral and social outcomes?

Chapter 5: Wave III

The Developmental Significance of Emerging Adulthood

The transition to adulthood represents a distinct stage of development that has been the focus of increasing attention. Developmental and life-course researchers have defined this period as a time of identity exploration, instability, self-focus, and future-oriented optimism (Arnett 2016; Arnett 2023; Elder Jr 1998; Sampson and Laub 2005). The pathways through which individuals transition into adulthood have lengthened and diversified relative to the expectations that they follow a predictable course moving linearly from school to work and from family of origin to family destination (Shanahan 2000; Settersten Jr 2003). Emerging adults experience transitions related to school, work, romance, and living situations that are increasingly less institutionally prescribed and more overlapping.

This extended transition period affords individuals increased autonomy and opportunities for self-discovery, yet simultaneously heightens exposure to risks associated with experimentation and risky behavior (Burt et al. 2014; Murray and Arnett 2019). From the perspective of social control theory, emerging adulthood represents a stage in which conventional social connections and institutional ties that structure daily routines are weakened or transformed. As external sources of control, such as parental oversight, educational institutions, and supervised activities, diminish in influence, behavior becomes increasingly dependent on internal sources of regulation (Hirschi 2002; Salvatore and Taniguchi 2012). Consequently, individual differences in self-regulation assume greater significance (Burt et al. 2014; Wood et al. 2017).

Emerging adulthood is characterized by increased social involvement. Peer, work, and leisure contexts present new opportunities, and social environments during this period are typically less structured and more autonomous compared to adolescence (Layland et al. 2018). The development of self-regulation in emerging adulthood occurs in response to these evolving social contexts (Elder Jr 1998). During this transition, individuals may either maintain previous behaviors or adapt them to align with new circumstances.

Continuity, Stability, and Change

A key question I address in this chapter is the extent to which early developmental influences remain relevant during the transition from adolescence to adulthood. Life-course perspectives emphasize the continuity of behaviorally significant processes, indicating that patterns formed during adolescence may shape later outcomes despite changing social contexts (Caspi et al. 2005; Sampson and Laub 2005). Research on developmental stability indicates that, although individuals experience considerable change as they adopt adult roles, core regulatory capacities persist throughout the life course (Roberts et al. 2006).

In this chapter, I examine self-regulation as a central mechanism connecting adolescent experiences to outcomes in emerging adulthood. By reassessing self-regulation and analyzing its associations with outcomes in conjunction with earlier extracurricular participation, the analyses evaluate whether differences related to participation observed during adolescence persist after the institutional structures of school and youth religious activities diminish.

Building on this continuity framework, self-regulation constitutes a critical domain for understanding long-term outcomes. Extensive longitudinal research demonstrates that self-regulatory capacities assessed during childhood and adolescence are associated with subsequent health, substance use, criminal involvement, and socioeconomic attainment (Duckworth and Seligman 2005; Moffitt et al. 2011; Nigg 2017). From a life-course perspective, these findings indicate that individual differences in behavioral regulation remain relatively stable across developmental stages, despite changes in social context (Sampson and Laub 2005).

The transition to emerging adulthood raises important questions about how self-regulation functions once the external structures that previously constrained behavior, such as schools, parental monitoring, and supervised activities diminish or disappear. As institutional regulation declines, self-regulation becomes increasingly significant and context-dependent, influenced by evolving social roles, expectations, and opportunities.

Therefore, in this chapter, I examine whether self-regulation during emerging adulthood remains salient for both deviant and pro-social outcomes.

Contemporary literature on structured extracurricular participation is marked by ongoing debates, with recent studies documenting both positive and complex associations with adolescent adjustment and development (Mahoney et al. 2005; O’Flaherty et al. 2022; Sandoval and Bowers 2025). While adolescent participation under adult supervision has been shown to reliably predict academic and pro-social outcomes, there is less evidence supporting long-term effects on civic engagement, risk behaviors, and well-being (Fredricks and Eccles 2006). Some researchers contend that lasting effects should occur because participation socializes youth into pro-social behaviors, offers skill-building opportunities, and exposes them to adult norms (Fredricks and Eccles 2010; Hughes et al. 2016). In contrast, other scholars suggest that selection effects better explain these findings, as individuals with certain advantages are more likely to participate (Eccles et al. 2003; Rotolo et al. 2020). The aim of the research in this chapter is to extend these findings by examining the extent to which adolescent participation predicts outcomes after high school, a period when institutional social pressures are diminished.

Methods

In the following models, I utilize data from Wave III of the National Longitudinal Study of Adolescent to Adult Health (Add Health), which examined individuals during the transition from adolescence to emerging adulthood. Data collection for Wave III occurred between 2001 and 2002, approximately six to seven years after the initial in-school survey, and was intended to assess health, behavior, and social experiences as participants moved beyond secondary education. At the time of the Wave III interview, respondents were between 18 and 26 years old. This wave marks the first point in the Add Health study when most participants were no longer part of secondary school institutional structures. Of the original Wave I and II cohort, 15,197 respondents participated in Wave III, indicating high

longitudinal retention (Harris et al. 2019).

Table 18

Descriptive Statistics for Wave III Sample (n = 2,924)

Variable	Min	Max	%	Variable	Min	Max	%
<i>(a) Demographic Indicators</i>				<i>(b) Participation Indicators</i>			
Age (mean)	18	26	21.6	Non-sport participation			
Gender (Female = 1)	0	1	52.0	No participation (Ref.)	0	1	44.1
Race^a				Moderate participation ^e	0	1	41.2
White (Ref.)	0	1	60.0	High participation ^f	0	1	14.7
Black	0	1	25.0	Sport Participation			
Other ^b	0	1	6.0	No participation (Ref.)	0	1	39.3
Ethnicity (Hispanic) ^c	0	1	9.0	Moderate participation ^g	0	1	43.4
Wave I Parent SES ^d (mean)	1	7	4.7	High participation ^h	0	1	17.3
Living Situation				Religious youth activity			
Own home (Ref.)	0	1	49.0	Never (Ref.)	0	1	47.1
Parent's home	0	1	39.8	Less than once per month	0	1	13.8
Another person's home	0	1	5.1	Once per month or more			
Other living situation	0	1	6.1	but less than once per week	0	1	15.7
Cont. Education/ Employment				Once per week or more	0	1	23.5
Enrolled	0	1	41.2				
Employed	0	1	69.3				

^a Respondents who marked Black were eliminated from any subsequent categories in the original Add Health data.

^b American Indian or Native American, Asian or Pacific Islander, and Other were collapsed for analyses.

^c Hispanic ethnicity or Latin origin is treated as a distinct race category.

^d Highest parental educational attainment is substituted as a proxy for socioeconomic status.

^e 1 - 2 groups.

^f 3 or more groups.

^g 1 - 2 teams or sports.

^h 3 or more teams or sports.

To address the need for measuring self-regulation, Wave III incorporates indicators that capture behavioral regulation, emotional functioning, self-concept, and impulsivity at a developmental stage characterized by diminished external control and increased individual regulation. Identifying the latent structure underlying these indicators necessitates explicit measurement modeling. Additionally, the longitudinal design of Add Health enables the integration of adolescent experiences, such as extracurricular participation measured at Wave

I, with behavioral and social outcomes observed in emerging adulthood.

The following analyses were conducted in three stages. First, an exploratory factor analysis (EFA) was performed to identify the latent structure of self-regulation in emerging adulthood using Wave III indicators. This step addressed both conceptual distinctions within the self-regulation literature and measurement differences between adolescence and adulthood. Second, a confirmatory factor analysis (CFA) was used to evaluate the measurement model derived from the EFA and to assess the adequacy of the retained factor structure. Finally, the validated latent constructs were incorporated into structural models to examine the extent to which adolescent extracurricular participation and self-regulation predict subsequent behavioral and social outcomes in emerging adulthood.

Measurement Model Development

Wave III of Add Health lacks a unified measure of self-regulation. Instead, it includes a diverse set of items that assess emotional functioning, impulsive decision-making, and self-evaluative beliefs. Although these domains are often considered components of self-regulatory functioning, Wave III does not offer a single established scale suitable for direct inclusion in structural models. Therefore, exploratory factor analysis (EFA) was employed to identify the latent structure underlying candidate indicators of self-regulation in emerging adulthood.

The objective of this analysis was to develop an empirically grounded and developmentally appropriate measurement framework for self-regulatory functioning in emerging adulthood, rather than to replicate the Wave I adolescent measurement models. Given that self-regulation is commonly conceptualized as multidimensional, the initial pool of indicators was intentionally broad. This approach allowed the data to determine whether a single coherent factor or multiple correlated domains provided a more defensible structure.

Indicator Pool and Recoding

Twenty-one candidate indicators were selected from Wave III self-report batteries, representing four conceptual domains: emotional stability and regulation, impulsivity and effortful control, self-concept, and problem-solving or decision-making. All indicators were recoded so that higher values indicated greater adaptive functioning, and all were treated as ordered categorical variables for estimation.

Exploratory Factor Analysis

EFA models were estimated using polychoric correlation matrices to address the ordered categorical nature of the indicators. Maximum likelihood extraction with geominQ rotation was applied, permitting factor correlations. Factor retention decisions were based on parallel analysis, interpretability, and the stability of loading patterns across solutions with two to five factors. Items exhibiting weak primary loadings or inconsistent patterns were identified for removal. All analyses were performed in R utilizing the psych package.

Factor Retention and Item Refinement

Parallel analysis indicated a multidimensional solution. Of the solutions evaluated, a three-factor structure yielded the most distinct and interpretable pattern of loadings. This solution included three coherent domains consistent with theoretical expectations: emotional stability and regulation, impulsivity, and self-concept. Conversely, items designed to assess problem-solving or decision-making failed to form a stable latent domain and exhibited weak shared variance.

Item refinement was conducted iteratively to enhance coherence and parsimony. Four indicators were excluded prior to final estimation due to weak empirical integration with the emerging factor structure and conceptual heterogeneity. Specifically, global or differently framed affect indicators, such as laughter frequency (H3SP1) and life satisfaction (H3SP3), did not align with the past-week affect battery. The avoidance item (H3SP17) did not load

consistently with the retained domains. The carefulness indicator (H3TO99) also failed to load meaningfully and introduced measurement heterogeneity, likely due to its distinct response format. Following the removal of these indicators, a final EFA was estimated on seventeen items.

The final solution supported three correlated domains of emerging adult self-regulation. The impulsivity factor was defined by items reflecting acting on feelings, losing control, relying on instincts, risk-taking, and making decisions based on gut feeling. The emotional stability and regulation factor was defined by affective and attentional items drawn from the past-week battery, including distress, sadness, perceived dislike, and difficulty maintaining focus, along with positively framed emotional functioning. The self-concept factor was defined as self-evaluative beliefs about personal qualities, pride, self-liking, doing things right, and confidence.

These three empirically supported dimensions provided the measurement foundation for subsequent confirmatory factor analysis. Item sets were further evaluated for parsimony and model fit before inclusion as selection controls in the structural models. A full listing of candidate indicators can be found in Appendix Table I1.1.

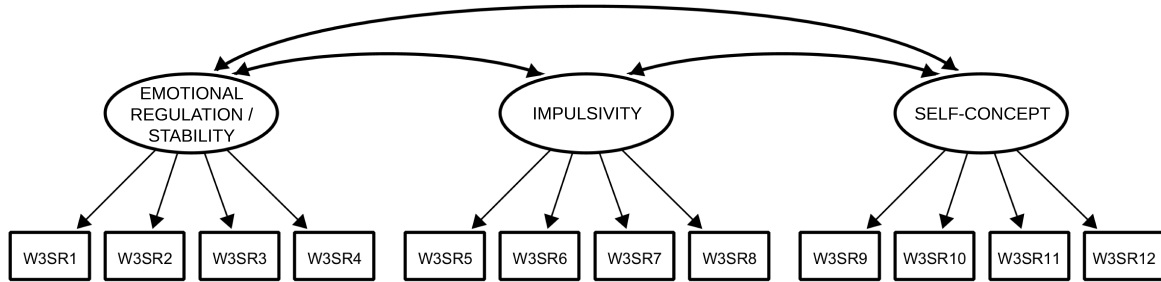
Confirmatory Factor Analysis

After exploratory identification of three correlated self-regulatory domains in Wave III, confirmatory factor analysis was performed to assess the measurement structure of emerging adult self-regulation before inclusion in structural models. The final exploratory factor analysis solution identified three latent constructs: Emotional Regulation/Stability, Impulsivity, and Self-Concept. Each construct was represented by four ordered categorical items chosen for conceptual alignment, empirical robustness, and measurement parsimony.

Models were estimated using weighted least squares with mean and variance adjustment (WLSMV) to address the ordinal nature of the indicators. Survey sampling weights were incorporated, and all latent factors were permitted to correlate. Cross-loadings

and correlated residuals were not specified, reflecting a conservative measurement approach that prioritized interpretability and model stability.

Figure 6. Wave III Confirmatory Factor Model for Self-Regulation



Model Fit Statistics

Fit Index	Scaled CFI	Scaled TLI	Scaled RMSEA	90% CI RMSEA	SRMR	<i>n</i>
Value	0.967	0.958	0.05	[0.045, 0.054]	0.053	2,924

The three-factor correlated CFA demonstrated good overall model fit: scaled χ^2 (51) = 418.360, scaled CFI = .967, scaled TLI = .958, scaled RMSEA = .05 (90% CI [.045, .054]), and SRMR = .053. Although the chi-square test was statistically significant, this result is expected in large samples. Standardized factor loadings were consistently moderate to strong, ranging from .54 to .80 for Emotional Regulation/Stability, .51 to .87 for Impulsivity, and .59 to .85 for Self-Concept. All loadings were statistically significant ($p < .001$), indicating that each indicator contributed meaningfully to its respective latent construct.

Latent factor correlations (r) indicated a moderate association between Emotional Regulation/Stability and Self-Concept ($r = .55$), a smaller association between Emotional Regulation/Stability and Impulsivity ($r = .25$), and a minimal association between Impulsivity and Self-Concept ($r = .07$). This pattern indicates that emotional functioning and self-evaluative processes are closely related in emerging adulthood, whereas impulsivity constitutes a comparatively distinct regulatory domain. Notably, impulsivity reflects behavioral self-regulation processes that are theoretically distinct from affective and cognitive self-evaluation, supporting its inclusion as an independent component of self-regulation rather than as a redundant indicator of emotional or self-concept functioning.

Table 19
Wave III Selected Indicators for Emerging Adult Self-Regulation

Variable		
Name	Item Wording (from Add Health Instruments)	
Emotional Stability/Regulation		
W3SR1	How often was the following true during the past seven days? You enjoyed life.	^a
W3SR2	How often was the following true during the past seven days? You could not shake off the blues, even with help from your family and your friends.	^b
W3SR3	How often was the following true during the past seven days? You were sad.	^b
W3SR4	How often was the following true during the past seven days? You felt that people disliked you.	^b
Impulsivity		
W3SR5	How true do you think the following statement is of you? I often do things based on how I feel at the moment.	^c
W3SR6	How true do you think the following statement is of you? I sometimes get so excited that I lose control of myself.	^c
W3SR7	How true do you think the following statement is of you? I often follow my instincts, without thinking through all the details.	^c
W3SR8	Do you agree or disagree that when making a decision, you go with your “gut feeling” and don’t think much about the consequences of each alternative?	^d
Self-Concept		
W3SR9	Do you agree or disagree that you have a lot to be proud of?	^e
W3SR10	Do you agree or disagree that you like yourself just the way you are?	^e
W3SR11	Do you agree or disagree that you feel you are doing things just about right?	^e
W3SR12	How confident are you of yourself?	^f
^a Never or rarely (1), Sometimes (2), A lot of the time (3), Most of the time or all of the time (4)		
^b Most of the time or all of the time (1), A lot of the time (2), Sometimes (3), Never or rarely (4)		
^c Very true (1), Pretty true (2), Somewhat true (3), A little true (4), Not true (5)		
^d Strongly agree (1), Agree (2), Neither agree nor disagree (3), Disagree (4), Strongly disagree (5)		
^e Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5)		
^f Not at all confident of myself (1), Slightly confident of myself (2), Moderately confident of myself (3), Very confident of myself (4)		

Composite reliability estimates demonstrated acceptable internal consistency for all three constructs (Emotional Regulation/Stability = .725; Impulsivity = .744; Self-Concept = .773). Collectively, these findings support a multidimensional conceptualization of self-regulation in Wave III, comprising three related but empirically distinct domains. These latent constructs are retained as correlated controls in subsequent structural models to account for selection processes linking earlier extracurricular participation to later developmental outcomes.

Wave III Structural Model

Building on the frameworks established in Chapters 3 and 4, the Wave III structural model is used to analyze outcomes in emerging adulthood as a function of prior extracurricular participation, youth religious activity, and contemporaneously measured latent self-regulation processes. Figure 7 presents the complete structural model, which includes observed demographic and participation predictors, as well as the three latent self-regulation constructs: Emotional Stability/Regulation, Impulsivity, and Self-Concept.

Consistent with the analytic strategy described in Chapter 3 and further developed in Chapter 4, the models incorporate an extensive set of controls addressing both background characteristics and current life circumstances. Demographic covariates include age, gender, race/ethnicity, and Wave I parental socioeconomic status, which is proxied by highest parental educational attainment to account for structural advantage. Hispanic ethnicity is classified as a distinct racial category, following Add Health documentation (Harris 2018). Living arrangement indicators (parental home, another person's home, or other living situation, with independent residence as the reference category) are included to capture variation in residential stability and support contexts during early adulthood. Current enrollment and employment status are modeled to represent educational and labor market engagement at Wave III.

Figure 7. Wave III Structural Model

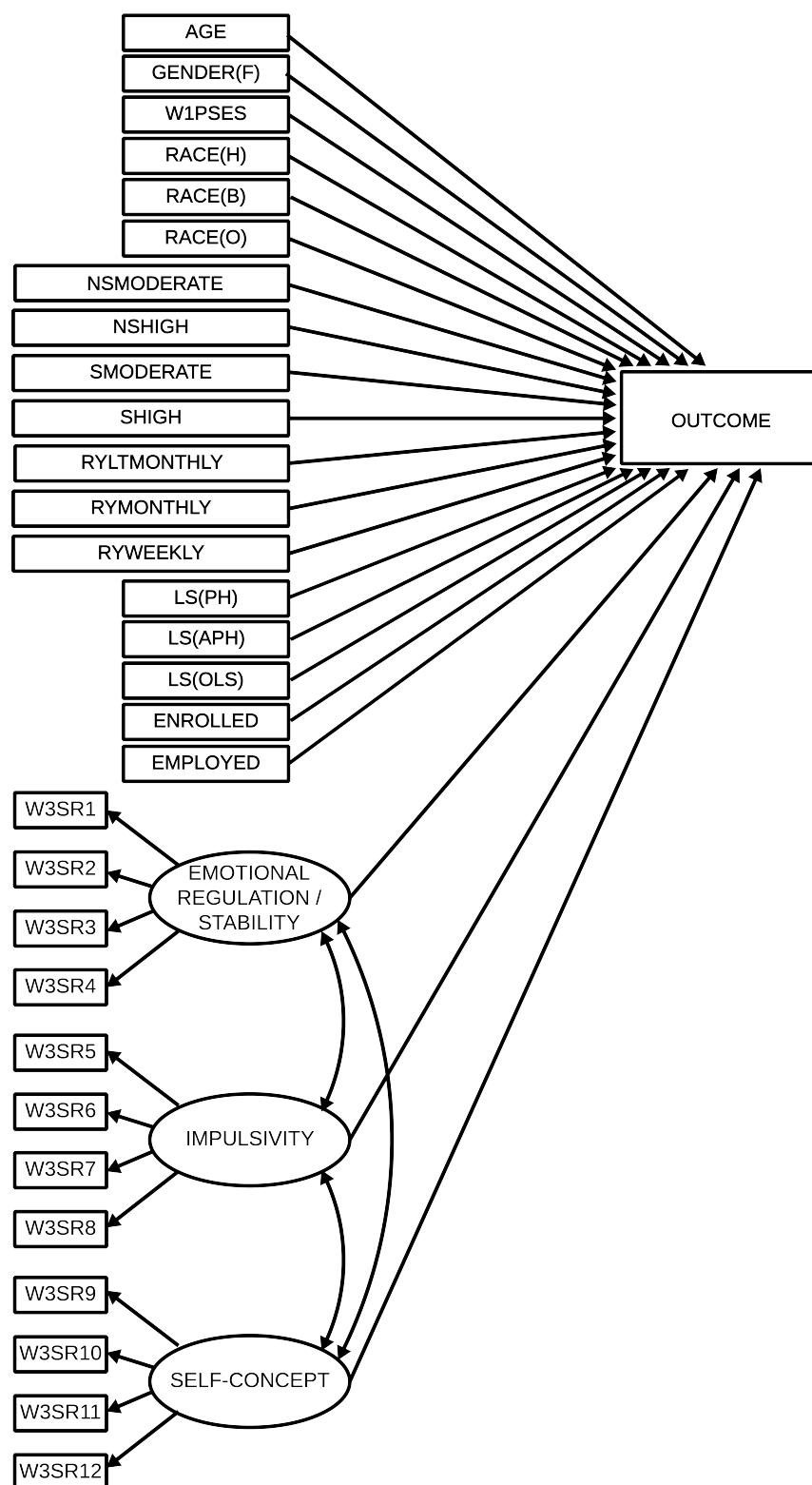


Table 20
Exogenous Variables Used in Wave III SEM

Label	Description
<i>(a) Demographic Indicators</i>	
AGE	Respondent age in years
GENDER(F)	Gender
W1PSES	Wave I Parent SES ^a
Race	
RACE(H)	Hispanic or Latino ^b
RACE(B)	Black or African American
RACE(O)	Other races
Living Situation	
LS(PH)	Parent's home
LS(APH)	Another person's home
LS(OLS)	Other living situation
Enrolled in University, College, or School / Employment	
ENROLLED	Currently enrolled
EMPLOYED	Currently employed
<i>(b) Participation Indicators</i>	
Non-sport participation	
NSMODERATE	Moderate participation
NSHIGH	High participation
Sport participation	
SMODERATE	Moderate participation
SHIGH	High participation
Religious Youth Activity	
RYLTMONTHLY	Less than once per month
RYMONTHLY	Once per month or more, but less than once per week
RYWEEKLY	Once per week or more

^a Highest parent educational attainment substituted as proxy for SES

^b Following recommendations in the Add Health documentation, Hispanic ethnicity is treated as a distinct racial category in all models. (Harris 2018)

Participation predictors are specified in accordance with the Wave I approach, distinguishing between moderate and high levels of non-sport and sport involvement, as well as frequency of youth religious activity. These variables are included in all Wave III models to isolate the long-term associations of structured activity participation. Wave III self-regulation constructs are modeled as correlated latent factors and placed as predictors for each outcome, facilitating assessment of their unique contributions independent of

demographic and participation controls. Each outcome is estimated in a separate, but identical, structural equation model using WLSMV and Wave III sampling weights.

Results

Wave III Outcomes

Outcomes from the Wave III models are organized into four domains that capture emerging adulthood functioning across both conventional life-course markers and civic or institutional orientations. Each item is modeled as a distinct outcome variable in a parallel set of models, allowing the association between extracurricular participation and later outcomes to vary across substantive domains. The domains include general outcomes that reflect broad well-being and attainment (self-rated health, educational attainment, income, and life satisfaction), criminal justice interactions that capture contact with formal social control, tobacco, alcohol, and drug use indicators, including a suicide-risk item, and civic and pro-social attitudes and behaviors that reflect engagement and trust in public institutions.

Table 21

Wave III Outcome Measures and Item Wording

Item Wording / Description		<i>n</i>
General Outcomes		
Model 1	In general, how is your health?	^a 2,919
Model 2	What is the highest grade or year of regular school you completed?	^b 2,917
Model 3	What was your total personal income before taxes in {2000/2001}?	^c 2,341
Model 4	How satisfied are you with your life as a whole?	^d 2,919
Criminal Justice Interactions		
Model 1	How many times have you been stopped or detained by the police for questioning about your activities? Don't count minor traffic violations	^e 2,906
Model 2	Have you ever been arrested or taken into custody by the police?	^f 2,913
Tobacco, Alcohol, Drugs, and Suicide Risk		
Model 1	Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?	^f 2,917
Model 2	During the past 12 months, on how many days did you drink five or more drinks in a row?	^g 2,913

Continued on next page

Item Wording / Description	<i>n</i>
Model 3 During the past 12 months, how many times has the following happened? You had problems with your friends because you had been drinking.	^h 2,917
Model 4 During the past 12 months, how many times has the following happened? You had problems with someone you were dating because you had been drinking.	^h 2,913
Model 5 Since June 1995, have you driven while drunk?	^f 2,894
Model 6 In the past year, have you used marijuana?	^f 2,919
Model 7 Past year illicit drug use item constructed from Add Health items concerning cocaine, methamphetamine, other drugs, and injected drugs.	^f 2,919
Model 8 During the past 12 months, have you ever seriously thought about committing suicide?	^f 2,866
Civic and Pro-Social Attitudes and Behavior	
Model 1 At any time during your adolescence, when you were between 12 to 18 years old, did you regularly participate in volunteer or community service work? Don't count things like washing cars or selling candy to raise money	^f 2,913
Model 2 During the last 12 months did you perform any unpaid volunteer or community service work?	^f 2,915
Model 3 Have you donated blood, plasma, or platelets during the last 12 months?	^f 2,914
Model 4 Are you a registered organ donor?	^f 2,891
Model 5 Are you registered to vote?	^f 2,910
Model 6 How much do you agree or disagree with the following statement? I trust the federal government.	ⁱ 2,910
Model 7 How much do you agree or disagree with the following statement? I trust my state government.	ⁱ 2,908
Model 8 How much do you agree or disagree with the following statement? I trust my local government.	ⁱ 2,907
^a Poor (1), Fair (2), Good (3), Very Good (4), Excellent (5)	
^b Less than 12th grade (1), 12th grade (2), Less than 4 years of college (3), 4 years of college or more (4)	
^c No income (0), Less than \$10,000 (1), \$10,000 to \$19,999 (2), \$20,000 to \$29,999 (3), \$30,000 to \$39,999 (4), \$40,000 to \$49,999 (5), \$50,000 or more (6)	
^d Very dissatisfied (1), Dissatisfied (2), Neither satisfied nor dissatisfied (3), Satisfied (4), Very Satisfied (5)	
^e Never (0), 1 time (1), 2 or 3 times (2), 4 or 5 times (3), 6 or more times (4)	
^f No (0), Yes (1)	
^g None (0), 1 or 2 days (1), Once a month or less (2), 2 or 3 days a month (3), 1 or 2 days a week (4), 3 to 5 days a week (5), Every day or almost every day (6)	
^h Never (0), Once (1), Twice (2), 3 or 4 times (3), 5 or more times (4)	
ⁱ Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly agree (5)	

Within each domain, outcomes are derived from Wave III self-reports and coded such that higher values correspond to lower deviance and stronger pro-social attitudes. Outcomes are estimated as ordered categorical indicators. This approach keeps the interpretation

aligned with how respondents were asked to report these behaviors and attitudes, and it avoids imposing linearity assumptions that would be difficult to justify for the categories used in Add Health. Sample sizes vary modestly across models as a function of item-level missingness, but the same analytic restrictions and weighting strategy are applied across outcomes to maintain comparability of estimates across domains.

The civic and pro-social domain is intentionally broader than simple volunteering. It includes behaviorally specific items (volunteering during adolescence, volunteering in the past year, donating blood products, and organ donor registration) alongside institutional participation and legitimacy measures (registered to vote, and trust in federal, state, and local government). Conceptually, these outcomes are treated as downstream indicators of integration into conventional adult roles and institutions. In the models that follow, the primary question is not whether extracurricular participation predicts a single form of good citizenship, but whether participation is associated with multiple dimensions of pro-social engagement and institutional confidence once demographic background, current role statuses, and the Wave III self-regulation factors are accounted for.

General Outcomes

The initial set of Wave III structural models are formulated to evaluate broad indicators of adult functioning, such as general health, educational attainment, prior year personal income, and overall life satisfaction. These outcomes were chosen to represent multiple domains of early adulthood adjustment, encompassing physical well-being, educational achievement, economic stability, and subjective quality of life. Collectively, these measures offer a comprehensive overview of respondents' developmental status approximately six years after Wave I.

All four models incorporate the same set of demographic, contextual, and participation covariates, as well as the latent self-regulation constructs estimated in the Wave III measurement model. Demographic controls consist of age, gender, race/ethnicity, and

Table 22
Wave III General Outcomes Models

	General Health ^a	Educational Attainment ^b	Prior Year Income ^c	Life Satisfaction ^d
Non-Sport Participation				
Mod. participation	0.002 (0.025)	0.130 (0.020)***	-0.005 (0.026)	0.013 (0.026)
High participation	0.017 (0.025)	0.133 (0.018)***	0.021 (0.025)	0.010 (0.026)
Sport Participation				
Mod. participation	0.077 (0.024)**	0.095 (0.019)***	0.034 (0.025)	0.046 (0.025) [†]
High participation	0.097 (0.026)***	0.042 (0.020)*	0.047 (0.026) [†]	0.039 (0.027)
Religious Youth Participation				
< Once per month	-0.010 (0.024)	-0.020 (0.018)	-0.043 (0.023) [†]	0.015 (0.024)
≥ Once per month	0.056 (0.024)*	0.023 (0.019)	-0.063 (0.023)**	0.054 (0.024)*
≥ Once per week	0.085 (0.024)***	0.014 (0.019)	-0.032 (0.025)	0.056 (0.025)*
Emot. Stability				
	0.098 (0.034)**	0.113 (0.030)***	0.032 (0.039)	0.351 (0.025)***
Impulsivity				
	0.093 (0.024)***	0.070 (0.021)***	-0.036 (0.026)	0.023 (0.022)
Self-Concept				
	0.330 (0.030)***	-0.054 (0.027)*	0.015 (0.035)	0.440 (0.023)***
Age	0.053 (0.025)*	0.339 (0.019)***	0.208 (0.026)***	0.048 (0.026) [†]
Female	-0.101 (0.024)***	0.081 (0.019)***	-0.127 (0.024)***	0.016 (0.025)
Wave I Parent SES	0.017 (0.024)	0.308 (0.017)***	0.030 (0.024)	0.000 (0.025)
Hispanic	-0.000 (0.023)	0.001 (0.018)	-0.008 (0.024)	0.022 (0.024)
Black	0.003 (0.020)	-0.017 (0.016)	-0.067 (0.022)**	-0.032 (0.020)
Other Race	-0.007 (0.023)	-0.013 (0.017)	0.007 (0.022)	-0.049 (0.024)*
Living Situation				
Parent's home	-0.028 (0.025)	0.054 (0.019)**	-0.081 (0.025)**	-0.104 (0.026)***
Other's home	0.000 (0.022)	-0.056 (0.017)***	0.037 (0.023)	-0.077 (0.022)***
Other situation	0.081 (0.025)**	0.032 (0.029)	-0.021 (0.024)	0.072 (0.027)**
Enrolled in University, College, or School / Employment				
Currently enrolled	0.080 (0.025)**	0.334 (0.018)***	-0.119 (0.026)***	0.097 (0.026)***
Currently employed	0.021 (0.023)	0.097 (0.019)***	0.239 (0.023)***	0.052 (0.023)*
Scaled χ^2 (df)	1053.560 (276)***	1067.050 (276)***	871.200 (276)***	1081.590 (276)***
Scaled CFI	0.936	0.933	0.940	0.941
Scaled TLI	0.982	0.981	0.983	0.983
Scaled RMSEA	0.031	0.031	0.030	0.032
SRMR	0.043	0.044	0.044	0.044
<i>n</i>	2919	2917	2341	2919

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a In general, how is your health?

^b What is the highest grade or year of regular school you completed?

^c What was your total personal income before taxes in {2000/2001}?

^d How satisfied are you with your life as a whole?

Wave I parent socioeconomic status, measured by highest parental education. To account for current life circumstances, the models include indicators of living situation (parent's home, another person's home, or other arrangements, with own home as the reference category),

current school enrollment, and current employment. This modeling strategy enables the isolation of associations between adolescent participation and adult outcomes, while controlling for both background characteristics and present structural conditions.

Participation predictors capture Wave I involvement in three domains: non-sport extracurricular activities, school-based sports, and religious youth activities. Non-sport and sport participation were categorized as moderate (1–2 groups or teams) and high (three or more), with non-participation serving as the reference. Religious youth participation was measured using three frequency indicators, with never participating as the reference group. Model fit indices were acceptable across all models, with scaled RMSEA values between .030 and .032, SRMR values slightly above .04, and scaled TLI values from .981 to .983, suggesting that the models adequately represent the observed data.

Several consistent patterns emerged from the analyses. Age is positively associated with educational attainment and income, reflecting typical developmental progression during early adulthood. Female respondents demonstrate higher educational attainment but lower income, after adjusting for covariates. Wave I parent socioeconomic status remains a strong predictor of educational attainment, highlighting the persistent influence of family background on post-secondary outcomes.

Current school enrollment is strongly associated with both educational attainment and life satisfaction, whereas employment is positively related to income and shows a modest association with life satisfaction. Living situation is also significant: residing in a parent's home or another person's home is linked to lower life satisfaction, and living in another person's home is associated with reduced educational attainment. These results underscore the importance of considering present structural conditions when modeling adult outcomes.

The effects of participation differ across domains. Non-sport participation is strongly associated with higher educational attainment but demonstrates minimal association with health, income, or life satisfaction. Sport participation is positively related to general health and educational attainment, with high levels of participation also marginally associated with

income. Religious youth participation exhibits a distinct pattern: frequent participation is linked to better self-rated health and higher life satisfaction, but moderate participation is associated with lower prior year income, indicating a complex relationship between religious engagement and economic outcomes.

The latent self-regulation constructs demonstrate some of the strongest associations within these models. Emotional stability and regulation are positively associated with perceptions of general health, educational attainment, and life satisfaction. Impulsivity displays modest positive associations with health and education. Self-concept emerges as a particularly salient predictor, showing strong associations with both general health and life satisfaction, but a negative association with educational attainment. These findings reinforce the central role of internal regulatory processes in shaping adult well-being, even after accounting for participation histories and current life circumstances.

In summary, the general outcomes models suggest that adolescent extracurricular participation exhibits domain-specific associations with adult functioning. These associations operate alongside significant influences from self-regulation, family background, and current structural conditions. The following sections extend this framework to examine more specific justice-related, behavioral, and pro-social outcomes.

Criminal Justice Interactions

The analyses in this section focus on two indicators of criminal justice involvement during emerging adulthood: being stopped or detained by police for questioning and having ever been arrested or taken into custody. Limited statistical power restricts the analyses to these two outcomes.. Although Add Health Wave III includes several justice-related items, most exhibited very low base rates after applying sampling weights and model covariates, resulting in insufficient variability. Model fit was adequate for both outcomes, as indicated by comparable scaled RMSEA (.031), SRMR (.044-.046), and scaled TLI values above .98, suggesting that the specification generalized effectively across both forms of justice contact.

Table 23
Wave III Criminal Justice Interactions Models

	Stopped by Police ^a	Arrested ^b
Non-Sport Participation		
Mod. participation	-0.014 (0.032)	-0.073 (0.040) [†]
High participation	0.004 (0.033)	-0.050 (0.042)
Sport Participation		
Mod. participation	0.055 (0.031) [†]	0.024 (0.040)
High participation	0.024 (0.031)	0.033 (0.040)
Religious Youth Participation		
< Once per month	0.045 (0.029)	0.029 (0.035)
≥ Once per month	-0.010 (0.031)	-0.025 (0.041)
≥ Once per week	-0.095 (0.033)**	-0.114 (0.040)**
Emot. Stability		
	-0.021 (0.046)	-0.014 (0.058)
Impulsivity		
	-0.182 (0.032)***	-0.212 (0.040)***
Self-Concept		
	-0.089 (0.038)*	-0.076 (0.048)
Age	-0.141 (0.032)***	-0.081 (0.042) [†]
Female	-0.358 (0.028)***	-0.365 (0.034)***
Wave I Parent SES	0.076 (0.031)*	0.076 (0.039) [†]
Hispanic	0.080 (0.028)**	-0.007 (0.037)
Black	0.013 (0.027)	0.036 (0.035)
Other Race	0.047 (0.027) [†]	0.038 (0.032)
Living Situation		
Parent's home	0.013 (0.031)	-0.045 (0.039)
Other's home	-0.008 (0.029)	-0.008 (0.034)
Other situation	-0.044 (0.031)	-0.070 (0.038) [†]
Enrolled in University, College, or School / Employment		
Currently enrolled	-0.029 (0.031)	-0.111 (0.040)**
Currently employed	-0.046 (0.029)	-0.020 (0.037)
Scaled χ^2 (df)	1049.150 (276)***	1056.420 (276)***
Scaled CFI	0.935	0.934
Scaled TLI	0.982	0.981
Scaled RMSEA	0.031	0.031
SRMR	0.044	0.046
<i>n</i>	2906	2913

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a How many times have you been stopped or detained by the police for questioning about your activities? Don't count minor traffic violations

^b Have you ever been arrested or taken into custody by the police?

Gender and behavioral self-regulation were the strongest and most consistent predictors across both outcomes. Female respondents exhibited substantially lower levels of police contact and arrest, with standardized effects near one-third of a standard deviation in magnitude. Impulsivity, coded so that higher values indicate greater behavioral regulation,

was strongly and negatively associated with both outcomes, with a larger effect observed for arrest than for police stops. These results indicate that effortful behavioral control is central in differentiating individuals who experience justice system contact during emerging adulthood, particularly at higher levels of involvement.

Self-concept demonstrated a modest protective effect for police stops but was not statistically significant for arrest, suggesting that positive self-evaluative functioning may be more relevant for lower-level police encounters than for custodial outcomes. Emotional Stability/Regulation was not significantly associated with either outcome after accounting for behavioral regulation and contextual factors.

Several structural and demographic factors exhibited outcome-specific patterns. Age was significantly associated with police stops but only marginally related to arrest, indicating that exposure to police contact decreases with age during this developmental period, while arrest risk is less influenced by age. School enrollment was unrelated to police stops but significantly protective against arrest, underscoring the importance of institutional embeddedness for more serious justice involvement. Hispanic respondents reported higher levels of police stops compared to White respondents, although this pattern did not extend to arrest. Black respondents did not differ significantly from the White reference group in either model after controls were applied.

Adolescent extracurricular participation showed limited direct association with justice outcomes. Neither non-sport nor sport participation demonstrated consistent effects across models, although moderate sport participation was marginally associated with police stops. In contrast, religious youth participation exhibited a clear threshold effect: weekly participation was significantly associated with lower levels of both police stops and arrest, while lower frequencies were unrelated to either outcome. This pattern suggests that sustained religious engagement during adolescence may offer a modest protective influence against later justice system contact.

These results indicate that criminal justice interactions in emerging adulthood are

shaped primarily by gender and behavioral self-regulation, with more limited contributions from adolescent extracurricular participation. Religious involvement is the only activity domain demonstrating consistent protective associations across justice outcomes. This aligns with a developmental perspective in which structured activities exert indirect influences through internal regulatory processes, while more immediate behavioral control plays a central role in justice-related trajectories.

Tobacco, Alcohol, Drugs, and Suicide Risk

Tables 24 and 25 display the Wave III models for tobacco use, alcohol use and related harms, marijuana and other illicit drug use, and suicide risk. Consistent with prior sections, the structural model remains unchanged. Across all eight models, overall fit indices are stable and within acceptable ranges (scaled CFI = .933 to .934, scaled TLI = .981, scaled RMSEA = .031, SRMR = .044 to .047), supporting the interpretation that observed differences across outcomes reflect substantive variation rather than model instability.

Several consistent patterns emerge across outcomes. Impulsivity is the most uniform predictor, demonstrating negative associations with regular smoking and all alcohol and substance outcomes, including binge drinking, alcohol-related problems with friends and dating, marijuana use, and illicit drug use. This finding aligns with the broader framework of self-regulation as a selection factor, in which higher regulatory capacity, after accounting for background characteristics, is associated with a lower risk of substance involvement. Self-concept also functions in the expected direction for many outcomes, particularly marijuana use, drunk driving, and suicide risk. In contrast, emotional stability and regulation differentiates sharply by outcome, especially when comparing suicide risk to substance outcomes. In the suicide model, emotional stability and regulation is the dominant and strongly protective predictor. For substance outcomes, its effect is either modestly protective or statistically indistinguishable from zero.

Table 24
Wave III Tobacco and Alcohol Models

	Regular Smoking ^a	Binge Drinking ^b	Problems Friends ^c	Problems Dating ^d
Non-Sport Participation				
Mod. participation	-0.034 (0.029)	-0.009 (0.025)	-0.015 (0.042)	0.029 (0.041)
High participation	-0.064 (0.028)*	-0.041 (0.025) [†]	0.011 (0.042)	0.011 (0.038)
Sport Participation				
Mod. participation	-0.008 (0.028)	0.091 (0.024)***	0.092 (0.041)*	0.133 (0.040)***
High participation	0.012 (0.030)	0.112 (0.025)***	0.076 (0.043) [†]	0.111 (0.039)**
Religious Youth Participation				
< Once per month	-0.003 (0.027)	-0.001 (0.023)	0.007 (0.038)	0.013 (0.034)
≥ Once per month	-0.057 (0.027)*	-0.021 (0.024)	-0.008 (0.042)	-0.022 (0.038)
≥ Once per week	-0.107 (0.028)***	-0.108 (0.024)***	-0.045 (0.044)	-0.059 (0.040)
Emot. Stability				
	-0.041 (0.044)	-0.018 (0.035)	-0.155 (0.060)**	-0.138 (0.057)*
Impulsivity				
	-0.223 (0.030)***	-0.224 (0.024)***	-0.271 (0.041)***	-0.171 (0.038)***
Self-Concept				
	-0.039 (0.039)	-0.074 (0.032)*	-0.068 (0.052)	-0.022 (0.050)
Age	-0.081 (0.029)**	-0.010 (0.025)	-0.072 (0.047)	-0.064 (0.044)
Female	-0.039 (0.028)	-0.212 (0.023)***	-0.174 (0.038)***	-0.063 (0.037) [†]
Wave I Parent SES	-0.018 (0.028)	0.104 (0.023)***	0.117 (0.039)**	0.055 (0.037)
Hispanic	-0.120 (0.027)***	-0.039 (0.023) [†]	0.030 (0.040)	-0.046 (0.039)
Black	-0.200 (0.025)***	-0.242 (0.020)***	-0.147 (0.041)***	-0.111 (0.037)**
Other Race	-0.007 (0.024)	-0.060 (0.021)**	-0.069 (0.040) [†]	0.012 (0.034)
Living Situation				
Parent's home	-0.070 (0.028)*	-0.041 (0.024) [†]	-0.013 (0.042)	-0.038 (0.039)
Other's home	0.050 (0.025) [†]	0.036 (0.020) [†]	0.017 (0.035)	0.009 (0.032)
Other situation	-0.138 (0.031)***	-0.010 (0.025)	-0.072 (0.042) [†]	-0.074 (0.038) [†]
Enrolled in University, College, or School / Employment				
Currently enrolled	-0.185 (0.028)***	0.050 (0.025)*	0.018 (0.044)	0.090 (0.039)*
Currently employed	-0.035 (0.027)	0.021 (0.022)	-0.024 (0.040)	0.050 (0.036)
Scaled χ^2 (df)	1056.460 (276)***	1068.160 (276)***	1064.490 (276)***	1064.510 (276)***
Scaled CFI	0.934	0.933	0.933	0.933
Scaled TLI	0.981	0.981	0.981	0.981
Scaled RMSEA	0.031	0.031	0.031	0.031
SRMR	0.044	0.045	0.047	0.047
n	2917	2913	2917	2913

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$
Standardized coefficients with scaled fit indices.

^a Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?

^b During the past 12 months, on how many days did you drink five or more drinks in a row?

^c During the past 12 months, how many times has the following happened? You had problems with your friends because you had been drinking.

^d During the past 12 months, how many times has the following happened? You had problems with someone you were dating because you had been drinking.

Participation effects vary by outcome rather than being uniform. Non-sport participation generally shows no significant associations across models, with the most

consistent finding being that high non-sport participation is modestly protective for regular smoking and marginally protective for binge drinking. In contrast, sport participation is positively associated with binge drinking, alcohol-related problems with friends and dating, and drunk driving. These associations are not observed for marijuana use, illicit drug use, or suicide risk, where sport participation effects are small and statistically non-significant. Collectively, these results indicate that the behavioral risks associated with sport involvement in early adulthood are concentrated in alcohol-related contexts rather than generalized substance use.

Religious youth participation demonstrates the most consistent protective association across all outcomes. Frequent religious participation, defined as once per week or more, is associated with lower rates of regular smoking, binge drinking, drunk driving, marijuana use, illicit drug use, and suicide risk. This cross-domain pattern supports a social control interpretation, suggesting that sustained involvement in conventional institutions, along with the routines and social ties they foster, corresponds to lower behavioral risk over time. The less frequent religious participation categories show weaker and less consistent associations, reinforcing the conclusion that the intensity and regularity of involvement are more consequential than nominal participation.

The covariates generally perform as anticipated and provide important context for the main findings. Women report lower levels of binge drinking, fewer alcohol-related problems, and reduced substance use across outcomes, although the association with suicide risk is not significant in this sample. Age is protective for several outcomes, particularly regular smoking and other substance use. Living situation, enrollment, and employment yield mixed results, with a strong protective effect of enrollment observed in the smoking model. Current school enrollment also demonstrates a small negative association with both binge drinking and alcohol-related dating problems. Race and ethnicity coefficients vary by outcome, with several models indicating lower risk among Black respondents for multiple substance-related outcomes, after adjusting for included controls.

Table 25
Wave III Substance Use and Suicide Risk Models

	Drunk Driving^a	Marijuana Use^b	Illicit Drug Use^c	Suicidal Ideation^d
Non-Sport Participation				
Mod. participation	0.014 (0.031)	-0.012 (0.030)	0.002 (0.036)	0.000 (0.045)
High participation	-0.008 (0.029)	-0.028 (0.029)	0.034 (0.034)	0.011 (0.046)
Sport Participation				
Mod. participation	0.134 (0.030) ^{***}	0.051 (0.029) [†]	0.004 (0.036)	-0.008 (0.048)
High participation	0.152 (0.031) ^{***}	0.043 (0.031)	-0.014 (0.035)	-0.003 (0.050)
Religious Youth Participation				
< Once per month	-0.035 (0.028)	0.017 (0.027)	0.041 (0.032)	-0.077 (0.044) [†]
≥ Once per month	-0.021 (0.030)	-0.040 (0.029)	0.015 (0.036)	-0.090 (0.048) [†]
≥ Once per week	-0.083 (0.030) ^{**}	-0.106 (0.030) ^{***}	-0.115 (0.036) ^{**}	-0.166 (0.046) ^{***}
Emot. Stability	0.134 (0.047) ^{**}	0.009 (0.046)	-0.072 (0.054)	-0.422 (0.057) ^{***}
Impulsivity	-0.192 (0.032) ^{***}	-0.235 (0.031) ^{***}	-0.256 (0.036) ^{***}	-0.122 (0.044) ^{**}
Self-Concept	-0.191 (0.041) ^{***}	-0.167 (0.040) ^{***}	-0.083 (0.048) [†]	-0.146 (0.047) ^{**}
Age	0.051 (0.032)	-0.152 (0.030) ^{***}	-0.157 (0.036) ^{***}	-0.182 (0.047) ^{***}
Female	-0.195 (0.028) ^{***}	-0.118 (0.028) ^{***}	-0.135 (0.034) ^{***}	-0.011 (0.045)
Wave I Parent SES	0.136 (0.029) ^{***}	0.105 (0.029) ^{***}	0.175 (0.034) ^{***}	0.086 (0.042) [*]
Hispanic	-0.094 (0.030) ^{**}	-0.048 (0.029) [†]	-0.001 (0.033)	0.031 (0.042)
Black	-0.188 (0.029) ^{***}	-0.064 (0.026) [*]	-0.235 (0.034) ^{***}	-0.048 (0.040)
Other Race	-0.068 (0.026) ^{**}	-0.034 (0.027)	-0.014 (0.030)	0.010 (0.040)
Living Situation				
Parent's home	-0.062 (0.030) [*]	-0.047 (0.030)	-0.037 (0.035)	0.056 (0.047)
Other's home	-0.033 (0.027)	0.032 (0.026)	0.068 (0.027) [*]	0.043 (0.037)
Other situation	-0.102 (0.032) ^{**}	-0.090 (0.028) ^{**}	-0.046 (0.037)	-0.071 (0.053)
Enrolled in University, College, or School / Employment				
Currently enrolled	0.062 (0.030) [*]	-0.041 (0.030)	-0.056 (0.036)	-0.055 (0.045)
Currently employed	0.044 (0.030)	-0.055 (0.027) [*]	-0.040 (0.033)	-0.031 (0.043)
Scaled χ^2 (df)	1047.980 (276) ^{***}	1057.900 (276) ^{***}	1055.530 (276) ^{***}	1047.040 (276) ^{***}
Scaled CFI	0.934	0.934	0.934	0.933
Scaled TLI	0.981	0.981	0.981	0.981
Scaled RMSEA	0.031	0.031	0.031	0.031
SRMR	0.044	0.044	0.044	0.046
<i>n</i>	2894	2919	2919	2866

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Since June 1995, have you driven while drunk?

^b In the past year, have you used marijuana?

^c Past year illicit drug use item constructed from Add Health items concerning cocaine, methamphetamine, other drugs, and injected drugs.

^d During the past 12 months, have you ever seriously thought about committing suicide?

One result merits careful interpretation because it does not align perfectly with the otherwise coherent pattern. In the drunk driving model, emotional stability and regulation is positively associated with the outcome, even though emotional stability and regulation is

strongly protective for suicide risk and is not elevated for most other substance outcomes. This is not a contradiction so much as a reminder that the alcohol-related outcomes are capturing a distinct behavioral context. In this domain, risk may be more tightly linked to exposure, peer leisure routines, and situational opportunity structures than to emotional dysregulation alone, especially once impulsivity and self-concept are simultaneously controlled. The broader pattern remains that impulsivity and self-concept operate consistently across substance outcomes, while emotional stability and regulation is most consequential for suicide risk.

Overall, these results support two key conclusions. First, participation effects are outcome-specific rather than uniformly protective or risky: sport participation is more closely associated with alcohol-related risk behaviors, while religious participation is broadly protective. Second, the self-regulation constructs serve as important selection controls and differentiate substantively across domains, especially when behavioral risk and suicide risk are modeled concurrently. The following section moves from risk outcomes to those that are explicitly pro-social and civic in nature. This shift enables an examination of whether participation patterns associated with lower behavioral risk are also linked to higher civic responsibility, and whether self-regulation factors that predict risk outcomes function similarly when the outcome domain is conventional and outward-facing rather than harmful or self-directed.

Civic Engagement and Institutional Trust

The final set of Wave III models include indicators of civic engagement, participation, and institutional trust. These outcomes encompass both behavioral involvement, such as volunteering, donation, and voter registration, and attitudinal orientations toward government. This approach offers a broad perspective on social integration and pro-social functioning during emerging adulthood.

Table 26
Wave III Civic Engagement Behavior Models

	Adolescent Volunteering ^a	Past Year Volunteering ^b	Blood Donation ^c	Organ Donor ^d
Non-Sport Participation				
Mod. participation	0.072 (0.029)*	0.094 (0.029)**	0.080 (0.034)*	0.113 (0.029)***
High participation	0.107 (0.027)***	0.140 (0.027)***	0.103 (0.031)***	0.091 (0.027)***
Sport Participation				
Mod. participation	0.050 (0.028) [†]	0.068 (0.029)*	-0.001 (0.034)	0.043 (0.028)
High participation	0.035 (0.029)	0.069 (0.029)*	-0.023 (0.034)	0.002 (0.030)
Religious Youth Participation				
< Once per month	0.065 (0.026)*	0.011 (0.027)	0.038 (0.030)	-0.018 (0.027)
≥ Once per month	0.087 (0.027)**	0.056 (0.027)*	0.050 (0.033)	-0.023 (0.027)
≥ Once per week	0.118 (0.027)***	0.057 (0.028)*	0.005 (0.033)	0.006 (0.028)
Emot. Stability	-0.017 (0.043)	-0.048 (0.044)	-0.037 (0.050)	0.040 (0.044)
Impulsivity	0.035 (0.030)	0.023 (0.030)	0.034 (0.035)	-0.006 (0.031)
Self-Concept	0.067 (0.039) [†]	0.122 (0.039)**	0.032 (0.044)	-0.022 (0.040)
Age	0.015 (0.028)	0.030 (0.029)	-0.011 (0.034)	0.035 (0.029)
Female	0.041 (0.027)	-0.036 (0.027)	-0.057 (0.032) [†]	0.145 (0.027)***
Wave I Parent SES	0.183 (0.027)***	0.172 (0.027)***	0.037 (0.033)	0.164 (0.028)***
Hispanic	0.025 (0.027)	0.001 (0.028)	-0.040 (0.033)	-0.094 (0.028)***
Black	-0.017 (0.023)	-0.022 (0.024)	-0.008 (0.029)	-0.162 (0.023)***
Other Race	0.035 (0.025)	-0.014 (0.026)	-0.015 (0.030)	-0.076 (0.025)**
Living Situation				
Parent's home	0.027 (0.028)	0.012 (0.028)	0.011 (0.034)	-0.035 (0.028)
Other home	-0.053 (0.025)*	-0.013 (0.028)	0.048 (0.029) [†]	0.010 (0.026)
Other's situation	0.066 (0.028)*	0.150 (0.027)***	0.031 (0.034)	0.035 (0.028)
Enrolled in University, College, or School / Employment				
Currently enrolled	0.129 (0.028)***	0.214 (0.027)***	0.049 (0.034)	0.023 (0.029)
Currently employed	0.021 (0.026)	0.046 (0.027) [†]	0.013 (0.032)	-0.019 (0.027)
Scaled χ^2 (df)	1056.460 (276)***	1068.160 (276)***	1064.490 (276)***	1064.510 (276)***
Scaled CFI	0.934	0.933	0.933	0.933
Scaled TLI	0.981	0.981	0.981	0.981
Scaled RMSEA	0.031	0.031	0.031	0.031
SRMR	0.044	0.045	0.047	0.047
<i>n</i>	2917	2913	2917	2913

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a At any time during your adolescence, when you were between 12 to 18 years old, did you regularly participate in volunteer or community service work? Don't count things like washing cars or selling candy to raise money

^b During the last 12 months did you perform any unpaid volunteer or community service work?

^c Have you donated blood, plasma, or platelets during the last 12 months?

^d Are you a registered organ donor?

Table 26 presents the results for civic engagement behaviors. Retrospective parent SES consistently predicts adolescent volunteering, past-year volunteering, and organ donor

registration, but not blood donation. Enrollment in post-secondary education is strongly associated with both adolescent and recent volunteering. Non-sport extracurricular participation demonstrates robust positive associations across all behavioral outcomes, with both moderate and high levels predicting a higher likelihood of volunteering, blood donation, and organ donor status. In contrast, sport participation exhibits more limited effects, achieving statistical significance only for past-year volunteering.

Religious youth participation demonstrates domain-specific associations. Higher-frequency participation is positively associated with increased adolescent volunteering, whereas the effects on adult volunteering are weaker. Religious participation does not significantly predict blood donation or organ donor status after accounting for demographic controls and self-regulation. Among the self-regulation constructs, self-concept is positively associated with past-year volunteering, while emotional stability/regulation and impulsivity do not exhibit consistent relationships across behavioral outcomes.

As shown in Table 27, regarding civic participation and institutional trust, voter registration is strongly associated with age, wave I parent SES, educational enrollment, and non-sport extracurricular participation. Both moderate and high levels of non-sport participation predict a higher likelihood of voter registration, whereas sport participation does not. Black respondents are more likely to report being registered to vote, despite exhibiting lower levels of institutional trust across all three government domains.

Patterns of institutional trust differ from those observed for behavioral participation. Sport participation is positively associated with trust in federal, state, and local government, while non-sport participation does not predict trust after controlling for other factors. Religious youth participation consistently demonstrates positive associations with trust in federal, state, and local government at higher frequencies, indicating a persistent link between adolescent religious involvement and adult institutional confidence.

Self-regulation exerts a greater influence on attitudinal outcomes than on behavioral outcomes. Both impulsivity and self-concept are positively associated with trust across all

Table 27

Wave III Civic Participation and Institutional Trust Models

	Registered to Vote ^a	Trust in Federal Gov. ^b	Trust in State Gov. ^c	Trust in Local Gov. ^d
Non-Sport Participation				
Mod. participation	0.122 (0.031) ^{***}	-0.022 (0.024)	-0.008 (0.025)	0.002 (0.025)
High participation	0.122 (0.033) ^{***}	-0.021 (0.025)	0.010 (0.025)	0.010 (0.025)
Sport Participation				
Mod. participation	-0.006 (0.030)	0.066 (0.024) ^{**}	0.057 (0.024) [*]	0.050 (0.024) [*]
High participation	0.016 (0.032)	0.056 (0.025) [*]	0.047 (0.025) [†]	0.047 (0.025) [†]
Religious Youth Participation				
< Once per month	0.044 (0.029)	0.031 (0.023)	0.018 (0.023)	-0.001 (0.023)
≥ Once per month	0.058 (0.031) [†]	0.101 (0.024) ^{***}	0.095 (0.024) ^{***}	0.080 (0.023) ^{***}
≥ Once per week	0.052 (0.031) [†]	0.087 (0.025) ^{***}	0.080 (0.025) ^{**}	0.078 (0.025) ^{**}
Emot. Stability				
	-0.006 (0.047)	0.074 (0.036) [*]	0.046 (0.036)	0.053 (0.037)
Impulsivity				
	0.034 (0.032)	0.090 (0.024) ^{***}	0.091 (0.024) ^{***}	0.072 (0.024) ^{**}
Self-Concept				
	0.035 (0.043)	0.139 (0.032) ^{***}	0.145 (0.031) ^{***}	0.143 (0.033) ^{***}
Age	0.160 (0.030) ^{***}	0.049 (0.024) [*]	0.016 (0.025)	0.011 (0.026)
Female	-0.061 (0.030) [*]	0.066 (0.024) ^{**}	0.031 (0.023)	0.039 (0.024)
Wave I Parent SES	0.203 (0.029) ^{***}	0.021 (0.023)	0.040 (0.023) [†]	0.034 (0.024)
Hispanic	-0.038 (0.027)	-0.001 (0.022)	0.022 (0.022)	0.011 (0.023)
Black	0.074 (0.026) ^{**}	-0.123 (0.020) ^{***}	-0.128 (0.020) ^{***}	-0.124 (0.020) ^{***}
Other Race	-0.073 (0.025) ^{**}	-0.032 (0.021)	-0.022 (0.022)	-0.030 (0.023)
Living Situation				
Parent's home	0.006 (0.031)	0.007 (0.024)	-0.003 (0.025)	0.008 (0.025)
Other's home	-0.031 (0.026)	-0.046 (0.021) [*]	-0.030 (0.021)	-0.020 (0.021)
Other situation	-0.022 (0.033)	0.053 (0.024) [*]	0.069 (0.027) [*]	0.045 (0.027) [†]
Enrolled in University, College, or School / Employment				
Currently enrolled	0.115 (0.030) ^{***}	0.058 (0.025) [*]	0.046 (0.025) [†]	0.076 (0.025) ^{**}
Currently employed	-0.012 (0.029)	-0.034 (0.022)	-0.024 (0.023)	-0.016 (0.023)
Scaled χ^2 (df)	1047.910 (276) ^{***}	1055.990 (276) ^{***}	1058.260 (276) ^{***}	1061.880 (276) ^{***}
Scaled CFI	0.934	0.935	0.934	0.934
Scaled TLI	0.981	0.982	0.981	0.981
Scaled RMSEA	0.031	0.031	0.031	0.031
SRMR	0.043	0.043	0.044	0.044
<i>n</i>	2910	2910	2908	2907

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Are you registered to vote?^b How much do you agree or disagree with the following statement? I trust the federal government.^c How much do you agree or disagree with the following statement? I trust my state government.^d How much do you agree or disagree with the following statement? I trust my local government.

levels of government, whereas emotional stability predicts trust in the federal government only. These findings indicate that internal regulatory capacities are more closely linked to institutional orientations than to specific civic behaviors.

These models indicate that extracurricular participation is associated not only with reduced risk behaviors but also with subsequent civic engagement. Non-sport activities primarily predict behavioral involvement, while sport participation is strongly associated with institutional trust. Family SES and educational engagement remain central to both domains, while self-regulation is most relevant for attitudinal outcomes.

Developmental Patterns in Emerging Adulthood

In this chapter, I examined the developmental significance of emerging adulthood by linking adolescent structured activity participation to outcomes observed during the Wave III interview period (ages 18 to 26), while accounting for contemporaneously measured self-regulation. Conceptually, the Wave III models were designed to test whether participation histories retain explanatory relevance after respondents exit the institutional structure of secondary schooling and after external constraints on daily behavior are weakened. Empirically, the results indicate that emerging adulthood is best characterized by domain specificity rather than uniform continuity. Participation effects persist for some outcomes but not others, and the strongest and most consistent predictors shift toward internal regulatory capacities and current structural conditions.

Two patterns organize the results across domains. First, adolescent participation is not uniformly protective or risky; rather, participation effects are concentrated in outcome domains that align closely with the social processes plausibly shaped by participation. Second, self-regulation operates as a consequential selection control in early adulthood, particularly when outcomes reflect behavioral risk or institutional orientations. These conclusions reinforce the core premise that emerging adulthood is a period in which conventional institutions exert less direct constraint and individual differences in internal regulation become increasingly salient.

General Outcomes and the Persistence of Structured Activity Benefits

For broad indicators of adult functioning, participation effects are present but selective. Non-sport extracurricular participation remains a strong predictor of educational attainment, even after controlling for parent socioeconomic status, current enrollment and employment, and Wave III self-regulation factors. This pattern aligns with a social control interpretation, in which structured activity participation reflects and may reinforce conventional ties and skill development that support educational persistence. In contrast, non-sport participation exhibits minimal direct association with health, income, and life satisfaction. This suggests that the long-term association of non-sport activities is most visible in outcomes closely tied to human capital accumulation.

Sport participation demonstrates a distinct profile. Sport involvement is positively associated with self-rated health and educational attainment, and high levels of sport participation exhibit a marginal association with income. This pattern indicates that sport participation corresponds to developmental advantages beyond academic outcomes, including health-related behaviors, embodied capital, and social networks. However, these benefits do not generalize to subjective well-being, suggesting that any advantages may be mediated through role structures and routine formation rather than through global life evaluation.

Religious youth participation exhibits the most consistent associations with global well-being. Higher frequency participation is linked to better self-rated health and higher life satisfaction, and it is broadly protective across several risk domains. These results support the interpretation that sustained adolescent religious involvement reflects dense social ties, normative reinforcement, and routine stabilization that remain consequential after the institutional transition out of adolescence.

Across general outcomes, current structural conditions are strongly predictive, as expected in a developmental period characterized by role experimentation and instability. Enrollment and employment serve as proximate markers of institutional embeddedness, while living arrangement indicators capture residential instability and dependence. These results

underscore a central distinction: adolescent participation is significant, but its effects are situated within a context where current role placement explains substantial variation in adult functioning.

Criminal Justice Interactions and the Centrality of Behavioral Regulation

In the justice domain, participation effects are limited, and the dominant predictors are gender and behavioral self-regulation. Impulsivity, coded so that higher scores indicate greater behavioral regulation, is strongly and negatively associated with both police stops and arrest. This finding supports the argument that emerging adulthood shifts the balance from external constraint to internal control. As structured environments become less prevalent, individual differences in effortful regulation become more consequential for justice contact.

Religious participation is an exception. Weekly participation is associated with lower levels of both stops and arrest, suggesting a threshold pattern consistent with the broader findings. In contrast, non-sport and sport participation show minimal direct association with justice outcomes. This does not negate the role of participation as an upstream influence; rather, it suggests that once internal regulation is modeled directly and current structural conditions are controlled, participation histories contribute less to explaining justice outcomes in this period than do contemporaneous regulatory capacities.

Substance Use, Alcohol-Related Risk, and Divergent Participation Profiles

The substance use domain provides clear evidence that participation effects are outcome-specific and context dependent. Impulsivity exhibits the most consistent protective association across tobacco, alcohol, marijuana, and illicit drug outcomes. Self-concept is also protective for several outcomes, including marijuana use, drunk driving, and suicide risk. Collectively, these effects reinforce the interpretation of Wave III self-regulation as a meaningful set of selection controls that differentiate risk trajectories during early adulthood.

Sport participation demonstrates a concentrated risk profile. Both moderate and high levels of sport participation predict binge drinking and alcohol-related harms, and sport participation is strongly associated with drunk driving. These results align with literature emphasizing peer leisure contexts and alcohol-related norms within sport networks, indicating that sport-associated risk in early adulthood is not generalized across all substances. Sport participation does not meaningfully predict marijuana use, illicit drug use, or suicide risk, suggesting that the risk mechanism is most closely tied to alcohol exposure and situational opportunity structures rather than global deviance propensity.

Religious participation again exhibits broad protective effects. Weekly participation is associated with lower regular smoking, lower binge drinking, lower drunk driving, lower marijuana use, lower illicit drug use, and lower suicide risk. This consistency is difficult to attribute solely to a single proximate mechanism and is more plausibly interpreted as reflecting stable social control processes, including routine formation, normative reinforcement, and sustained conventional attachments.

One result in this domain requires careful interpretation. Emotional stability and regulation is positively associated with drunk driving, despite being strongly protective for suicide risk and largely unrelated to several substance outcomes. This pattern suggests that the drunk driving outcome may capture exposure and routine-based opportunity structures that are not reducible to emotional dysregulation alone, particularly when impulsivity and self-concept are modeled simultaneously. The broader conclusion remains that behavioral regulation and self-concept operate coherently across substance outcomes, while emotional stability is most consequential for self-directed risk.

Civic Engagement and Institutional Trust as Downstream Indicators of Integration

The civic domain provides direct evidence that adolescent participation is linked to pro-social adult functioning. Non-sport participation exhibits robust positive associations

with civic engagement behaviors, including adolescent volunteering, past-year volunteering, blood donation, and organ donor registration. These effects persist after controlling for family background, current role statuses, and self-regulation constructs. This pattern supports the argument that structured non-sport participation socializes youth into conventional pro-social practices, provides opportunities to develop civic skills, and connects individuals to networks that normalize community involvement.

In contrast, sport participation is more predictive of institutional trust than of civic behaviors. Sport participation is positively associated with trust in federal, state, and local government, but does not predict voter registration after controls. Religious participation also predicts higher institutional trust at higher frequencies, reinforcing the broader pattern that sustained religious involvement corresponds to conventional institutional orientation.

Self-regulation plays a more substantial role for attitudinal outcomes than for behavioral civic outcomes. Impulsivity and self-concept are positively associated with trust in government across levels, while emotional stability predicts trust in the federal government only. These findings suggest that internal regulatory capacities are more closely aligned with institutional legitimacy and confidence than with discrete pro-social behaviors, which may depend more on opportunity structures and role placement.

Core Findings from Wave III Models

Collectively, the Wave III results support three main conclusions. First, emerging adulthood is characterized by differentiation rather than uniform continuity. Participation effects persist, but they are concentrated in outcome domains where participation plausibly builds durable skills, networks, and orientations. Second, the inclusion of Wave III self-regulation substantially clarifies the interpretation of participation effects. Self-regulation operates as a meaningful selection control, particularly for behavioral risk and institutional trust, and differentiates risk trajectories in a period defined by reduced external constraints. Third, religious youth participation exhibits the most consistent protective

pattern across risk domains, while non-sport participation is most strongly linked to pro-social engagement and educational attainment, and sport participation exhibits a mixed profile that includes both health-related advantages and alcohol-specific risk.

These findings align with the broader framework of this study. Participation is consequential, but its effects are conditional on developmental timing, outcome domain, and the shifting balance between institutional constraint and internal regulation. The subsequent chapter extends this analysis into a later phase of adulthood, when role structures stabilize and life-course trajectories become more cumulative.

From Emerging Adulthood to Young Adulthood

In Chapter 6, the focus shifts from emerging adulthood to young adulthood, examining respondents who are approximately 24 to 33 years old at the Wave IV interview. Compared to Wave III, this period is less defined by broad identity exploration and more by consolidation and stabilization. Young adulthood is a stage in which educational trajectories more fully translate into labor market placement, cohabitation and marriage become more common, and parenting responsibilities increasingly structure daily routines. As these roles accumulate, conventional institutions may again exert stronger indirect control through routine formation, responsibility, and reduced exposure to unstructured peer contexts.

From a life-course perspective, this developmental shift alters the analytic expectations for the subsequent models. While Wave III reflects a period where internal regulatory capacities are especially salient due to diminished external constraint, Wave IV represents a period in which role-based constraint and cumulative advantage or disadvantage become more visible. In this context, adolescent participation may be less consequential as a direct predictor for some outcomes, but may remain influential through its earlier association with educational attainment, role placement, and pro-social orientations. Similarly, self-regulation may function not only as a selection control but also as a mechanism through which individuals maintain stability, avoid risk, and sustain conventional commitments as

adult responsibilities intensify.

Accordingly, in Chapter 6, I evaluate whether the domain-specific participation patterns observed in Wave III persist into young adulthood, whether sport-associated alcohol risk attenuates as role structures stabilize, and whether religious participation continues to correspond to broad protection. I also assess whether self-regulation retains explanatory relevance as adult trajectories become increasingly shaped by enduring role commitments rather than by short-term opportunity structures.

Chapter 6: Wave IV

In the previous chapter, I established emerging adulthood as a developmental period characterized by both the salience and instability of self-regulation. Analyses of the Wave III models indicated that extracurricular participation exhibited domain-specific associations with emerging adult outcomes, and that these associations were significantly influenced by latent self-regulation constructs encompassing emotional functioning, impulsivity, and self-concept. Collectively, these findings support two central claims guiding the subsequent phase of this study. First, selection processes remain active throughout emerging adulthood, and self-regulation offers a theoretically coherent framework for accounting for baseline differences that influence both participation histories and later outcomes. Second, participation cannot be reduced to a single protective or risky factor; its effects differ across institutional domains and depend on the specific competencies and vulnerabilities individuals bring from adolescence.

This developmental transition also modifies the influence of self-regulatory capacity on outcomes. During adolescence and emerging adulthood, self-regulation is closely associated with behavioral direction and the management of instability as individuals encounter new environments and opportunities (Arnett 2000; Arnett 2023). By young adulthood, however, most individuals have entered relatively stable institutional roles (Laub and Sampson 2006; Sampson and Laub 1995). In this context, self-regulation serves less as a mechanism for exploration and more as a resource that facilitates the maintenance and consolidation of adult trajectories (Elder Jr 1998; Moffitt 1993). Therefore, the Wave IV analyses should be interpreted as reflecting not the formation of new behavioral patterns, but the ways in which earlier regulatory capacities continue to influence adaptation within established adult roles.

In this chapter the focus shifts to young adulthood, a developmental stage characterized by the consolidation of role expectations and increased structuring of daily life for many individuals. Life course perspectives emphasize that transitions involve not only changes in age but also shifts in social roles, routines, and constraints, which can alter both

exposure to risk and access to protective resources (Elder Jr 1998; Hogan and Astone 1986; Settersten Jr 2003; Shanahan 2000). Within this framework, young adulthood is defined less by exploration and instability and more by the accumulation of enduring social positions, such as employment, partnership, parenting, and other institutional commitments. These changes have important implications for interpreting participation effects, as the opportunities, incentives, and controls that shape behavior can differ substantially as individuals progress further into adult life (Cohen and Felson 1979; Osgood et al. 1996; Sampson and Laub 2005).

This developmental shift necessitates adjustments to the measurement strategy employed in previous chapters. Self-regulation is widely recognized as multidimensional and developmentally contingent, with constructs such as executive functioning, cognitive control, effortful control, and impulsivity overlapping yet remaining distinguishable across developmental periods and measurement contexts (Barkley 2012; Blair 2016; Nigg 2017). Although underlying traits may exhibit continuity, evolving situational demands can alter the manifestation of regulatory capacities in adulthood (Caspi et al. 2005; Roberts and DelVecchio 2000; Roberts et al. 2006; Roberts and Mroczek 2008). Consequently, the Wave III structure of self-regulation cannot be carried forward unchanged. In this chapter, I re-evaluate the measurement model using EFA and CFA before estimating structural models, aiming to align the latent constructs with the Wave IV measurement context while preserving theoretical continuity with earlier chapters.

This chapter is a further development of the theoretical framework concerning social bonds and self-regulation. Social control perspectives suggest that as individuals assume and invest in conventional roles, the structure of social bonds and routines can reinforce constraints on deviance and elevate the costs associated with risk behavior (Costello and Laub 2020; Hirschi 2002). At the same time, scholarship focused on both emerging and young adults indicates that social bonds may be reconfigured rather than merely strengthened, particularly as peer contexts, romantic relationships, and institutional

attachments change in form and significance, while adult social ties continue to exert regulatory influence (Nader and Davies Robinson 2023; Salvatore and Taniguchi 2012; Sampson and Laub 2005). The subsequent analyses are used to assess whether extracurricular participation maintains protective associations in young adulthood, whether previously observed risks persist or diminish, and how self-regulation operates as a selection control as adult roles and expectations become increasingly significant.

Expanding on the Wave III findings, I examine whether extracurricular participation maintains domain-specific associations with young adult outcomes across behavioral, institutional, and relational domains. Additionally, these models serve to re-evaluate the role of self-regulation as a selection control in contexts where adult responsibilities and constraints are more salient. This comparative approach facilitates direct developmental contrasts while maintaining theoretical continuity with earlier chapters.

Methods

For this chapter, I utilize data from Wave IV of the National Longitudinal Study of Adolescent to Adult Health (Add Health), which tracks respondents into young adulthood. The analytic sample comprises 3,186 individuals who satisfied prior participation criteria and possessed valid Wave IV sampling weights, which are used to address unequal probability of selection and differential attrition across waves.

At the time of the Wave IV interview, respondents were aged 24-33, placing the sample in young adulthood. This developmental stage is marked by greater consolidation of institutional roles than in emerging adulthood, including sustained employment, residential independence, partnership formation, and parenthood. These structural transitions require the inclusion of updated demographic and role-based controls in addition to the core participation indicators established in prior waves.

All demographic and participation variables were constructed to parallel those in earlier chapters wherever possible, thereby facilitating direct developmental comparisons.

Table 28
Descriptive Statistics for Wave IV Sample (n = 3,186)

Variable	Min	Max	%	Variable	Min	Max	%
<i>(a) Demographic Indicators</i>				<i>(b) Participation Indicators</i>			
Age	24	33	28.2	Non-sport participation			
Gender (Female = 1)	0	1	52.0	No participation (Ref.)	0	1	44.1
Race^a				Moderate participation ^f	0	1	41.6
White (Ref.)	0	1	59.7	High participation ^g	0	1	14.3
Black	0	1	25.3	Sport Participation			
Other ^b	0	1	6.1	No participation (Ref.)	0	1	39.6
Ethnicity (Hispanic) ^c	0	1	8.9	Moderate participation ^h	0	1	43.3
Living Situation				High participation ⁱ	0	1	17.1
Own home (Ref.)	0	1	78.8	Religious youth activity			
Parent's home	0	1	14.0	Never (Ref.)	0	1	47.2
Another person's home	0	1	5.6	Less than once per month	0	1	13.9
Other living situation	0	1	1.6	Once per month or more			
Other Structural Controls				but less than once per week	0	1	15.5
SES ^d	0	6	3.5	Once per week or more	0	1	23.4
Educational Attainment ^e	1	5	3.2				
Currently Employed	0	1	65.9				
Ever Married	0	1	48.6				
Child(ren) in Home	0	1	35.6				

^a Respondents who marked Black were eliminated from any subsequent categories in the original Add Health data.

^b American Indian or Native American, Asian or Pacific Islander, and Other were collapsed for analyses.

^c Hispanic ethnicity or Latin origin is treated as a distinct race category.

^d No income (0), < \$10,000 (1), \$10,000 to \$19,999 (2), \$20,000 to \$29,999 (3), \$30,000 to \$39,999 (4), \$40,000 to \$49,999 (5), \$50,000 and above (6)

^e Less than High School (1), High School Diploma (2), Less than Bachelor's (3), Bachelor's Degree (4), More than Bachelor's (5)

^f 1 - 2 groups.

^g 3 or more groups.

^h 1 - 2 teams or sports.

ⁱ 3 or more teams or sports.

Demographic controls include age, gender, race and ethnicity, socioeconomic status, educational attainment, employment status, marital history, living arrangement, and the

presence of children in the household. Participation indicators capture adolescent extracurricular involvement across non-sport, sport, and religious domains, operationalized using the same categorical structure as in previous analyses. Prior to estimating structural models, the measurement structure of self-regulation was re-evaluated using exploratory and confirmatory factor analysis to ensure that the latent construct reflected both the developmental context and measurement constraints of Wave IV.

Measurement Model Development

Exploratory Factor Analysis

The dimensional structure of self-regulation in young adulthood was assessed using exploratory factor analysis with the full set of candidate indicators presented in Table M1.1. Due to the ordinal nature of the items, polychoric correlations were estimated and factors were extracted using maximum likelihood estimation. Sampling weights were applied following the recommendations provided in the Add Health documentation (Harris 2018).

The candidate indicator pool was intentionally broad, incorporating items reflecting emotional stability, impulsivity, control beliefs, future expectancy, behavioral regulation, and agency-related perceptions. Although earlier waves indicated differentiated regulatory domains, no assumption was made that an identical structure would persist into young adulthood. The EFA approach enabled the empirical identification of self-regulation domains at Wave IV, despite the constraints imposed by the available measures.

The number of factors retained was determined using criteria including eigenvalues greater than one, scree plot inspection, and interpretability of rotated solutions. Oblique rotation was used based on the expectation that regulatory domains would be correlated rather than orthogonal. Across candidate solutions, a four-factor structure was both statistically supported and theoretically coherent.

The first factor was characterized by items reflecting mood instability, irritability, worry, stress reactivity, and affective composure, corresponding to the domain of emotional

stability. The second factor captured internalized beliefs about the controllability of life circumstances, reflecting perceptions of internal and external control rather than specific coping capacity. The third factor represented beliefs about the capacity to manage life demands and overcome difficulties. According to Skinner's (1996) taxonomy of control constructs, these items reflect agent-means beliefs, which concern the capacity to influence outcomes and manage life demands. The fourth factor was defined by expectations regarding future outcomes.

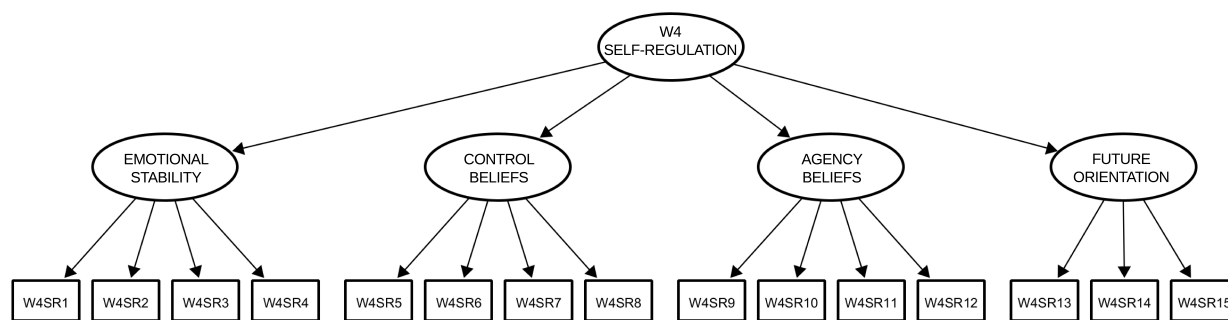
Items reflecting impulsivity and behavioral regulation did not form stable, independent factors after accounting for emotional stability, control beliefs, agency beliefs, and future expectancy. These items either cross-loaded or lacked sufficient conceptual and statistical distinction to justify separate latent constructs. Consequently, they were excluded from the confirmatory specification.

This factor structure represents an empirical depiction of self-regulation within the Add Health Wave IV data. The identified domains reflect how regulatory processes are measured by the available indicators at this developmental stage. This analysis should not be interpreted as a comprehensive redefinition of self-regulation as a theoretical construct, but instead as an identification of the dimensions most coherently represented in this dataset. In Wave IV, self-regulation is best operationalized through emotional stability, control beliefs, agency beliefs, and future expectancy. These domains served as the foundation for the subsequent confirmatory factor analysis.

Confirmatory Factor Analysis

In alignment with previous chapters, confirmatory factor analysis was employed to assess the measurement structure of Wave IV self-regulation. All indicators were treated as ordered categorical variables and estimated using WLSMV with Wave IV sampling weights. The analytic sample included only respondents who met prior participation criteria, resulting in a maximum of 3,186 cases.

Figure 8. Wave IV Confirmatory Factor Model for Self-Regulation



Model Fit Statistics

Fit Index	Scaled CFI	Scaled TLI	Scaled RMSEA	90% CI RMSEA	SRMR	<i>n</i>
Value	0.975	0.970	0.051	[0.048, 0.055]	0.041	3,186

Based on the exploratory analyses described earlier, a second-order factor structure was specified. The higher-order Self Regulation construct is modeled as a function of four first-order domains: Emotional Stability, Control Beliefs, Agency Beliefs, and Future Orientation. Emotional Stability is indicated by four items capturing anger, upset, temper control, and the ability to keep one's composure. Control Beliefs reflect internal versus external perceptions of control. Agency Beliefs captures perceived competence and mastery in handling personal problems. Future Orientation reflects optimistic expectations and hopeful anticipation regarding life trajectory.

The Control Beliefs domain is conceptually adjacent to traditional formulations of locus of control, reflecting generalized perceptions of the extent to which life circumstances are controllable. Rather than focusing solely on attributional style, this operationalization encompasses broader evaluations of structural and situational constraints. In contrast, Agency Beliefs corresponds closely to constructs such as self-efficacy, reflecting perceived capacity to manage challenges and initiate action. According to Skinner's (1996) distinction between generalized control beliefs and agent-means beliefs, these domains constitute related yet analytically distinct components of adult self-regulation: one concerns perceived controllability of outcomes, while the other concerns perceived capacity to act effectively within those circumstances.

Table 29

Wave IV Selected Indicators for Young Adult Self-Regulation

Indicator Item Wording (from Add Health Instruments)	
Emotional Stability	
<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
W4SR1 I get angry easily.	<i>a</i>
W4SR2 I get upset easily.	<i>a</i>
W4SR3 I lose my temper.	<i>a</i>
W4SR4 I keep my cool.	<i>b</i>
Control Beliefs	
<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
W4SR5 There is little I can do to change the important things in my life.	<i>a</i>
W4SR6 Other people determine most of what I can and cannot do.	<i>a</i>
W4SR7 I have little control over the things that happen to me.	<i>a</i>
W4SR8 There is really no way I can solve the problems I have.	<i>a</i>
Agency Beliefs	
<i>In the last 30 days, how often have you felt</i>	
W4SR9 that you were unable to control the important things in your life?	<i>c</i>
W4SR10 confident in your ability to handle your personal problems?	<i>d</i>
W4SR11 that things were going your way?	<i>d</i>
W4SR12 that difficulties were piling up so high that you could not overcome them?	<i>c</i>
Future Orientation	
<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
W4SR13 I hardly ever expect things to go my way.	<i>a</i>
W4SR14 Overall, I expect more good things to happen to me than bad.	<i>b</i>
W4SR15 I rarely count on good things happening to me.	<i>a</i>
<i>^a Strongly agree (1), Agree (2), Neither agree nor disagree (3), Disagree (4), Strongly disagree (5)</i>	
<i>^b Strongly disagree (1), Disagree (2), Neither agree nor disagree (3), Agree (4), Strongly Agree (5)</i>	
<i>^c Very often (1), Fairly often (2), Sometimes (3), Almost never (4), Never (5)</i>	
<i>^d Never (1), Almost never (2), Sometimes (3), Fairly often (4), Very often (5)</i>	

The second-order model demonstrates strong fit to the data, with scaled fit statistics indicating robust model fit (Scaled CFI = .975, Scaled TLI = .970, Scaled RMSEA = .051 (90% CI [.048, .055]), and SRMR = .041). All first-order loadings are statistically significant ($p < .001$) and substantively strong, with standardized loadings ranging from .650 to .857. No cross-loadings were specified. The higher-order loadings are also statistically significant ($p < .001$). Standardized loadings indicate that Emotional Stability (.559), Control Beliefs (.686), Agency Beliefs (.686), and Future Orientation (.934) each contribute substantially to the global Wave IV self-regulation construct. Future Orientation emerged as the strongest indicator of the higher-order factor, suggesting that in young adulthood, regulatory capacity is expressed prominently through forward-looking expectations and perceived life trajectory.

Residual variances indicate that the higher-order factor explains substantial portions of variance in Control Beliefs and Agency Beliefs, and a large proportion of variance in Future Orientation, while Emotional Stability retains greater domain-specific variance. This structure is theoretically coherent, reflecting the consolidation of regulatory processes in adulthood into affective control, agency beliefs, control beliefs, and temporal orientation. Taken together, the results support a parsimonious and theoretically grounded second-order representation of Wave IV self-regulation.

Wave IV Structural Model

The Wave IV structural models extend the previously established measurement framework to evaluate associations between adolescent extracurricular participation and young adult outcomes. Figure 9 presents the complete structural specification. Participation indicators are specified as exogenous predictors, and latent Wave IV self-regulation is included as a selection control. Covariances among demographic variables and participation indicators are freely estimated in the full model to address shared error variance and correlated background influences among exogenous predictors. This strategy prevents inflation of structural coefficients resulting from unmodeled overlap among predictors.

Figure 9. Wave IV Structural Model

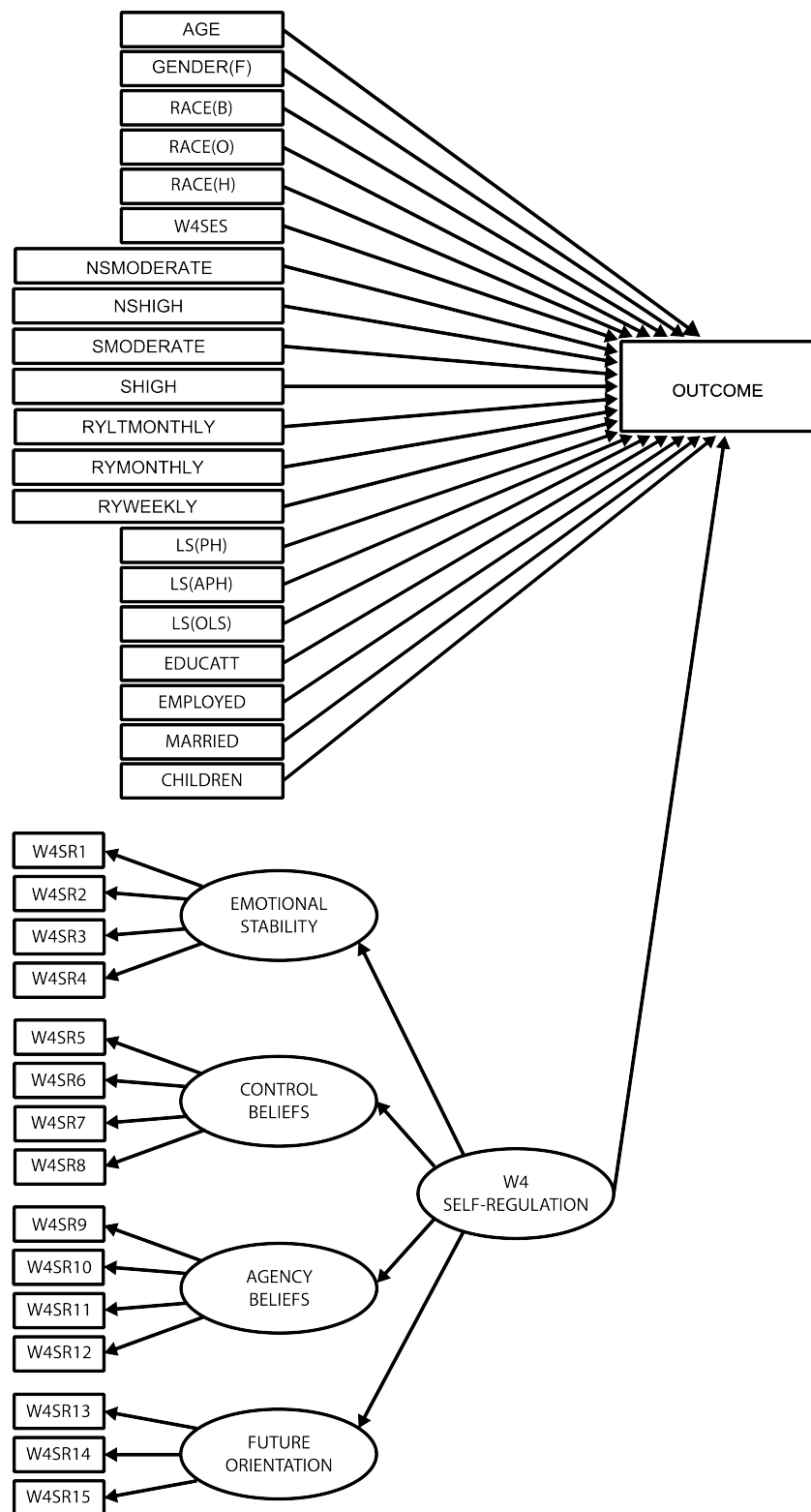


Table 30
Exogenous Variables Used in Wave IV SEM

Label	Description
<i>(a) Demographic Indicators</i>	
AGE	Respondent age in years
GENDER(F)	Gender
Race	
RACE(H)	Hispanic or Latino ^a
RACE(B)	Black or African American
RACE(O)	Other races
Living Situation	
LS(PH)	Parent's home
LS(APH)	Another person's home
LS(OLS)	Other living situation
Other Structural Controls	
W4SES	Wave IV SES
EDUCATT	Educational attainment
EMPLOYED	Currently employed
MARRIED	Ever been married
CHILDREN	Child(ren) living in home
<i>(b) Participation Indicators</i>	
Non-sport participation	
NSMODERATE	Moderate participation
NSHIGH	High participation
Sport participation	
SMODERATE	Moderate participation
SHIGH	High participation
Religious Youth Activity	
RYLTMONTHLY	Less than once per month
RYMONTHLY	Once per month or more, but less than once per week
RYWEEKLY	Once per week or more

^a Following recommendations in the Add Health documentation, Hispanic ethnicity is treated as a distinct racial category in all models. (Harris 2018)

The structural specification diverges from those used in Waves I and III in two key ways. First, demographic controls now represent consolidated adult roles rather than adolescent or transitional contexts. In Wave I, controls focused on household structure and early environmental conditions, while Wave III incorporated transitional markers of emerging adulthood. By Wave IV, respondents have predominantly assumed stable institutional roles.

Therefore, the model includes age, gender, race and ethnicity, socioeconomic status, educational attainment, employment status, marital history, living arrangement, and the presence of children in the household. These controls capture structural embedding within adult institutions and enable estimation of participation effects independent of role acquisition and socioeconomic status.

Table 31
Wave IV Outcome Measures and Item Wording

	Item Wording / Description	<i>n</i>
General Outcomes		
Model 1	Think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States.	^a 3,110
Model 2	In general, how is your health?	^b 3,112
Model 3	[Regarding most current job:] How satisfied (are/were) you with this job, as a whole?	^c 3,078
Model 4	How many close friends do you have? (Close friends include people whom you feel at ease with, can talk to about private matters, and can call on for help.)	^d 3,078
Criminal Justice Interactions		
Model 1	How many times have you been arrested since your 18th birthday?	^e 3,100
Model 2	Have you ever been convicted of or pled guilty to any charges other than a minor traffic violation?	^f 3,108
Model 3	Have you ever been on probation for an offense?	^f 3,109
Model 4	Have you ever spent time in a jail, prison, juvenile detention center or other correctional facility?	^g 3,109
Tobacco, Alcohol, and Drug Use		
Model 1	Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?	^g 3,111
Model 2	During the past 12 months, on how many days did you drink 5 or more/4 or more drinks in a row?	^h 3,100
Model 3	Have you ever used any of the following drugs: marijuana	^g 3,101
Model 4	Past year illicit drug use item constructed from Add Health items concerning steroids, cocaine, methamphetamine, other drugs, and injected drugs.	^g 3,112

Continued on next page

Item Wording / Description		<i>n</i>
Alcohol Related Consequences		
Model 5	How often has your drinking interfered with your responsibilities at work or school?	ⁱ 3,110
Model 6	How often have you been under the influence of alcohol when you could have gotten yourself or others hurt, or put yourself or others at risk, including unprotected sex?	ⁱ 3,111
Model 7	How often have you had legal problems because of your drinking, like being arrested for disturbing the peace or driving under the influence of alcohol, or anything else?	ⁱ 3,110
Model 8	How often have you had problems with your family, friends, or people at work or school because of your drinking?	ⁱ 3,111
Civic and Religious Participation		
Model 1	In the past 12 months, how many hours did you spend on volunteer or community service work?	^j 3,100
Model 2	How often do you usually vote in local or statewide elections?	^k 3,101
Model 3	How often have you attended church, synagogue, temple, mosque, or religious services in the past 12 months?	^l 3,112
Model 4	Many churches, synagogues, and other places of worship have special activities outside of regular worship services-such as classes, retreats, small groups, or choir. In the past 12 months, how often have you taken part in such activities?	^l 3,110
^a	1 (1), 2 (2), 3 (3), 4 (4), 5 (5), 6 (6), 7 (7), 8 (8), 9 (9), 10 (10)	
^b	Poor (1), Fair (2), Good (3), Very Good (4), Excellent (5)	
^c	Extremely dissatisfied (1), Dissatisfied (2), Neither satisfied nor dissatisfied (3), Satisfied (4), Extremely Satisfied (5)	
^d	None (1), 1 or 2 friends (2), 3 to 5 friends (3), 6 to 9 friends (4), 10 or more friends (5)	
^e	Continuous (0 - 25)	
^f	No (0), Once (1), More than once (2)	
^g	No (0), Yes (1)	
^h	None (0), 1 or 2 days in the past 12 months (1), Once a month or less (2), 2 or 3 days a month (3), 1 or 2 days a week (4), 3 to 5 days a week (5), Every day or almost every day (6)	
ⁱ	Never (0), 1 time (1), More than 1 time (2)	
^j	0 hours (0), 1 to 19 hours (1), 20 to 39 hours (2), 40 to 79 hours (3), 80 to 159 hours (4), 160 hours or more (5)	
^k	Never (0), Sometimes (1), Often (2), Always (3)	
^l	A few times (1), Once a month (2), 2 or 3 times a month (3), Once a week (4), More than once a week (5)	

Second, the Wave IV model incorporates role-based structural controls that were not suitable for earlier developmental stages. Employment, marriage, residential independence, and parenthood are institutional attachments that may independently constrain deviant behavior, structure daily routines, and modify opportunity exposure. Including these variables ensures that estimated participation effects are not confounded with adult role occupancy. This approach aligns with life course perspectives, which emphasize that

institutional commitments in adulthood can reorganize social bonds and behavioral constraints.

Participation indicators maintain the categorical structure established in previous chapters to enable direct developmental comparisons. Non-sport and sport participation are modeled using moderate and high engagement categories, each compared to non-participation. Religious youth activity is modeled across graduated frequency categories, with “never” as the reference group. This specification allows for the identification of nonlinear participation effects while preserving continuity with earlier analyses.

Latent Wave IV self-regulation is modeled as a second-order construct indicated by Emotional Stability, Control Beliefs, Agency Beliefs, and Future Orientation. This construct accounts for stable individual differences in regulatory capacity that may be associated with both participation histories and adult outcomes. All models are estimated using WLSMV with Wave IV sampling weights. This specification enables direct developmental comparison with Waves I and III while appropriately accounting for the increased institutional structuring characteristic of young adulthood.

Results

General Outcomes

Table 32 contains the Wave IV general outcomes models, which include subjective social standing, general health, job satisfaction, and number of close friends. Model fit is strong and highly consistent across outcomes (scaled CFI = .959 to .961; scaled TLI = .988; scaled RMSEA = .030; SRMR = .038 to .042). Across all outcomes, Wave IV self-regulation is the most consistent predictor. After accounting for demographics, structural controls, and participation measures, self-regulation is positively associated with each outcome: subjective social standing ($\beta = .230$), general health ($\beta = .312$), job satisfaction ($\beta = .235$), and close friends ($\beta = .185$). In this context, self-regulation operates as a broad adult resource, influencing not only perceptions of social status but also subjective well-being and social

Table 32
Wave IV General Outcomes Models

	Social Standing ^a	General Health ^b	Job Satisfaction ^c	Close Friends ^d
Non-Sport Participation				
Mod. participation	0.008 (0.021)	0.007 (0.023)	-0.007 (0.025)	0.003 (0.024)
High participation	0.043 (0.020)*	0.052 (0.023)*	0.051 (0.024)*	0.077 (0.025)**
Sport Participation				
Mod. participation	0.048 (0.020)*	0.050 (0.023)*	0.004 (0.024)	0.038 (0.023)
High participation	0.043 (0.022)*	0.054 (0.024)*	0.017 (0.026)	0.026 (0.025)
Religious Youth Participation				
< Once per month	-0.013 (0.019)	-0.002 (0.022)	0.027 (0.022)	0.020 (0.022)
≥ Once per month	0.023 (0.019)	0.032 (0.023)	0.025 (0.022)	0.024 (0.023)
≥ Once per week	0.007 (0.020)	0.013 (0.022)	0.032 (0.024)	0.022 (0.022)
Self-Regulation				
	0.230 (0.018)***	0.312 (0.021)***	0.235 (0.023)***	0.185 (0.023)***
Age	-0.011 (0.020)	-0.039 (0.023) [†]	-0.051 (0.023)*	0.010 (0.023)
Female	-0.012 (0.022)	-0.073 (0.024)**	0.004 (0.025)	-0.066 (0.024)**
Prior year income	0.235 (0.020)***	0.110 (0.024)***	0.139 (0.025)***	0.079 (0.024)**
Hispanic	0.012 (0.019)	-0.017 (0.020)	0.037 (0.023)	-0.018 (0.021)
Black	0.006 (0.016)	-0.050 (0.019)**	-0.032 (0.020)	-0.124 (0.020)***
Other Race	-0.017 (0.018)	-0.054 (0.022)*	-0.010 (0.022)	0.002 (0.022)
Living Situation				
Parent's home	-0.035 (0.019) [†]	0.004 (0.021)	-0.015 (0.024)	-0.046 (0.022)*
Other's home	-0.032 (0.019) [†]	0.011 (0.021)	-0.047 (0.023)*	-0.039 (0.021) [†]
Other situation	-0.056 (0.017)***	-0.019 (0.021)	0.024 (0.018)	-0.049 (0.021)*
Other Structural Controls				
Ever married	0.053 (0.022)*	0.025 (0.024)	0.115 (0.025)***	-0.064 (0.024)**
Child(ren) in home	-0.000 (0.029)	0.029 (0.032)	0.064 (0.030)*	-0.090 (0.029)**
Educ. Attainment	0.312 (0.019)***	0.217 (0.023)***	0.025 (0.025)	0.153 (0.024)***
Currently employed	-0.070 (0.019)***	-0.039 (0.021) [†]	0.056 (0.022)*	-0.024 (0.021)
Scaled χ^2 (df)	1551.400 (400)***	1520.570 (400)***	1521.800 (400)***	1493.780 (400)***
Scaled CFI	0.959	0.960	0.959	0.961
Scaled TLI	0.988	0.988	0.988	0.988
Scaled RMSEA	0.030	0.030	0.030	0.030
SRMR	0.041	0.040	0.042	0.038
<i>n</i>	3110	3112	3078	3078

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States.

^b In general, how is your health?

^c [Regarding most current job:] How satisfied (are/were) you with this job, as a whole?

^d How many close friends do you have? (Close friends include people whom you feel at ease with, can talk to about private matters, and can call on for help.)

integration. This pattern aligns with the interpretation advanced in earlier chapters, which conceptualizes self-regulatory capacity as both a selection process and a mechanism shaping

adult outcomes across multiple domains.

The SES indicator demonstrates similar consistency. Prior year income is positively associated with each outcome, with the strongest association observed for subjective social standing, followed by job satisfaction, general health, and close friends. Educational attainment also differentiates outcomes, strongly predicting perceptions of social standing and general health, and maintaining a positive association with close friends. However, educational attainment is not associated with job satisfaction after controlling for income, employment status, and other variables. This finding suggests that job satisfaction in adulthood is not solely determined by educational attainment.

Extracurricular participation effects are evident, but primarily among individuals with high levels of participation. High non-sport participation is positively associated with each outcome, whereas moderate non-sport participation shows no significant associations. Sport participation exhibits a more limited pattern, with both moderate and high levels linked to higher social standing and general health, but not to job satisfaction or close friendships. Religious youth participation does not predict Wave IV general outcomes in this model, indicating that any protective or pro-social effects of religious involvement may be specific to certain domains.

Several controls clarify the life-course sensitivity of specific outcomes. Number of close friends is most clearly patterned by family formation and living arrangements, with negative associations observed for being married, having children in the home, and residing in a parent's home or other living situations. Demographic disparities in general health remain pronounced, with lower reported health among women, Black respondents, and those classified as other race. Job satisfaction demonstrates a distinct pattern, including a small negative association with age and positive associations with having ever been married, having children in the home, and current employment. Overall, these results indicate that the general outcomes domain in Wave IV reflects both structural positioning and self-regulatory resources. Participation effects are primarily observed at higher levels of

involvement and are most consistent for non-sport participation.

Interaction with the Criminal Justice System

Table 33 presents the Wave IV criminal justice interaction models, which encompass adult arrest, pleading guilty or conviction, probation, and incarceration. Model fit indices indicate strong and consistent fit across all outcomes (scaled CFI = .960 to .961; scaled TLI = .988; scaled RMSEA = .030; SRMR = .039 to .042). Several predictors, including self-regulation, socioeconomic position, and educational attainment, demonstrate consistent associations with criminal justice interaction in adulthood.

Wave IV self-regulation demonstrates a consistent protective association with criminal justice interaction. After adjusting for demographic characteristics, structural controls, and participation measures, higher self-regulation is associated with lower probabilities of arrest, conviction, probation, and incarceration. The strongest association is observed for adult arrest, with smaller but still significant associations for incarceration. These findings support the interpretation that self-regulation functions as a key mechanism influencing behavioral outcomes across the life course. Individuals with greater self-regulatory capacity are less likely to experience formal contact with the criminal justice system in adulthood.

Structural socioeconomic indicators also demonstrate consistent patterns. Both prior year income and educational attainment are negatively associated with criminal justice interaction, with educational attainment exhibiting the strongest and most stable associations across outcomes. Individuals with higher educational attainment report substantially lower probabilities of arrest, conviction, probation, and incarceration.

Participation effects display a more complex pattern. Non-sport participation demonstrates little consistent association with criminal justice interaction in adulthood, with only weak or marginal effects observed across outcomes. In contrast, sport participation is positively associated with several forms of criminal justice interaction, particularly conviction and incarceration. Individuals with higher levels of sport participation

Table 33
Wave IV Criminal Justice Interaction Models

	Adult Arrest ^a	Pled Guilty or Convicted ^b	Probation ^c	Ever Incarcerated ^d
Non-Sport Participation				
Mod. participation	-0.050 (0.027) [†]	-0.035 (0.036)	-0.013 (0.034)	0.013 (0.033)
High participation	-0.016 (0.035)	-0.028 (0.036)	-0.031 (0.035)	-0.066 (0.037) [†]
Sport Participation				
Mod. participation	0.018 (0.026)	0.066 (0.035) [†]	0.052 (0.034)	0.080 (0.034) [*]
High participation	0.031 (0.028)	0.072 (0.034) [*]	0.062 (0.033) [†]	0.129 (0.033) ^{***}
Religious Youth Participation				
< Once per month	0.016 (0.023)	0.022 (0.031)	0.043 (0.029)	0.065 (0.029) [*]
≥ Once per month	-0.035 (0.033)	-0.022 (0.035)	-0.076 (0.035) [*]	0.002 (0.032)
≥ Once per week	-0.048 (0.030)	-0.061 (0.036) [†]	-0.100 (0.034) ^{**}	-0.070 (0.034) [*]
Self-Regulation				
	-0.116 (0.014) ^{***}	-0.054 (0.032) [†]	-0.056 (0.031) [†]	-0.089 (0.032) ^{**}
Age	-0.005 (0.028)	-0.036 (0.035)	-0.044 (0.035)	0.029 (0.033)
Female	-0.168 (0.034) ^{***}	-0.330 (0.035) ^{***}	-0.341 (0.033) ^{***}	-0.305 (0.033) ^{***}
Prior year income	-0.084 (0.028) ^{**}	-0.126 (0.035) ^{***}	-0.098 (0.035) ^{**}	-0.173 (0.034) ^{***}
Hispanic	-0.006 (0.025)	0.010 (0.029)	-0.018 (0.030)	0.042 (0.029)
Black	0.044 (0.022) [*]	0.012 (0.030)	0.021 (0.030)	0.047 (0.027) [†]
Other Race	0.021 (0.019)	-0.017 (0.032)	-0.036 (0.034)	0.011 (0.029)
Living Situation				
Parent's home	-0.020 (0.022)	-0.017 (0.031)	-0.012 (0.031)	-0.033 (0.030)
Other's home	0.028 (0.023)	0.035 (0.028)	0.060 (0.028) [*]	0.045 (0.030)
Other situation	0.096 (0.010) ^{***}	0.045 (0.024) [†]	0.035 (0.023)	-0.072 (0.021) ^{***}
Other Structural Controls				
Ever married	-0.053 (0.029) [†]	-0.053 (0.037)	-0.036 (0.038)	-0.075 (0.035) [*]
Child(ren) in home	-0.019 (0.037)	0.020 (0.041)	-0.028 (0.048)	-0.023 (0.040)
Educ. Attainment	-0.127 (0.026) ^{***}	-0.232 (0.034) ^{***}	-0.232 (0.034) ^{***}	-0.320 (0.033) ^{***}
Currently employed	0.028 (0.026)	0.010 (0.032)	0.004 (0.031)	0.039 (0.030)
Scaled χ^2 (df)	1538.010 (400) ^{***}	1488.230 (400) ^{***}	1493.350 (400) ^{***}	1499.140 (400) ^{***}
Scaled CFI	0.960	0.961	0.961	0.961
Scaled TLI	0.988	0.988	0.988	0.988
Scaled RMSEA	0.030	0.030	0.030	0.030
SRMR	0.039	0.042	0.041	0.042
<i>n</i>	3100	3108	3109	3109

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a How many times have you been arrested since your 18th birthday?

^b Have you ever been convicted of or pled guilty to any charges other than a minor traffic violation?

^c Have you ever been on probation for an offense?

^d Have you ever spent time in a jail, prison, juvenile detention center or other correctional facility?

are more likely to be convicted, placed on probation, or incarcerated than those with lower levels of involvement. This pattern contrasts with the positive associations observed for sport participation in the general outcomes, suggesting that the relationship between sport

involvement and later-life outcomes may differ across behavioral domains.

Religious youth participation demonstrates modest protective associations for certain outcomes. High levels of participation are negatively associated with conviction, probation, and incarceration, although the magnitude of these associations remains relatively small. This pattern suggests that religious participation during adolescence may contribute to modest reductions in criminal justice interaction in adulthood, although these effects are less consistent than those associated with educational attainment or self-regulatory capacity.

Several demographic and structural controls further differentiate criminal justice interaction across individuals. Women consistently report lower levels of criminal justice interaction across all outcomes, and income provides additional differentiation. Living arrangements also exhibit domain-specific associations, particularly for individuals reporting alternative living situations, although these effects are not consistent across all models.

Overall, the criminal justice interaction models indicate that adult contact with the criminal justice system reflects a combination of structural positioning and individual regulatory capacity. Educational attainment and income offer substantial protection against criminal justice involvement, while self-regulation remains an important behavioral resource in adulthood. Participation effects are less consistent in this domain, with sport participation showing positive associations with several forms of criminal justice interaction and non-sport participation demonstrating little consistent relationship with these outcomes.

Tobacco, Alcohol, and Drug Use

Tables 34 and 35 show the Wave IV substance use models. The first set evaluates regular cigarette smoking, binge drinking, marijuana use, and illicit drug use. The second set assesses alcohol-related consequences, including work or school interference, risky behavior while drinking, legal problems due to drinking, and interpersonal problems associated with alcohol use. Model fit is robust and highly consistent across all eight outcomes. Scaled CFI

values range from .960 to .962, scaled TLI values range from .988 to .989, scaled RMSEA remains at .029 to .030, and SRMR ranges from .038 to .043.

Table 34

Wave IV Tobacco, Alcohol, and Drug Use Models

	Regular Smoking ^a	Binge Drinking ^b	Marijuana Use ^c	Illicit Drug Use ^d
Non-Sport Participation				
Mod. participation	0.019 (0.028)	−0.013 (0.025)	−0.013 (0.029)	−0.020 (0.029)
High participation	−0.002 (0.027)	0.018 (0.024)	−0.003 (0.028)	0.042 (0.028)
Sport Participation				
Mod. participation	0.014 (0.027)	0.070 (0.023)**	0.073 (0.027)**	0.002 (0.028)
High participation	0.007 (0.028)	0.057 (0.025)*	0.054 (0.029) [†]	−0.019 (0.028)
Religious Youth Participation				
< Once per month	0.018 (0.025)	0.004 (0.022)	0.033 (0.026)	0.023 (0.025)
≥ Once per month	−0.036 (0.026)	−0.073 (0.023)**	−0.085 (0.027)**	−0.063 (0.028)*
≥ Once per week	−0.062 (0.026)*	−0.098 (0.023)**	−0.122 (0.027)**	−0.094 (0.028)**
Self-Regulation				
	−0.099 (0.029)**	−0.054 (0.025)*	−0.067 (0.030)*	−0.098 (0.030)**
Age	−0.014 (0.026)	−0.064 (0.023)**	−0.063 (0.027)*	−0.048 (0.028) [†]
Female	−0.044 (0.028)	−0.133 (0.024)**	−0.086 (0.029)**	−0.108 (0.029)**
Prior year income	−0.102 (0.028)**	0.090 (0.024)**	−0.008 (0.029)	−0.019 (0.029)
Hispanic	−0.103 (0.024)**	−0.044 (0.021)*	−0.059 (0.026)*	−0.068 (0.025)**
Black	−0.178 (0.024)**	−0.195 (0.020)**	−0.146 (0.023)**	−0.351 (0.027)**
Other Race	0.011 (0.023)	−0.040 (0.019)*	−0.009 (0.024)	0.004 (0.023)
Living Situation				
Parent's home	0.003 (0.026)	−0.045 (0.021)*	−0.080 (0.027)**	0.000 (0.026)
Other's home	0.055 (0.025)*	−0.007 (0.021)	−0.011 (0.026)	−0.005 (0.024)
Other situation	−0.002 (0.024)	−0.028 (0.018)	−0.023 (0.024)	−0.003 (0.022)
Other Structural Controls				
Ever married	−0.050 (0.028) [†]	−0.166 (0.024)**	−0.149 (0.029)**	−0.143 (0.029)**
Child(ren) in home	0.033 (0.030)	−0.101 (0.020)**	−0.049 (0.028) [†]	−0.073 (0.027)**
Educ. Attainment	−0.321 (0.027)**	−0.020 (0.025)	−0.068 (0.029)*	−0.138 (0.029)**
Currently employed	0.046 (0.025) [†]	0.008 (0.022)	0.055 (0.025)*	0.066 (0.026)*
Scaled χ^2 (df)	1513.730 (400)**	1474.740 (400)**	1518.500 (400)**	1509.010 (400)**
Scaled CFI	0.960	0.962	0.960	0.961
Scaled TLI	0.988	0.989	0.988	0.988
Scaled RMSEA	0.030	0.029	0.030	0.030
SRMR	0.042	0.038	0.042	0.042
<i>n</i>	3111	3100	3101	3112

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?

^b During the past 12 months, on how many days did you drink 5 or more/4 or more drinks in a row?

^c Have you ever used any of the following drugs: marijuana

^d Past year illicit drug use item constructed from Add Health items concerning steroids, cocaine, methamphetamine, other drugs, and injected drugs.

Within the first set of substance use outcomes, Wave IV self-regulation exhibits a broadly protective pattern. Higher self-regulation is associated with lower levels of regular smoking, binge drinking, marijuana use, and illicit drug use. Although the magnitude of these associations is modest, the pattern remains consistent across all four models. This finding extends the broader pattern established in earlier chapters and previous Wave IV sections, indicating that self-regulation serves as a general protective resource in adulthood, even after controlling for socioeconomic position, family structure, living arrangements, and prior participation measures.

Structural controls further differentiate substance use outcomes in theoretically meaningful ways. Educational attainment emerges as one of the strongest protective correlates of regular smoking and is also negatively associated with marijuana use and illicit drug use, but not with binge drinking. Prior-year income demonstrates a divergent pattern, showing a negative association with regular smoking but a positive association with binge drinking. This contrast indicates that various forms of adult substance use are socially patterned in distinct ways. Smoking is more prevalent among individuals with fewer conventional resources, whereas binge drinking is more common among those with higher income and greater leisure opportunities. Marriage and parenthood function as important protective factors, particularly for binge drinking, marijuana use, and illicit drug use. These findings suggest that conventional adult role attachments continue to constrain substance use, although their influence varies by substance.

Racial and ethnic patterns are also noteworthy. Black respondents report significantly lower levels across all four outcomes, with particularly strong negative associations for illicit drug use. Hispanic respondents similarly exhibit lower odds of regular smoking, binge drinking, marijuana use, and illicit drug use. These consistent patterns across the first set of models suggest that the substance use domain in Wave IV is shaped not only by self-regulation and conventional social bonds, but also by persistent demographic differences in exposure, opportunity, and behavioral norms.

Participation effects are more limited and differentiated by activity type compared to earlier sections. Non-sport participation is not significantly associated with any of the four primary substance use outcomes. In contrast, sport participation is positively associated with binge drinking and marijuana use. Moderate sport participation predicts both outcomes, while high sport participation predicts binge drinking and approaches significance for marijuana use. Sport participation is not associated with regular smoking or illicit drug use. This pattern is important because it indicates that the social settings and norms associated with sport participation may be linked to alcohol use and, to a lesser extent, marijuana use, but not to substance use more broadly. Conversely, religious youth participation demonstrates the most consistent protective pattern in this domain. Participation at least once per month is associated with lower binge drinking, marijuana use, and illicit drug use, while weekly or more frequent participation is also associated with lower regular smoking. Among the Wave I participation measures, religious involvement during adolescence appears to provide the most enduring protection against adult substance use.

The second set of models addresses the consequences associated with alcohol use rather than substance use itself, revealing more domain-specific patterns. Alcohol-related work or school problems are negatively associated with being Black, being married, having children in the home, and living in another person's home, while both moderate and high sport participation are positively associated with this outcome. Religious participation once per month or more is negatively associated with work or school problems, although Wave IV self-regulation is not significant in this model. The risk to self or others model displays a broader pattern: higher self-regulation is associated with lower risk behavior while drinking, and both moderate and high sport participation are positively associated with this outcome. Hispanic and Black respondents report lower levels, while weekly or more frequent religious participation remains protective. The legal problems model is more limited in scope but still demonstrates clear negative associations for women, Black respondents, and weekly or more frequent religious participation. Finally, interpersonal problems related to drinking exhibit

one of the clearest patterns in the alcohol consequence models. Higher self-regulation is associated with fewer family, friend, or work-related problems due to drinking; Black and

Table 35

Wave IV Alcohol Related Consequences Models

	School/Work Problems ^a	Risk to Self/Others ^b	Legal Problems ^c	Family/Friends Problems ^d
Non-Sport Participation				
Mod. participation	-0.027 (0.033)	-0.019 (0.030)	-0.043 (0.038)	-0.083 (0.037)*
High participation	-0.013 (0.032)	-0.014 (0.028)	-0.064 (0.042)	-0.053 (0.036)
Sport Participation				
Mod. participation	0.097 (0.032)**	0.106 (0.029)***	0.073 (0.039) [†]	0.024 (0.036)
High participation	0.104 (0.032)**	0.098 (0.029)***	0.075 (0.039) [†]	0.081 (0.036)*
Religious Youth Participation				
< Once per month	0.035 (0.029)	0.043 (0.026) [†]	0.031 (0.033)	0.050 (0.031)
≥ Once per month	-0.078 (0.032)*	-0.069 (0.028)*	-0.058 (0.038)	-0.036 (0.037)
≥ Once per week	-0.057 (0.032) [†]	-0.102 (0.029)***	-0.118 (0.041)**	-0.045 (0.038)
Self-Regulation	-0.055 (0.035)	-0.069 (0.031)*	-0.054 (0.039)	-0.136 (0.037)***
Age	-0.021 (0.032)	-0.058 (0.028)*	0.001 (0.040)	-0.018 (0.037)
Female	-0.056 (0.033) [†]	-0.120 (0.029)***	-0.271 (0.038)***	-0.083 (0.036)*
Prior year income	0.002 (0.033)	0.042 (0.030)	-0.044 (0.039)	0.010 (0.036)
Hispanic	-0.041 (0.032)	-0.087 (0.027)**	-0.067 (0.038) [†]	-0.079 (0.033)*
Black	-0.218 (0.032)***	-0.203 (0.026)***	-0.231 (0.037)***	-0.245 (0.037)***
Other Race	0.016 (0.026)	-0.021 (0.025)	-0.047 (0.032)	0.013 (0.029)
Living Situation				
Parent's home	-0.037 (0.032)	-0.075 (0.028)**	-0.085 (0.037)*	-0.018 (0.033)
Other's home	-0.079 (0.031)*	-0.033 (0.026)	-0.002 (0.031)	-0.052 (0.032)
Other situation	-0.043 (0.031)	-0.044 (0.024) [†]	-0.053 (0.027) [†]	-0.043 (0.029)
Other Structural Controls				
Ever married	-0.076 (0.034)*	-0.048 (0.029)	-0.075 (0.042) [†]	-0.063 (0.036) [†]
Child(ren) in home	-0.145 (0.045)**	-0.068 (0.031)*	-0.082 (0.056)	-0.063 (0.029)*
Educ. Attainment	-0.015 (0.035)	0.033 (0.031)	-0.022 (0.040)	-0.061 (0.037)
Currently employed	0.038 (0.030)	0.058 (0.027)*	0.003 (0.034)	0.004 (0.033)
Scaled χ^2 (df)	1521.810 (400)***	1523.260 (400)***	1489.220 (400)***	1512.950 (400)***
Scaled CFI	0.960	0.960	0.961	0.961
Scaled TLI	0.988	0.988	0.988	0.988
Scaled RMSEA	0.030	0.030	0.030	0.030
SRMR	0.043	0.043	0.040	0.043
<i>n</i>	3110	3111	3110	3111

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$
Standardized coefficients with scaled fit indices.

^a How often has your drinking interfered with your responsibilities at work or school?

^b How often have you been under the influence of alcohol when you could have gotten yourself or others hurt, or put yourself or others at risk, including unprotected sex?

^c How often have you had legal problems because of your drinking, like being arrested for disturbing the peace or driving under the influence of alcohol, or anything else?

^d How often have you had problems with your family, friends, or people at work or school because of your drinking?

Hispanic respondents report fewer such problems; and moderate non-sport participation is negatively associated with this outcome, while high sport participation is positively associated.

Collectively, these models indicate that the substance use domain in adulthood encompasses two distinct processes. The first process concerns whether individuals engage in smoking, drinking, marijuana use, or illicit drug use. In this domain, self-regulation and religious youth participation emerge as the most consistent protective factors, while sport participation is specifically linked to binge drinking and marijuana use. The second process involves whether alcohol use leads to consequential disruptions in adult life. Here, self-regulation is less uniformly important but remains relevant for risk behavior and interpersonal problems, while sport participation is more consistently associated with elevated alcohol-related consequences.

This distinction is significant. The results do not indicate that all forms of extracurricular participation function uniformly across adult substance-related outcomes. Rather, the models indicate that the context of activity participation is critical. Religious participation maintains a durable protective association, whereas sport participation is more closely associated with alcohol-centered social patterns that may increase certain risks and consequences in adulthood.

The results from these models reinforce the central interpretation developed throughout the study. Adult substance use and alcohol-related harms are influenced by both self-regulatory capacity and social integration into conventional roles and institutions. Self-regulation remains an important protective factor, although its effects vary across different manifestations of substance-related behavior. Similarly, extracurricular participation does not operate as a single, undifferentiated protective mechanism. Long-term associations depend on the type of participation and the specific adult outcome considered. These results extend the broader argument by demonstrating that the protective effects of youth participation in later life are conditional, domain specific, and mediated by the

developmental pathways through which self-regulation and adult social roles are organized.

Civic and Religious Participation

Table 36 presents models that examine adult civic and religious participation in Wave IV. The four outcomes assessed include volunteer or community service work, voting frequency in local or statewide elections, attendance at religious services, and participation in religious activities outside formal worship services. All models demonstrate strong fit to the data, as indicated by scaled CFI values ranging from .961 to .962, scaled TLI values from .988 to .989, RMSEA values between .029 and .030, and SRMR values from .038 to .040.

Educational attainment is the most consistent predictor across all four models. Higher levels of education are associated with greater engagement in volunteer work, higher voting frequency, and increased participation in both religious attendance and religious activities beyond formal services. These results indicate that educational attainment is closely linked to a broad range of civic and institutional participation behaviors in early adulthood.

Patterns of racial differences vary across the outcomes. Black respondents report higher levels of voting frequency and substantially higher levels of religious attendance and participation in religious activities. In contrast, Black respondents report lower levels of volunteer work. Hispanic respondents report lower voting frequency and volunteer activity but higher levels of religious attendance. These differences suggest that civic participation patterns differ across domains and that religious participation may represent a particularly salient form of institutional engagement for certain groups.

Adult life course transitions also influence participation in these activities. Marriage is positively associated with voting and is strongly associated with both religious attendance and participation in religious activities. Living in another person's home is negatively associated with voting frequency, while other nonstandard living arrangements are positively associated with volunteer work and religious participation. These findings suggest that integration into stable adult social roles and household arrangements may facilitate specific

forms of institutional engagement.

Table 36

Wave IV Civic and Religious Participation Models

	Volunteer Work ^a	Voting Frequency ^b	Religious Attendance ^c	Religious Activities ^d
Non-Sport Participation				
Mod. participation	0.042 (0.027)	0.070 (0.023)**	0.038 (0.022) [†]	0.033 (0.027)
High participation	0.089 (0.025)***	0.073 (0.022)**	0.049 (0.022)*	0.048 (0.026) [†]
Sport Participation				
Mod. participation	0.023 (0.025)	0.029 (0.023)	0.023 (0.021)	−0.028 (0.026)
High participation	0.041 (0.026)	0.007 (0.024)	−0.001 (0.022)	−0.020 (0.026)
Religious Youth Participation				
< Once per month	0.031 (0.024)	0.046 (0.021)*	0.081 (0.021)***	0.085 (0.026)**
≥ Once per month	0.052 (0.024)*	0.054 (0.022)*	0.197 (0.020)***	0.193 (0.024)***
≥ Once per week	0.107 (0.024)***	0.076 (0.022)***	0.281 (0.019)***	0.265 (0.023)***
Self-Regulation	0.039 (0.027)	0.100 (0.023)***	0.069 (0.022)**	0.079 (0.027)**
Age	−0.005 (0.024)	0.085 (0.022)***	0.040 (0.020)*	0.033 (0.025)
Female	0.033 (0.026)	0.049 (0.024)*	0.044 (0.022)*	0.017 (0.028)
Prior year income	0.040 (0.026)	0.022 (0.023)	0.002 (0.022)	−0.035 (0.027)
Hispanic	−0.078 (0.024)***	−0.047 (0.020)*	0.080 (0.021)***	0.008 (0.027)
Black	−0.064 (0.022)**	0.118 (0.019)***	0.188 (0.018)***	0.140 (0.021)***
Other Race	0.018 (0.021)	−0.003 (0.020)	0.037 (0.018)*	0.063 (0.022)**
Living Situation				
Parent's home	0.029 (0.024)	0.022 (0.021)	0.030 (0.020)	0.040 (0.026)
Other's home	−0.045 (0.024) [†]	−0.080 (0.021)***	−0.012 (0.022)	−0.008 (0.026)
Other situation	0.039 (0.019)*	−0.028 (0.022)	0.044 (0.017)**	0.069 (0.020)***
Other Structural Controls				
Ever married	0.045 (0.027) [†]	0.060 (0.024)*	0.240 (0.021)***	0.182 (0.027)***
Child(ren) in home	0.032 (0.036)	−0.045 (0.026) [†]	0.007 (0.025)	−0.002 (0.035)
Educ.l Attainment	0.245 (0.026)***	0.233 (0.023)***	0.144 (0.022)***	0.116 (0.029)***
Currently employed	−0.034 (0.023)	0.025 (0.021)	−0.004 (0.020)	0.017 (0.024)
Scaled χ^2 (df)	1472.010 (400)***	1468.570 (400)***	1507.440 (400)***	1500.730 (400)***
Scaled CFI	0.962	0.962	0.961	0.961
Scaled TLI	0.989	0.989	0.988	0.988
Scaled RMSEA	0.029	0.029	0.030	0.030
SRMR	0.039	0.038	0.040	0.040
<i>n</i>	3100	3101	3112	3110

Significance levels: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, [†] $p < 0.10$

Standardized coefficients with scaled fit indices.

^a In the past 12 months, how many hours did you spend on volunteer or community service work?

^b How often do you usually vote in local or statewide elections?

^c How often have you attended church, synagogue, temple, mosque, or religious services in the past 12 months?

^d Many churches, synagogues, and other places of worship have special activities outside of regular worship services—such as classes, retreats, small groups, or choir. In the past 12 months, how often have you taken part in such activities?

Participation in non-sport extracurricular activities during adolescence demonstrates consistent positive associations with civic behaviors in adulthood. High levels of non-sport participation are associated with greater volunteer activity, higher voting frequency, and increased religious participation, although the effects on religious participation are somewhat smaller. Moderate levels of non-sport participation are positively associated with voting frequency and display marginal relationships with religious attendance. In contrast, sport participation does not exhibit statistically significant relationships with any of the civic or religious outcomes examined in these models.

Religious participation during adolescence demonstrates the most consistent and substantial relationships with adult religious engagement. Youth participation in church or religious activities exhibits a clear gradient effect across both religious outcomes. Weekly youth participation is associated with substantially higher levels of adult religious attendance and participation in religious activities, while monthly and less frequent participation also display significant positive associations. These patterns indicate strong continuity between adolescent religious involvement and adult religious participation.

The Wave IV self-regulation construct demonstrates mixed effects across the models. Self-regulation is positively associated with voting frequency, religious attendance, and participation in religious activities, but is not significantly associated with volunteer work. These findings suggest that self-regulatory capacity may influence specific forms of institutional participation, particularly those requiring sustained engagement with structured civic or community institutions.

Collectively, these results indicate that adult civic and religious participation reflects a combination of educational attainment, life course transitions, and continuity in prior patterns of social involvement. Non-sport extracurricular activities during adolescence appear to promote later civic engagement, particularly in the domains of volunteerism and political participation, while religious youth participation demonstrates especially strong continuity with adult religious involvement. These findings further support the broader

pattern observed throughout this chapter: extracurricular participation during adolescence is associated with later patterns of institutional engagement, although the strength and direction of these relationships vary across domains.

Developmental Patterns in Young Adult Outcomes

The Wave IV models collectively reveal consistent patterns concerning the influence of self-regulation and adolescent participation on young adult outcomes. Across outcome domains such as general well-being, criminal justice interactions, substance use, alcohol-related consequences, and civic and religious engagement, three principal findings emerge.

Self-regulation remains a central individual resource in young adulthood. Higher levels of self-regulation are consistently linked to more favorable outcomes, including increased subjective social standing, improved health, greater job satisfaction, and expanded social networks. Individuals with stronger self-regulatory capacity are less likely to have contact with the criminal justice system, engage in regular smoking, binge drinking, marijuana use, or illicit drug use, and experience fewer interpersonal or behavioral consequences related to alcohol use. Self-regulation is also positively associated with institutional participation, such as voting and religious engagement. While the strength of these associations varies, the overall pattern underscores the enduring significance of self-regulation as a behavioral and psychological resource throughout adulthood. These results align with life-course perspectives that highlight the lasting impact of regulatory capacity on adult adaptation and social integration.

Structural socioeconomic factors exert substantial and consistent influence across outcome domains. Educational attainment and income consistently emerge as strong predictors of adult outcomes. Higher education correlates with improved health, greater perceived social standing, reduced likelihood of criminal justice interaction, decreased substance use, and increased civic participation. Income shows similar but more

domain-specific effects; for instance, higher income is linked to greater social standing and job satisfaction, as well as increased binge drinking. These findings suggest that adult outcomes are significantly shaped by structural positioning within the social stratification system. Although self-regulation influences individual behavioral differences, socioeconomic resources remain critical determinants of opportunity, risk exposure, and institutional engagement.

Adolescent extracurricular participation demonstrates differentiated and domain-specific long-term associations, rather than uniform protective effects. Non-sport participation shows the most consistent positive associations with later civic engagement and several indicators of adult well-being, especially at higher levels of involvement. Individuals with substantial non-sport involvement during adolescence report higher volunteer activity, increased voting frequency, and modest improvements in subjective well-being, including health and social standing. In contrast, sport participation presents a more complex pattern. While it is positively associated with certain well-being indicators, it is also linked to higher levels of binge drinking, marijuana use, and several alcohol-related consequences. These results suggest that the social environments of athletic participation may promote patterns of alcohol and substance use that persist into adulthood.

Religious participation during adolescence demonstrates the most consistent protective associations across behavioral domains. Higher levels of adolescent religious involvement are linked to lower rates of smoking, binge drinking, marijuana use, illicit drug use, and several alcohol-related consequences in adulthood. Furthermore, religious participation in adolescence strongly predicts adult religious engagement, as individuals highly involved in youth religious activities report substantially higher attendance and participation in religious activities in Wave IV. These findings suggest that religious socialization during adolescence fosters durable behavioral norms and institutional attachments that persist into adulthood.

The results indicate that adolescent extracurricular participation does not function as a single, uniform protective mechanism. Instead, long-term associations depend on both the

type of activity and the specific adult outcome. Participation in various institutional contexts exposes individuals to distinct social networks, behavioral norms, and role expectations, shaping developmental trajectories in diverse ways. Certain forms of participation reinforce civic engagement and institutional involvement, while others may be associated with social environments that facilitate specific risk behaviors.

The Wave IV results underscore the growing importance of adult social roles and structural embedding in shaping behavior. Marriage, parenthood, employment, and residential arrangements each demonstrate domain-specific associations with adult outcomes, particularly regarding substance use and social relationships. These patterns align with life-course perspectives, which emphasize that institutional roles in adulthood reorganize daily routines, social bonds, and opportunity structures.

Overall, the findings from Wave IV indicate that young adult outcomes result from the interaction of enduring individual capacities, structural socioeconomic resources, and developmental pathways established through adolescent participation. Self-regulation remains a crucial individual resource, socioeconomic position shapes opportunities and constraints, and extracurricular participation demonstrates differentiated long-term associations based on the social context. Collectively, these patterns illustrate that developmental processes initiated during adolescence continue to influence behavioral and institutional trajectories into young adulthood.

The combined findings from Waves I, III, and IV can be interpreted as reflecting a developmental cascade linking adolescent experiences with adult outcomes. Participation during adolescence provides structured contexts that foster competencies related to self-regulation and social bonding. These competencies influence how individuals navigate the instability of emerging adulthood, shaping both behavioral risks and opportunities for institutional engagement. By young adulthood, the influence of these earlier processes becomes visible through the stabilization of trajectories within work, family, and civic domains. In this sense, the Wave IV results do not represent isolated adult outcomes, but

rather the cumulative consequences of developmental processes unfolding across earlier stages of the life course. These cumulative patterns are consistent with the concept of developmental cascades, articulated by Masten et al. (2005) and Masten and Cicchetti (2010), in which competencies and experiences in one developmental period shape functioning across multiple domains in later stages of the life course .

Chapter 7: A Developmental Cascade of Self-Regulation

In this chapter, I synthesize the findings from Waves I, III, and IV and situate those findings within a broader developmental framework. The previous chapters of this dissertation contain examinations of the relationship between extracurricular participation and various outcomes across adolescence, emerging adulthood, and young adulthood, with particular emphasis on self-regulation as both a selection control and explanatory construct. Although each chapter addressed a specific developmental stage, the collective results indicate a more integrated interpretation that transcends individual waves of analysis.

The central research question guiding this study concerns whether, and under what conditions, participation in school-age extracurricular activities functions as a protective factor against deviance and related outcomes in later life. To address this question, I have utilized longitudinal data spanning multiple developmental periods, enabling examination of both continuity and change in the relationships among participation, self-regulation, and key outcomes. This design offers a unique opportunity to assess not only whether early participation is associated with later outcomes, but also how these associations are influenced by evolving social contexts and internal regulatory processes.

Findings across the three waves consistently demonstrate that both extracurricular participation and self-regulation are associated with a range of outcomes, including educational attainment, substance use, criminal justice involvement, and broader indicators of well-being. However, the structure and function of self-regulation varied across developmental stages, and the effects of participation differed by activity type and outcome domain. These patterns indicate that the relationship between participation and later outcomes is not a direct or static association. Instead, the results suggest that these relationships develop over time, reflecting changes in both social environments and the internal organization of regulatory processes.

Building on these observations, in this chapter I argue that the effects of extracurricular participation are best conceptualized within a developmental cascade

framework. The findings indicate that social bonds, as described in social control theory (Hirschi 2002), and self-regulation, understood as a multidimensional and developmentally contingent construct, operate together across the life course. Early participation in structured activities fosters the formation and reinforcement of social bonds, which subsequently influence the development and organization of self-regulatory capacities. As individuals transition from adolescence to emerging and young adulthood, both social bonds and self-regulation are reconfigured, resulting in a sequence of interconnected processes that accumulate and transform over time.

Thus, the relationship between extracurricular participation and later outcomes reflects a dynamic interplay between external social structures and internal regulatory processes, rather than being solely a matter of exposure or selection. The analyses in previous chapters provide empirical support for this interpretation. My aim is to articulate this process explicitly by synthesizing empirical findings across waves, reconciling differences in measurement and model structure, and developing a unified theoretical account of how social control and self-regulation jointly contribute to a developmental cascade from adolescence through young adulthood.

Summary of Empirical Findings Across Waves

The findings from Chapters 3 through 6 demonstrate both continuity and change in the structure and function of self-regulation across developmental stages. Although the association between extracurricular participation and key outcomes persists across waves, the internal organization of self-regulation and its role within the model exhibit systematic variation. To explain these patterns, this section contains a summary of the empirical findings for each developmental period, focusing on both measurement structure and substantive interpretation.

Wave I (Adolescence): Structured Regulation

In the Wave I models, self-regulation was conceptualized as a second-order latent construct comprising several first-order domains: emotional stability, emotional reactivity and impulsivity, self-concept and social acceptance, and problem solving. This approach accounted for the substantial shared variance among regulatory processes and offered a concise representation of overall regulatory capacity. The subsequent analyses in Chapter 4 were used to expand this model by investigating the internal organization of these domains using a developmental cascade framework.

Using the cascade model, I was able to identify a consistent pattern of directional relationships among regulatory domains. Emotional stability was linked to both emotional reactivity and impulsivity and self concept and social acceptance, which ultimately impacted problem solving. This structure indicates that regulatory processes are functionally organized, with upstream emotional processes influencing downstream social and cognitive capacities. The second-order representation captures shared variance among domains, whereas the cascade model offers a more detailed explanation of the interrelations among regulatory processes.

Within the structural models, self-regulation and its constituent domains consistently predicted a range of outcomes, such as educational performance, school attachment, family attachment, substance use, and delinquency. Additionally, extracurricular participation remained a significant predictor across multiple outcomes, even after controlling for self-regulation and other covariates. These results suggest that the effects of participation cannot be entirely attributed to selection based on pre-existing regulatory capacity.

The adolescent context is marked by strong and overlapping social bonds, especially within school and family environments. These structured settings offer consistent expectations, supervision, and normative guidance, which align closely with the development and expression of self-regulation. In this context, the cascade structure implies that regulatory processes are reinforced through both internal dynamics and external social

organization. Emotional stability, behavioral control, and social self-perception are interrelated and embedded within environments that foster consistency across domains.

Collectively, the findings from Wave I indicate that self-regulation functions within a highly structured social environment where regulatory processes are integrated and directionally organized. The cascade model demonstrates that emotional, behavioral, social, and cognitive components of regulation are connected through sequential relationships reflecting functional dependencies among domains. In this setting, extracurricular participation is situated within institutional structures, reinforcing both social bonds and the development of self-regulatory capacity.

Wave III (Emerging Adulthood): Differentiation and Instability

During emerging adulthood, the structure of self-regulation undergoes significant changes. The second-order latent construct identified in adolescence is no longer evident. Instead, self-regulation is characterized by a set of correlated yet distinct domains: emotional regulation and stability, impulsivity, and self-concept. The associations among these domains are uneven, with a moderate correlation between emotional regulation and self-concept, a weaker correlation between emotional regulation and impulsivity, and minimal correlation between impulsivity and self-concept. This pattern demonstrates a reduction in shared variance across regulatory domains, indicating that self-regulation is no longer organized as a unified construct. Instead, distinct aspects of regulation vary independently, reflecting a process of differentiation in which emotional, behavioral, and self-evaluative components are no longer closely linked.

The effects of these domains are specific to particular outcomes. Self-concept is strongly associated with indicators of well-being, including perceived health and life satisfaction. In contrast, impulsivity is more closely related to behavioral outcomes, such as substance use and involvement with the criminal justice system. Emotional regulation demonstrates a more targeted association, particularly with suicide risk. These findings

suggest that different domains of self-regulation function through distinct pathways rather than a single, overarching mechanism.

This structural differentiation occurs alongside broader changes in social context. As individuals move beyond adolescence, institutional constraints related to school and family diminish, resulting in greater autonomy in decision-making and social engagement. The weakening or reconfiguration of social bonds creates an environment in which regulatory processes are less externally supported and exhibit greater variability across individuals.

The findings from Wave III suggest that self-regulation becomes increasingly differentiated as external structures diminish and individuals encounter greater autonomy. During this stage, regulatory domains function more independently, and the relationship between participation and outcomes depends more on specific pathways than on a unified regulatory system.

Wave IV (Young Adulthood): Reintegration Under Structure

During young adulthood, the structure of self-regulation undergoes another transformation, with empirical evidence again supporting the existence of a higher-order latent construct. Unlike adolescence, the composition of this construct encompasses distinct domains such as emotional stability, control beliefs, agency beliefs, and future orientation. These domains demonstrate considerable shared variance, with future orientation serving as a particularly robust indicator of the higher-order factor.

Measures of impulsivity do not form a coherent latent construct during young adulthood, indicating that behavioral regulation may no longer be a primary dimension of variation. Instead, self-regulation in young adulthood is structured around cognitive and evaluative processes, such as beliefs about control, perceptions of agency, and orientation toward future goals. This reorganization of regulatory capacity highlights the increasing centrality of forward-looking and interpretive processes.

The structural models consistently demonstrate that self-regulation is associated with

a range of adult outcomes, including social standing, health, job satisfaction, and criminal justice involvement. These effects are generally protective and operate across multiple domains, suggesting that self-regulation serves as a generalized resource in adulthood. Concurrently, extracurricular participation continues to exert selective effects, although these are often diminished compared to earlier developmental stages and are influenced by adult roles and structural conditions such as employment, marriage, and parenthood.

The re-emergence of a higher-order structure takes place within a context marked by increased stability in institutional roles. Employment, family formation, and residential arrangements introduce new forms of structure that influence daily routines and constrain behavior. Within this context, self-regulation is reorganized to align with these roles, reflecting a system that prioritizes long-term planning and goal-directed behavior over immediate behavioral control.

The findings from Wave IV indicate that self-regulation is reorganized as a generalized adult resource aligned with stable institutional roles. This reintegration contrasts with the structure observed during adolescence, reflecting a shift toward cognitive and future-oriented processes that facilitate sustained engagement within adult social structures.

Reconciling Measurement Models Across Developmental Periods

The analyses presented in Chapters 3 through 6 utilize multiple representations of self-regulation, including second-order latent structures, directional cascade models, and correlated domain specifications. Although these differences in measurement and model specification may initially appear inconsistent, they do not indicate instability in the underlying construct. Instead, these variations capture developmentally contingent manifestations of self-regulation as expressed across different stages of the life course.

During adolescence, self-regulation demonstrates a high degree of integration across domains. The second-order latent model estimated in Chapter 3 captures this shared variance, offering a parsimonious representation of overall regulatory capacity. Building on

this structure, the cascade model introduced in Chapter 4 decomposes the higher-order construct into directional relationships among domains, revealing functional dependencies in which emotional processes shape behavioral control, which, in turn, influences social self-perception and cognitive regulation. These two representations are complementary: the second-order model reflects the coherence of regulatory processes, while the cascade model specifies how these processes operate in relation to one another within a structured developmental context.

In emerging adulthood, the integrated structure of self-regulation is no longer supported. The results in Chapter 5 demonstrate that the second-order factor collapses into a set of correlated but distinct domains. Reduced correlations among these domains indicate a decline in shared variance and suggest that regulatory processes are no longer tightly coupled. This differentiation reflects a developmental context marked by increased autonomy and reduced external structure, where individuals encounter a broader range of environments and experiences. Consequently, distinct aspects of self-regulation vary more independently, and their effects on outcomes become increasingly domain-specific.

In young adulthood, the structure of self-regulation shifts once more. Analyses in Chapter 6 support a return to a higher-order latent construct, but with a different configuration of domains. This reintegrated structure reflects the consolidation of regulatory processes within the context of stable institutional roles such as employment, partnership, and parenthood. In contrast to the adolescent model, which emphasizes behavioral and social dimensions, the adult model is more strongly oriented toward cognitive and evaluative processes, particularly those related to perceived control and future expectations.

Taken together, these models demonstrate that self-regulation is neither fixed nor unitary, but instead varies in its internal organization across developmental stages. The second-order representation in adolescence reflects a system of tightly coupled regulatory processes operating within structured environments. The cascade model further specifies the directional relationships among these processes, highlighting functional dependencies within

that system. In emerging adulthood, this structure becomes differentiated as regulatory domains decouple in response to reduced external constraint and increased variability in social context. Then, in young adulthood, self-regulation is reorganized into a higher-order structure aligned with stable institutional roles, emphasizing cognitive and future-oriented components of regulation.

This progression indicates that differences in measurement structure are not methodological artifacts, but substantive features of development. Each model captures a distinct phase in the organization of self-regulation, and together they provide a more comprehensive account of how regulatory processes evolve over time. Allowing the measurement model to vary across developmental stages preserves theoretical coherence while remaining responsive to the empirical structure of the data.

Social Control and Self-Regulation as Joint Processes

In previous sections I have shown that social bonds, as expressed through extracurricular participation, and self-regulation are consistently linked to various outcomes throughout developmental stages. Despite this, the literature frequently treats these constructs as distinct or competing explanations. Social control theory highlights the influence of external bonds in limiting deviant behavior, whereas research on self-regulation emphasizes internal capacities that allow individuals to manage behavior and achieve long-term objectives. The results of this study indicate that these perspectives are best viewed as complementary, with their relationship evolving dynamically across development.

Revisiting Social Control Theory

Social control theory, as articulated by Hirschi (2002), asserts that individuals refrain from deviant behavior to the extent that they are bonded to conventional social institutions. These bonds are typically defined as attachment, commitment, involvement, and belief. Attachment is an effect of emotional connections with significant others, particularly parents and teachers, which fosters concern for approval and discourages actions that might

jeopardize these relationships. Commitment signifies investment in conventional goals, such as educational attainment, thereby increasing the perceived costs of deviance. Involvement encompasses participation in structured activities that restricts opportunities for deviant behavior. Belief refers to the internalization of conventional norms and values.

During adolescence, these bonds are embedded within highly structured environments such as schools and families, where expectations are clearly defined and supervision is consistent. These settings impose direct constraints on behavior and exert indirect influence by reinforcing norms and expectations. Participation in extracurricular activities constitutes a salient form of involvement, as it places individuals in organized contexts that encourage interaction with pro-social peers and authority figures, thereby reinforcing commitment to conventional goals.

As individuals transition into emerging and young adulthood, the nature of these bonds change. School-based attachments diminish or are replaced by new connections, such as employment, romantic partnerships, and family formation. These developments do not reduce the significance of social bonds but instead alter the contexts in which they function. Adult roles introduce new expectations and constraints, which can limit opportunities for deviance and reshape the incentives associated with various behaviors.

Self-Regulation as Selection and Mechanism

Within this framework, self-regulation fulfills two related yet distinct functions. First, it acts as a selection process by capturing individual differences that influence both participation in extracurricular activities and subsequent outcomes. Individuals exhibiting higher levels of self-regulation are more likely to engage in structured activities, persist in conventional roles, and avoid behaviors associated with deviance. Neglecting these differences risks attributing effects to participation that may actually result from pre-existing regulatory capacity.

Second, self-regulation serves as a mechanism that shapes behavioral outcomes across

various contexts. As demonstrated in earlier chapters, regulatory processes are linked to a broad spectrum of outcomes, including academic performance, substance use, criminal justice involvement, and general well-being. Notably, the structure of self-regulation changes across developmental stages, evolving from an integrated system in adolescence to differentiated domains in emerging adulthood, and ultimately to a reorganized, higher-order construct in young adulthood. These developmental changes suggest that self-regulation is a dynamic system that adapts to changing social and institutional contexts, rather than a static trait.

Essentially, these roles position self-regulation as both a control variable and a substantive component of the developmental process. It accounts for baseline differences across individuals while also providing a mechanism for shaping and maintaining behavior over time.

The Interaction Between Social Bonds and Self-Regulation

The findings indicate that social bonds and self-regulation function as interdependent processes that mutually influence each other throughout development. Social bonds aid establishment of the framework within which self-regulation emerges and is enacted, while self-regulation shapes the ways individuals form, sustain, and respond to these bonds. This relationship is dynamic, evolving across the life course.

During adolescence, robust and overlapping social bonds within school and family environments facilitate the development of integrated regulatory processes. The cascade structure observed at this stage demonstrates that emotional, behavioral, social, and cognitive components of regulation are closely interconnected, with these connections reinforced by structured settings that promote consistency across domains. In this context, social bonds are central to organizing regulatory processes, and extracurricular participation further strengthens both attachment and regulatory capacity within these institutional frameworks.

In emerging adulthood, the weakening or transformation of social bonds is

accompanied by a differentiation of self-regulatory domains. As institutional constraints lessen and autonomy increases, regulatory processes become less integrated, allowing distinct domains to function more independently. This transition reflects a context with reduced external structure, requiring individuals to navigate diverse environments with varying expectations and support. The decreased alignment between social bonds and regulatory processes leads to greater variability in outcomes and more domain-specific developmental trajectories.

In young adulthood, new social bonds develop through stable institutional roles such as employment, partnership, and parenthood. These roles impose structured expectations and routines that redefine both opportunities and constraints. Within this context, self-regulation is reorganized into a higher-order construct aligned with these roles, emphasizing cognitive and future-oriented processes including control beliefs, agency, and future expectations. The renewed structure is associated with increased coherence in regulatory processes, although it differs from the structure present during adolescence.

These patterns demonstrate a reciprocal, longitudinal relationship in which social bonds shape the development and organization of self-regulation, while self-regulation influences the effectiveness and persistence of these bonds. Across developmental stages, shifts in social context correspond with changes in the internal organization of regulatory processes, resulting in a dynamic interplay between external constraints and internal capacities. This interaction underpins an understanding of how early experiences, such as extracurricular participation, contribute to developmental pathways extending into adulthood.

A Developmental Cascade of Social Bonds and Self-Regulation

A developmental cascade is defined as the process by which early experiences and individual capacities initiate sequences of interactions that accumulate and transform over time, resulting in both continuity and change across multiple domains of functioning (Cox

et al. 2010; Masten et al. 2005; Masten and Cicchetti 2010). Rather than representing a single causal pathway, cascade models highlight the interdependence of processes across domains and demonstrate how early behavioral patterns and social experiences shape subsequent development through interconnected and evolving mechanisms. Within this framework, outcomes observed in later life stages are conceptualized as the result of prior configurations of individual capacities and social contexts, rather than as isolated or independent events.

The findings of this study align with the developmental cascade perspective and indicate that the relationship between extracurricular participation and later outcomes is best conceptualized as a cascade involving the combined influence of social bonds and self-regulation. Across Waves I, III, and IV, the structure of self-regulation and the effects of participation demonstrate systematic changes consistent with a staged yet adaptive developmental process. Although these stages are not discrete or strictly bounded, they reflect shifts in the balance between external structure and internal regulatory organization that characterize distinct periods of development.

Stage 1: Structure

During adolescence, the cascade is situated within a structured social environment defined by strong and overlapping connections to family and school. These connections establish consistent expectations, supervision, and normative guidance, shaping both behavioral outcomes and the development of internal regulatory capacities. In this context, participation in extracurricular activities serves as an extension of institutional structures, reinforcing attachment, commitment, and involvement while positioning individuals within organized social frameworks.

Empirical evidence indicates that this developmental stage is marked by an integrated structure of self-regulation, as demonstrated by the second-order latent model and the directional relationships identified in the cascade model. Regulatory domains such as

emotional stability, impulsivity, self-concept, and problem solving are closely interconnected and functionally organized. Emotional processes are linked to behavioral control, which subsequently relates to social self-perception and cognitive regulation. This pattern aligns with previous research showing that adolescent regulatory capacities are influenced by both internal mechanisms and external supports (Blair and Raver 2015; Moffitt et al. 2011).

In this structured environment, social bonds and self-regulation function in close alignment. Strong institutional constraints reduce opportunities for deviant behavior while supporting the development of regulatory capacities. Consequently, early experiences such as participation in extracurricular activities are embedded within a system that fosters consistency across multiple domains of functioning. The cascade observed at this stage reflects both the internal organization of regulatory processes and the external structure provided by social bonds, generating developmental pathways that persist beyond adolescence.

Stage 2: Transition

The transition to emerging adulthood involves a reconfiguration of social bonds and self-regulation. As institutional structures related to school and family become less central, individuals gain increased autonomy in decision-making and social engagement (Arnett 2000). This transition introduces greater variability in social environments, such as differences in educational trajectories, employment, and living arrangements. Consequently, the consistency of external constraints diminishes, requiring individuals to navigate a broader array of contexts with diverse expectations and varying levels of support.

In line with these contextual changes, the structure of self-regulation becomes more differentiated. The second-order latent construct present during adolescence is no longer evident, and regulatory domains function with greater independence. Emotional regulation, impulsivity, and self-concept display distinct associations with outcomes, suggesting that regulatory processes are no longer closely integrated within a unified system. This

differentiation characterizes a developmental period in which internal capacities receive less external scaffolding and are increasingly shaped by individual variation.

Within the cascade framework, this stage constitutes a transitional phase during which previously integrated processes become decoupled. The directional dependencies characteristic of adolescence are no longer apparent, and the pathways connecting regulatory domains are weakened. Simultaneously, the effects of extracurricular participation become more domain-specific, aligning with particular outcomes rather than functioning through a general regulatory mechanism. These observations indicate that the cascade adapts to changes in social context, resulting in a period of instability in which both social bonds and regulatory processes are reorganized.

Stage 3: Consolidation

During young adulthood, the developmental cascade progresses into a phase of consolidation, marked by the emergence of novel social structures and a reorganization of self-regulation. Stable institutional roles, such as employment, romantic partnerships, and parenthood, introduce new expectations and routines that influence daily behavior and long-term decision-making. These roles serve as mechanisms of social control, imposing constraints on deviant behavior and offering incentives for conformity.

Empirically, this stage is characterized by the re-emergence of a higher-order structure of self-regulation, although the configuration of domains differs from that observed in adolescence. Regulatory processes are organized around emotional stability, control beliefs, agency beliefs, and future orientation, with substantial shared variance across these domains. This structure signifies a shift from behavioral regulation, such as impulsivity, toward cognitive and evaluative processes that facilitate goal-directed behavior and long-term planning. These findings align with research highlighting the increasing significance of future orientation and perceived control in adulthood (Nurmi 2005).

Within this context, self-regulation functions as a generalized resource that supports

engagement within adult roles and institutions. Social bonds are re-established in new forms, aligned with regulatory processes that emphasize stability, planning, and agency. The cascade observed in this stage reflects a reintegration of regulatory domains within a structured social environment, though this structure differs from that of adolescence in both content and organization.

Synthesis: An Adaptive Developmental Cascade

Collectively, these stages demonstrate that the developmental cascade identified in this study is adaptive rather than linear, reflecting changes in both social context and the internal organization of self-regulation across developmental periods. During adolescence, strong social bonds and structured environments facilitate an integrated and directionally organized system of self-regulation. In emerging adulthood, the weakening or reconfiguration of these bonds is associated with a differentiation of regulatory processes and a decoupling of domains. In young adulthood, the emergence of new social structures, particularly those related to stable institutional roles, corresponds with a reintegration of self-regulation centered on cognitive and future-oriented capacities.

The cascade observed in this study is shaped by the dynamic interaction between evolving social structures and corresponding changes in regulatory organization, rather than by a single continuous trajectory. The progression from integration to differentiation and then to reintegration is not uniform; instead, it reflects the reconfiguration of external constraints and opportunities across developmental stages. Early experiences, such as participation in extracurricular activities, initiate developmental pathways that are subsequently modified as individuals encounter new contexts, roles, and expectations. Thus, continuity across the life course is maintained not through structural stability, but through successive reorganizations that preserve underlying connections while altering their form.

Although this study focuses on adolescence through young adulthood, the observed pattern indicates that the developmental cascade may extend beyond the periods examined.

The reintegration of self-regulation in young adulthood, particularly with respect to future orientation, agency, and control beliefs, may constitute a transitional configuration rather than a final state. As individuals progress into middle adulthood and later life stages, further changes in social roles, institutional attachments, and life circumstances are likely to prompt additional reorganizations of regulatory processes.

Subsequent waves of the Add Health study offer the opportunity to examine these developmental processes directly. Wave V and VI data are now available, providing the potential to extend the observed developmental sequence into later adulthood. These data may enable assessment of whether the reintegrated structure identified in young adulthood is maintained, further transformed, or differentiated in response to new social and institutional contexts. Although the present analysis does not include these later waves, the findings suggest that the developmental cascade identified here likely forms part of a longer sequence that continues throughout the life course.

The Role of Extracurricular Participation in the Cascade Process

The analyses presented in the preceding chapters demonstrate that extracurricular participation is consistently associated with diverse outcomes across developmental stages. However, these effects are neither uniform nor static. Rather than functioning as a direct or isolated influence, extracurricular participation initiates pathways that persist throughout development, with its effects mediated by evolving systems of social bonds and self-regulation. Within the developmental cascade described above, participation serves as an early contextual input that shapes subsequent trajectories through interactions with both external structures and internal regulatory processes.

During adolescence, extracurricular participation occurs within highly structured institutional environments, particularly schools and organized community settings, where it reinforces social bonds. Participation in organized activities increases engagement, strengthens attachment to peers and authority figures, and supports commitment to

conventional goals. This encompasses both school-based activities and youth religious involvement, which offer additional structured contexts for engagement. In this setting, participation operates alongside robust social bonds and an integrated regulatory system, making it challenging to isolate direct effects from those mediated by broader structures. Findings from Wave I indicate that participation is associated with positive educational and behavioral outcomes, although these effects are partially mediated by self-regulation and embedded within the broader organization of social bonds.

As individuals transition into emerging adulthood, the influence of extracurricular participation becomes more differentiated. The weakening or reconfiguration of institutional bonds, along with the differentiation of self-regulatory domains, alters the pathways through which participation exerts its effects. Rather than operating through a unified regulatory system, participation effects correspond to specific domains and outcomes. Non-sport activities are more consistently linked to educational attainment and civic engagement, reflecting their alignment with identity formation and prosocial orientations. In contrast, sport participation demonstrates a more complex pattern, with positive associations in health and social integration but increased risk in areas such as substance use. Religious participation remains consistently protective, indicating continuity in pathways associated with structured involvement and normative contexts.

In young adulthood, the effects of extracurricular participation are further shaped by the reorganization of social bonds and self-regulation. Adolescent participation continues to be associated with adult outcomes, although these effects are often diminished and depend on the presence of stable institutional roles such as employment, partnership, and family formation. Non-sport participation remains positively associated with educational attainment and aspects of social standing, indicating continuity in pathways related to identity and achievement. Sport participation continues to show mixed effects, while religious participation generally maintains a protective association, particularly regarding criminal justice involvement and institutional trust.

Together, these patterns indicate that extracurricular participation is neither uniformly protective nor uniformly risky. Its effects depend on the type of activity, developmental stage, and the structure of social bonds and self-regulation at specific points in time. Participation initiates pathways that are subsequently shaped by changes in social context and internal regulatory organization, resulting in outcomes that vary across domains and throughout the life course.

Within the developmental cascade framework, extracurricular participation functions as an early influence that contributes to the formation of social bonds and exerts effects that persist in modified forms into later developmental stages. The persistence of these effects, even after accounting for self-regulation, suggests that participation operates through multiple pathways beyond regulatory processes. Simultaneously, the variability in these effects highlights the importance of considering participation as a context-dependent experience rather than a universally beneficial intervention.

By situating extracurricular participation within the broader cascade of social bonds and self-regulation, I underscore the importance of both timing and context in understanding its long-term implications. Early participation shapes developmental trajectories, but these trajectories are continually modified as individuals encounter changing social environments and as the internal organization of self-regulation evolves.

Theoretical Implications

The findings of this study have important implications for theoretical perspectives on deviance, especially regarding social control theory, models of self-regulation, and developmental approaches to behavior. The results indicate that explanations of deviance should consider not only the existence of key constructs but also their evolving organization and interaction throughout different developmental stages.

Implications for Social Control Theory

Social control theory has traditionally emphasized the importance of bonds to conventional institutions in constraining deviant behavior (Hirschi 2002). The findings of this study are broadly consistent with this perspective, as indicated by associations between attachment and commitment via participation and various outcomes across developmental stages. However, the results indicate that social bonds are dynamic, changing in both form and function over time.

During adolescence, social bonds are primarily rooted in family and school contexts, where institutional structures provide consistent expectations and supervision. In emerging adulthood, these bonds are often weakened or reconfigured as individuals transition out of these environments and encounter more variable social contexts. By young adulthood, new forms of social bonds develop through stable institutional roles such as employment, romantic partnerships, and parenthood. These roles introduce distinct constraints and expectations that influence behavior differently than in earlier stages.

These findings indicate that social control theory may be extended by explicitly incorporating a life-course perspective, recognizing that the sources and strength of social bonds vary across developmental stages. Rather than conceptualizing bonds as fixed attributes, it is more appropriate to view them as dynamic relationships that are continually restructured in response to changing social contexts. This approach provides a more nuanced understanding of how social control operates over time and how various forms of attachment and commitment influence behavior at different points in the life course.

Implications for Self-Regulation

The findings also contribute to ongoing debates about the nature of self-regulation. As mentioned in Chapter 2, self-regulation and criminological self-control share a number of conceptual similarities, particularly in areas related to impulse regulation, behavioral constraint, and decision-making. Contrary to perspectives that conceptualize self-control as

a stable, unitary trait, the results of this study indicate that self-regulation is neither unitary nor stable in its internal structure. Across developmental stages, self-regulation transitions from an integrated system of interrelated domains in adolescence, to a differentiated set of more independent processes in emerging adulthood, and ultimately to a reorganized higher-order construct in young adulthood.

These developmental changes suggest that self-regulation is more accurately conceptualized as a multidimensional and developmentally contingent system rather than as a fixed individual characteristic. The differentiation observed in emerging adulthood indicates that distinct aspects of regulation, including emotional stability, impulsivity, and self-concept, may function through separate pathways when external structure is reduced. The subsequent reintegration in young adulthood reflects a reorganization of these processes in accordance with stable institutional roles and expectations.

Additionally, the consistent association between self-regulation and a wide range of outcomes across measurement waves supports its significance as a factor influencing behavior. The findings suggest that self-regulation operates both as a selection process and as a mechanism through which outcomes are produced, although its internal organization varies across developmental contexts. Incorporating this variability into theoretical models may yield a more accurate representation of how regulatory processes influence behavior over time.

Implications for Developmental Theory

The results of this study provide additional support for developmental cascade frameworks, which emphasize the accumulation and transformation of processes across domains and over time (Masten and Cicchetti 2010). The observed pattern of integration, differentiation, and reintegration in the structure of self-regulation aligns with a cascade process, wherein early configurations of behavior and social experience influence subsequent development through a series of interconnected and evolving mechanisms.

Additionally, these findings extend existing cascade models by demonstrating that developmental processes involve not only continuity across domains but also structural transformation within domains. The reorganization of self-regulation across developmental stages indicates that cascades are not merely additive or cumulative; rather, they involve shifts in the internal organization of key constructs as individuals encounter new social contexts and roles. Therefore, developmental theories should account for both the persistence of early influences and the ways in which those influences are reconfigured over time.

More broadly, the results underscore the importance of considering the interaction between external social structures and internal regulatory processes within developmental frameworks. The cascade observed in this study reflects changes in both factors, as shifts in social bonds correspond to changes in the organization of self-regulation. This interaction indicates that developmental processes are shaped by the ongoing interplay between context and capacity, rather than by either factor independently.

Implications for Policy and Practice

The findings of this study also have important implications for policy and practice, especially within youth development, education, and community programming. Although the results do not establish causality, they demonstrate that extracurricular participation, social bonds, and self-regulation are consistently linked to a variety of outcomes across developmental stages. These patterns indicate that interventions targeting deviance reduction and well-being promotion may be more effective if they account for both the timing of participation and the broader developmental context.

A key implication is the significance of access to structured extracurricular activities during adolescence. The results show that participation in these activities during this period is associated with positive outcomes across educational and behavioral domains, even when controlling for self-regulation. Expanding access to organized activities that foster sustained engagement and connections to conventional institutions may strengthen social bonds and

support the development of regulatory capacities. For example, school-based programs such as academic clubs, performing arts groups, and CareerTech pathways provide structured environments in which students regularly interact with peers and adult mentors while working toward shared goals. However, the observed variation in effects across activity types suggests that program design should account for the specific contexts and expectations associated with different activities.

The findings further emphasize the importance of maintaining structured engagement beyond adolescence. During the transition to emerging adulthood, the weakening of institutional bonds is linked to differentiated self-regulatory processes and increased variability in outcomes. Policies and programs that offer structured opportunities for engagement during this transitional period may help offset the loss of external support and reduce the risk of adverse outcomes. Examples include post-secondary educational pathways, workforce development programs such as apprenticeships or job training initiatives, and community-based organizations that provide structured opportunities for continued engagement during early adulthood.

In young adulthood, the results demonstrate that stable institutional roles, such as employment and family formation, are associated with a reorganization of self-regulation and more consistent behavioral patterns. Policies that support access to stable employment, career development, and family resources may indirectly influence behavioral outcomes by reinforcing social bonds and regulatory processes. For instance, access to stable full-time employment, employer-sponsored training programs, or family support policies such as childcare assistance can provide structure and reinforce long-term planning and responsibility. Although these roles differ from the structured environments of adolescence, they continue to serve as significant sources of social organization and constraint.

Across all developmental stages, the findings highlight the necessity of addressing the interaction between social context and individual capacity. Interventions that focus solely on either external structure or internal skills are likely to be less effective than those that

integrate both elements. Programs that combine structured engagement opportunities with support for developing self-regulatory capacities may be especially effective in influencing long-term outcomes. This could also include programs that pair structured participation with coaching in goal-setting, time management, or decision-making skills.

Simultaneously, the results should be viewed with caution against assuming that extracurricular participation is universally beneficial. The variation in effects across activity types, especially regarding sport participation, indicates that the social environments of different activities can yield both positive and negative outcomes. This underscores the importance of program quality, supervision, and normative context, rather than focusing solely on participation. For example, highly supervised team environments that emphasize discipline and accountability may produce different outcomes than less structured settings where peer norms encourage risk-taking.

Collectively, these findings indicate that policy initiatives designed to promote positive developmental outcomes should adopt a life-course perspective, acknowledging that the effects of early experiences are influenced by subsequent contexts and opportunities. While extracurricular participation serves as one entry point, its long-term impact is contingent upon its interaction with evolving systems of social bonds and self-regulation throughout development.

Limitations

Several limitations should be considered when interpreting the findings of this study. These limitations do not undermine the overall patterns observed, but they define the boundaries within which the results should be understood.

First, measurement constraints, especially in Wave IV, restrict the comparability of self-regulation across developmental stages. The items available for young adulthood differ from those in earlier waves, emphasizing cognitive and future-oriented aspects rather than behavioral components such as impulsivity. Although this shift aligns with developmental

expectations and provides substantive insight, it primarily reflects the structure of the available data. Consequently, differences in measurement across waves may reflect both developmental change and variation in item content.

Second, the analyses rely on observational data and therefore cannot establish causality. Although the models adjust for a range of covariates, including self-regulation as a selection control, unobserved factors may still influence both participation and outcomes. The continued association between participation and later outcomes after these adjustments suggests a relationship, but residual confounding cannot be entirely ruled out.

Third, measures of extracurricular participation are based on self-report data and include potential participation. Although these measures offer valuable information regarding the type and frequency of participation, they may be affected by reporting bias. Furthermore, the available data do not capture variation in program quality, intensity beyond frequency categories, or the specific social contexts of participation. These unmeasured factors may influence the magnitude and direction of participation effects but are not directly observed.

Fourth, this study utilizes the public-use version of the Add Health dataset, which restricts access to certain variables to protect respondent confidentiality. Specifically, the public-use data exclude detailed geographic identifiers and other information necessary for geo-stratification or that could increase the risk of deductive identification. Consequently, it is not possible to account for contextual factors such as neighborhood characteristics or local institutional environments that may influence participation and outcomes. Additionally, the public-use dataset comprises a reduced subset of the full sample, potentially limiting statistical power, especially for analyses involving less common outcomes such as self-reported deviance and criminal behavior. These constraints may hinder the detection of smaller effects or the examination of more detailed subgroup variations.

An additional limitation involves the potential for residual selection effects in extracurricular participation. Although the models in this study incorporate self-regulation as a selection control, participation in structured activities is not randomly assigned.

Children and adolescents possessing stronger regulatory capacities, greater institutional attachment, higher levels of family support, or stronger prosocial orientations may be more likely to self-select into extracurricular activities initially and to sustain participation over time. As Campbell and Stanley (1966) note in discussions of quasi-experimental validity, selection processes remain a persistent challenge in observational research lacking random assignment. Consequently, although the findings indicate that participation effects persist net of self-regulation and other covariates, the possibility that unmeasured selection processes contribute to these associations cannot be fully excluded.

Finally, the models do not account for all potential sources of variation influencing self-regulation and behavioral outcomes. Factors such as peer networks, unmeasured family characteristics, and other contextual influences may contribute to the observed associations. Although the inclusion of multiple covariates and a longitudinal design mitigates some concerns, omitted variable bias remains possible.

These limitations indicate that the findings should be interpreted as evidence of patterned associations across developmental stages rather than definitive causal effects. Nevertheless, the consistency of results across multiple outcomes and waves supports broader conclusions regarding the roles of extracurricular participation, social bonds, and self-regulation within a developmental cascade framework.

Potential Directions for Future Research

The findings of this study indicate several avenues for future research that may extend and refine the proposed developmental framework. Specifically, further research is required to directly model the mechanisms by which extracurricular participation, social bonds, and self-regulation interact throughout the life course.

An important direction for future research is the application of longitudinal mediation models to explicitly test the pathways proposed by the developmental cascade. Although the current analyses identify patterned relationships across waves and demonstrate

changes in self-regulation structure, they do not formally estimate indirect effects that link early participation to later outcomes through intermediate processes. Employing longitudinal structural equation modeling could clarify the extent to which self-regulatory domains and social bonds mediate the relationship between adolescent participation and adult outcomes, while accounting for the temporal sequence of these variables.

Future studies could also extend the cascade framework by estimating models that explicitly link regulatory processes across waves. While the present analyses examine the internal organization of self-regulation within each developmental stage, they do not directly model transitions in regulatory structure between waves. Cross-wave cascade models could offer a more precise account of how earlier configurations of self-regulation influence subsequent forms, including transitions from integration to differentiation and later reintegration. These models would enable a more direct test of the developmental processes inferred in this study.

Another direction for future research is the development of more refined measures of self-regulation in adulthood. Findings from Wave IV indicate that regulatory processes in young adulthood are organized around cognitive and evaluative dimensions, such as control beliefs, agency, and future orientation. However, the current measures are limited by the survey design and do not fully capture the range of regulatory capacities relevant in later life stages. Future studies could incorporate more comprehensive assessments of adult self-regulation, including planning, decision-making, and long-term goal management, to better understand the evolution of these processes beyond early adulthood.

Further research is also needed to more precisely measure social bonds across developmental stages. Although this study captures key aspects of attachment and involvement during adolescence and includes indicators of adult roles in later waves, these measures do not fully reflect the diversity and complexity of social relationships throughout the life course. Future studies could benefit from role-specific measures of social bonds, such as detailed assessments of workplace attachment, relationship quality, parental involvement,

and community engagement. These measures would enable a more nuanced examination of how various forms of social connection interact with self-regulation to influence behavior.

The availability of additional waves of the Add Health study presents significant opportunities to extend the current analysis. Data from Wave V and Wave VI may enable examination of whether the patterns identified in this study persist into middle adulthood and beyond. These data can be used to assess whether the reintegrated structure of self-regulation observed in young adulthood remains stable, undergoes further transformation, or is influenced by new social roles and life circumstances. Extending the analysis into later stages of the life course would yield a more comprehensive understanding of the developmental cascade and its long-term implications.

Finally, access to the restricted-use version of the Add Health dataset would facilitate a more detailed examination of contextual factors not available in the public-use data. The inclusion of geographic identifiers would enable the incorporation of neighborhood characteristics, local institutional contexts, and regional variation into the analysis. These factors may significantly influence both participation opportunities and behavioral outcomes. Additionally, the larger sample size in the restricted-use data would increase statistical power, particularly for analyses of less common outcomes such as specific forms of deviance and criminal behavior. Future research utilizing these expanded data resources could offer a more comprehensive account of the interactions among individual, social, and contextual influences within the developmental cascade framework.

The developmental cascade identified in this study serves as a foundation for further investigation rather than a definitive model. By extending analyses across additional waves, refining measurement strategies, and incorporating more detailed contextual information, future research can build upon these findings to develop a more comprehensive and precise understanding of how extracurricular participation, social bonds, and self-regulation interact throughout the life course.

Conclusion

My purpose in this study was to examine whether, and under what conditions, participation in school-age extracurricular activities function as a protective factor against deviance and related outcomes across the life course. Analysis of longitudinal data from adolescence through young adulthood demonstrates that extracurricular participation is consistently associated with positive outcomes, especially during adolescence and in areas such as education, social integration, and reduced deviant behavior. However, these effects are not uniform or universal; in certain domains, the protective influence is diminished or accompanied by increased risk.

The results across multiple waves indicate both continuity and change in self-regulation and the structure of social bonds. During adolescence, strong institutional attachments and structured environments foster an integrated system of self-regulation, within which extracurricular participation is broadly protective. In emerging adulthood, the weakening or reconfiguration of these bonds leads to differentiated regulatory processes and increased variability in outcomes, producing more domain-specific and uneven effects of participation. By young adulthood, the establishment of stable institutional roles is linked to a reintegration of self-regulation, now centered on cognitive and future-oriented capacities, with participation effects persisting in more selective and context-dependent forms.

Within this developmental framework, extracurricular participation serves as an early entry point into broader processes of social bond formation and self-regulation, with effects that extend into later developmental stages. The findings indicate that participation is not uniformly protective; its effects differ by activity type. Non-sport activities are more consistently linked to positive outcomes, while sport participation shows both beneficial and adverse associations depending on the domain. Religious participation generally demonstrates protective patterns. These distinctions highlight the significance of social context and normative environment in determining the consequences of participation.

The results emphasize the need to consider both external structures and internal

capacities when examining deviance. Social bonds and self-regulation are dynamically interconnected processes that evolve throughout the life course. Shifts in social context correspond with changes in the internal organization of self-regulation, influencing individual responses to opportunities and constraints. The developmental cascade identified in this study illustrates this interaction, connecting early experiences to later outcomes through a sequence of adaptive reorganizations rather than a single, continuous pathway.

Considered across the life course, the findings indicate that the relationship between extracurricular participation and deviance is best conceptualized as a dynamic developmental process shaped by the evolving interplay of social bonds and self-regulation. Although participation is frequently linked to protective outcomes, its effects depend on developmental stage, activity type, and the broader social and regulatory context. By framing these patterns within a developmental cascade, this study offers a framework for understanding both the benefits and limitations of extracurricular participation, as well as the ways in which early social experiences influence long-term behavioral and well-being trajectories.

List of Appendix Tables

A1.1	CFA Factor Loadings with SEs, z-values, and Std. Estimates	190
A1.2	Residual Variances with SEs, z-values, and Std. Estimates.....	191
A1.3	Threshold Estimates with SEs and z-values	192
B1.1	Wave I Educational Outcomes Model 1 (Grade Average) – Std. Factor Loadings.....	194
B1.2	Wave I Educational Outcomes Model 1 (Grade Average) – Structural Regressions	195
B1.3	Wave I Educational Outcomes Model 1 (Grade Average) – Residual & Latent Variances	196
B2.1	Wave I Educational Outcomes Model 2 (Unexcused Absences) – Std. Factor Loadings.....	197
B2.2	Wave I Educational Outcomes Model 2 (Unexcused Absences) – Structural Regressions	198
B2.3	Wave I Educational Outcomes Model 2 (Unexcused Absences) – Residual & Latent Variances	199
B3.1	Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Std. Factor Loadings	200
B3.2	Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Structural Regressions	201
B3.3	Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Residual & Latent Variances.....	202
B4.1	Wave I Educational Outcomes Model 4 (Expulsion) – Std. Factor Loadings.....	203
B4.2	Wave I Educational Outcomes Model 4 (Expulsion) – Structural Regressions	204
B4.3	Wave I Educational Outcomes Model 4 (Expulsion) – Residual & Latent Variances	205
C1.1	Wave I Attachment to School Model 1 (Feel Close to People at School) – Std. Factor Loadings	206
C1.2	Wave I Attachment to School Model 1 (Feel Close to People at School) – Structural Regressions.....	207

C1.3	Wave I Attachment to School Model 1 (Feel Close to People at School) – Residual & Latent Variances	208
C2.1	Wave I Attachment to School Model 2 (Feel Like a Part of School) – Std. Factor Loadings	209
C2.2	Wave I Attachment to School Model 2 (Feel Like a Part of School) – Structural Regressions	210
C2.3	Wave I Attachment to School Model 2 (Feel Like a Part of School) – Residual & Latent Variances	211
C3.1	Wave I Attachment to School Model 3 (Feel Safe in School) – Std. Factor Loadings.....	212
C3.2	Wave I Attachment to School Model 3 (Feel Safe in School) – Structural Regressions	213
C3.3	Wave I Attachment to School Model 3 (Feel Safe in School) – Residual & Latent Variances	214
C4.1	Wave I Attachment to School Model 4 (Trouble With Teachers) – Std. Factor Loadings.....	215
C4.2	Wave I Attachment to School Model 4 (Trouble With Teachers) – Structural Regressions	216
C4.3	Wave I Attachment to School Model 4 (Trouble With Teachers) – Residual & Latent Variances	217
D1.1	Wave I Attachment to Parents and Family Model 1 (Parental Care) – Std. Factor Loadings	218
D1.2	Wave I Attachment to Parents and Family Model 1 (Parental Care) – Structural Regressions.....	219
D1.3	Wave I Attachment to Parents and Family Model 1 (Parental Care) – Residual & Latent Variances.....	220
D2.1	Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Std. Factor Loadings	221
D2.2	Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Structural Regressions.....	222
D2.3	Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Residual & Latent Variances	223
D3.1	Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Std. Factor Loadings	224
D3.2	Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Structural Regressions.....	225

D3.3	Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Residual & Latent Variances	226
D4.1	Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Std. Factor Loadings	227
D4.2	Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Structural Regressions.....	228
D4.3	Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Residual & Latent Variances	229
E1.1	Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Std. Factor Loadings	230
E1.2	Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Structural Regressions.....	231
E1.3	Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Residual & Latent Variances	232
E2.1	Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Std. Factor Loadings	233
E2.2	Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Structural Regressions	234
E2.3	Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Residual & Latent Variances	235
E3.1	Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Std. Factor Loadings.....	236
E3.2	Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Structural Regressions	237
E3.3	Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Residual & Latent Variances	238
E4.1	Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Std. Factor Loadings.....	239
E4.2	Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Structural Regressions	240
E4.3	Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Residual & Latent Variances	241
F1.1	Wave I Delinquency Model 1 (Lying to Parents) – Std. Factor Loadings....	242
F1.2	Wave I Delinquency Model 1 (Lying to Parents) – Structural Regressions ..	243

F1.3	Wave I Delinquency Model 1 (Lying to Parents) – Residual & Latent Variances	244
F2.1	Wave I Delinquency Model 2 (Running Away from Home) – Std. Factor Loadings.....	245
F2.2	Wave I Delinquency Model 2 (Running Away from Home) – Structural Regressions	246
F2.3	Wave I Delinquency Model 2 (Running Away from Home) – Residual & Latent Variances	247
F3.1	Wave I Delinquency Model 3 (Minor Theft) – Std. Factor Loadings.....	248
F3.2	Wave I Delinquency Model 3 (Minor Theft) – Structural Regressions	249
F3.3	Wave I Delinquency Model 3 (Minor Theft) – Residual & Latent Variances	250
F4.1	Wave I Delinquency Model 4 (Serious Fighting) – Std. Factor Loadings	251
F4.2	Wave I Delinquency Model 4 (Serious Fighting) – Structural Regressions...	252
F4.3	Wave I Delinquency Model 4 (Serious Fighting) – Residual & Latent Variances	253
G1.1	Fit Indices for the Developmental Cascade Model.....	254
G1.2	Std. Latent Structural Paths with SEs and z-values.....	254
G1.3	Std. Factor Loadings with SEs and z-values	255
G1.4	Std. Residual Variances with SEs and z-values	256
G1.5	Threshold Estimates with SEs and z-values	257
H1.1	Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) – Std. Factor Loadings	259
H1.2	Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) – Structural Regressions.....	260
H1.3	Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) – Residual & Latent Variances	261
H2.1	Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Std. Factor Loadings.....	262

H2.2	Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Structural Regressions.....	263
H2.3	Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Residual & Latent Variances.....	264
H3.1	Wave I Educational Outcomes - Developmental Cascade - Model 3 (Out of School Suspension) – Std. Factor Loadings	265
H3.2	Wave I Educational Outcomes - Developmental Cascade - Model 3 (Out of School Suspension) – Structural Regressions.....	266
H3.3	Wave I Educational Outcomes - Developmental Cascade - Model 3 (Out of School Suspension) – Residual & Latent Variances	267
H4.1	Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Std. Factor Loadings	268
H4.2	Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Structural Regressions.....	269
H4.3	Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Residual & Latent Variances	270
I1.1	Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Std. Factor Loadings.....	271
I1.2	Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Structural Regressions.....	272
I1.3	Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Residual & Latent Variances	273
I2.1	Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) – Std. Factor Loadings.....	274
I2.2	Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) – Structural Regressions.....	275
I2.3	Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) – Residual & Latent Variances.....	276
I3.1	Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Std. Factor Loadings	277
I3.2	Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Structural Regressions	278
I3.3	Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Residual & Latent Variances	279
I4.1	Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Std. Factor Loadings	280

I4.2	Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Structural Regressions.....	281
I4.3	Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Residual & Latent Variances	282
J1.1	Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) – Std. Factor Loadings	283
J1.2	Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) – Structural Regressions.....	284
J1.3	Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) – Residual & Latent Variances	285
J2.1	Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Std. Factor Loadings	286
J2.2	Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Structural Regressions	287
J2.3	Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Residual & Latent Variances	288
J3.1	Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) – Std. Factor Loadings.....	289
J3.2	Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) – Structural Regressions	290
J3.3	Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) – Residual & Latent Variances.....	291
J4.1	Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) – Std. Factor Loadings.....	292
J4.2	Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) – Structural Regressions.....	293
J4.3	Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) – Residual & Latent Variances	294
K1.1	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Std. Factor Loadings	295
K1.2	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Structural Regressions	296
K1.3	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Residual & Latent Variances	297
K2.1	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) – Std. Factor Loadings.....	298

K2.2	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) – Structural Regressions.....	299
K2.3	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) – Residual & Latent Variances	300
K3.1	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use) – Std. Factor Loadings	301
K3.2	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use) – Structural Regressions.....	302
K3.3	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use) – Residual & Latent Variances	303
K4.1	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving) – Std. Factor Loadings	304
K4.2	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving) – Structural Regressions.....	305
K4.3	Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving) – Residual & Latent Variances	306
L1.1	Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) – Std. Factor Loadings	307
L1.2	Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) – Structural Regressions.....	308
L1.3	Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) – Residual & Latent Variances	309
L2.1	Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Std. Factor Loadings	310
L2.2	Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Structural Regressions	311
L2.3	Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Residual & Latent Variances.....	312
L3.1	Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) – Std. Factor Loadings	313
L3.2	Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) – Structural Regressions.....	314
L3.3	Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) – Residual & Latent Variances	315
L4.1	Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) – Std. Factor Loadings	316

L4.2	Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) – Structural Regressions.....	317
L4.3	Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) – Residual & Latent Variances	318
M1.1	Wave III Candidate Indicators for Emerging Adult Self-Regulation.....	319
M1.2	CFA Factor Loadings with SEs, z-values, and Std. Estimates	320
M1.3	Residual Variances with SEs, z-values, and Std. Estimates.....	321
M1.4	Latent Factor Covariances with SEs, z-values, and Std. Estimates.....	321
M1.5	Threshold Estimates with SEs and z-values.....	322
N1.1	Wave III General Outcomes Model 1 (General Health) – Std. Factor Loadings.....	324
N1.2	Wave III General Outcomes Model 1 (General Health) – Structural Regressions	325
N1.3	Wave III General Outcomes Model 1 (General Health) – Residual & Latent Variances	326
N1.4	Wave III General Outcomes Model 1 (General Health) – Covariances.....	326
N2.1	Wave III General Outcomes Model 2 (Educational Attainment) – Std. Factor Loadings.....	327
N2.2	Wave III General Outcomes Model 2 (Educational Attainment) – Structural Regressions	328
N2.3	Wave III General Outcomes Model 2 (Educational Attainment) – Residual & Latent Variances	329
N2.4	Wave III General Outcomes Model 2 (Educational Attainment) – Covariances.....	329
N3.1	Wave III General Outcomes Model 3 (Prior Year Income) – Std. Factor Loadings.....	330
N3.2	Wave III General Outcomes Model 3 (Prior Year Income) – Structural Regressions	331
N3.3	Wave III General Outcomes Model 3 (Prior Year Income) – Residual & Latent Variances	332
N3.4	Wave III General Outcomes Model 3 (Prior Year Income) – Covariances....	332

N4.1	Wave III General Outcomes Model 4 (Life Satisfaction) – Std. Factor Loadings.....	333
N4.2	Wave III General Outcomes Model 4 (Life Satisfaction) – Structural Regressions	334
N4.3	Wave III General Outcomes Model 4 (Life Satisfaction) – Residual & Latent Variances.....	335
N4.4	Wave III General Outcomes Model 4 (Life Satisfaction) – Covariances	335
O1.1	Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Std. Factor Loadings	336
O1.2	Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Structural Regressions.....	337
O1.3	Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Residual & Latent Variances.....	338
O1.4	Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Covariances.....	338
O2.1	Wave III Criminal Justice Interactions Model 2 (Arrested) – Std. Factor Loadings.....	339
O2.2	Wave III Criminal Justice Interactions Model 2 (Arrested) – Structural Regressions	340
O2.3	Wave III Criminal Justice Interactions Model 2 (Arrested) – Residual & Latent Variances	341
O2.4	Wave III Criminal Justice Interactions Model 2 (Arrested) – Covariances ..	341
P1.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Std. Factor Loadings	342
P1.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Structural Regressions.....	343
P1.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Residual & Latent Variances	344
P1.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Covariances.....	344
P2.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Std. Factor Loadings	345
P2.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Structural Regressions.....	346

P2.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Residual & Latent Variances	347
P2.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Covariances	347
P3.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Std. Factor Loadings	348
P3.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Structural Regressions	349
P3.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Residual & Latent Variances	350
P3.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Covariances	350
P4.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Std. Factor Loadings	351
P4.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Structural Regressions	352
P4.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Residual & Latent Variances	353
P4.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Covariances	353
P5.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Std. Factor Loadings	354
P5.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Structural Regressions	355
P5.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Residual & Latent Variances	356
P5.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Covariances	356
P6.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Std. Factor Loadings	357
P6.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Structural Regressions	358
P6.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Residual & Latent Variances	359
P6.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Covariances	359

P7.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Std. Factor Loadings	360
P7.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Structural Regressions.....	361
P7.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Residual & Latent Variances	362
P7.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Covariances.....	362
P8.1	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Std. Factor Loadings	363
P8.2	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Structural Regressions.....	364
P8.3	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Residual & Latent Variances	365
P8.4	Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Covariances.....	365
Q1.1	Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Std. Factor Loadings.....	366
Q1.2	Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Structural Regressions	367
Q1.3	Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Residual & Latent Variances.....	368
Q1.4	Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Covariances	368
Q2.1	Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Std. Factor Loadings.....	369
Q2.2	Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Structural Regressions	370
Q2.3	Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Residual & Latent Variances.....	371
Q2.4	Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Covariances	371
Q3.1	Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Std. Factor Loadings	372
Q3.2	Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Structural Regressions.....	373

Q3.3	Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Residual & Latent Variances	374
Q3.4	Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Covariances	374
Q4.1	Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Std. Factor Loadings	375
Q4.2	Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Structural Regressions.....	376
Q4.3	Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Residual & Latent Variances	377
Q4.4	Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Covariances.....	377
Q5.1	Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Std. Factor Loadings.....	378
Q5.2	Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Structural Regressions	379
Q5.3	Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Residual & Latent Variances.....	380
Q5.4	Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Covariances	380
Q6.1	Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Std. Factor Loadings	381
Q6.2	Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Structural Regressions.....	382
Q6.3	Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Residual & Latent Variances	383
Q6.4	Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Covariances.....	383
Q7.1	Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Std. Factor Loadings	384
Q7.2	Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Structural Regressions.....	385
Q7.3	Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Residual & Latent Variances	386
Q7.4	Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Covariances.....	386

Q8.1	Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Std. Factor Loadings	387
Q8.2	Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Structural Regressions.....	388
Q8.3	Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Residual & Latent Variances	389
Q8.4	Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Covariances.....	389
R1.1	Wave IV Candidate Indicators for Young Adult Self-Regulation	390
R1.2	Wave IV CFA Factor Loadings.....	392
R1.3	Wave IV CFA Residual Variances.....	393
R1.4	Wave IV CFA Threshold Estimates	394
S1.1	Wave IV General Outcomes Model 1 (Social Standing) – Std. Factor Loadings.....	396
S1.2	Wave IV General Outcomes Model 1 (Social Standing) – Structural Regressions	397
S1.3	Wave IV General Outcomes Model 1 (Social Standing) – Residual & Latent Variances	398
S2.1	Wave IV General Outcomes Model 2 (General Health) – Std. Factor Loadings.....	399
S2.2	Wave IV General Outcomes Model 2 (General Health) – Structural Regressions	400
S2.3	Wave IV General Outcomes Model 2 (General Health) – Residual & Latent Variances	401
S3.1	Wave IV General Outcomes Model 3 (Job Satisfaction) – Std. Factor Loadings.....	402
S3.2	Wave IV General Outcomes Model 3 (Job Satisfaction) – Structural Regressions	403
S3.3	Wave IV General Outcomes Model 3 (Job Satisfaction) – Residual & Latent Variances	404
S4.1	Wave IV General Outcomes Model 4 (Close Friends) – Std. Factor Loadings.....	405

S4.2	Wave IV General Outcomes Model 4 (Close Friends) – Structural Regressions	406
S4.3	Wave IV General Outcomes Model 4 (Close Friends) – Residual & Latent Variances	407
T1.1	Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Std. Factor Loadings.....	408
T1.2	Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Structural Regressions	409
T1.3	Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Residual & Latent Variances	410
T2.1	Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Std. Factor Loadings	411
T2.2	Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Structural Regressions.....	412
T2.3	Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Residual & Latent Variances	413
T3.1	Wave IV Criminal Justice Interaction Model 3 (Probation) – Std. Factor Loadings.....	414
T3.2	Wave IV Criminal Justice Interaction Model 3 (Probation) – Structural Regressions	415
T3.3	Wave IV Criminal Justice Interaction Model 3 (Probation) – Residual & Latent Variances	416
T4.1	Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Std. Factor Loadings	417
T4.2	Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Structural Regressions	418
T4.3	Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Residual & Latent Variances	419
U1.1	Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Std. Factor Loadings	420
U1.2	Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Structural Regressions	421
U1.3	Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Residual & Latent Variances	422
U2.1	Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Std. Factor Loadings.....	423

U2.2	Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Structural Regressions	424
U2.3	Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Residual & Latent Variances	425
U3.1	Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Std. Factor Loadings.....	426
U3.2	Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Structural Regressions	427
U3.3	Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Residual & Latent Variances	428
U4.1	Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Std. Factor Loadings.....	429
U4.2	Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Structural Regressions	430
U4.3	Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Residual & Latent Variances	431
U5.1	Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Std. Factor Loadings	432
U5.2	Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Structural Regressions.....	433
U5.3	Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Residual & Latent Variances	434
U6.1	Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Std. Factor Loadings	435
U6.2	Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Structural Regressions.....	436
U6.3	Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Residual & Latent Variances.....	437
U7.1	Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Std. Factor Loadings.....	438
U7.2	Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Structural Regressions	439
U7.3	Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Residual & Latent Variances	440
U8.1	Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Std. Factor Loadings	441

U8.2	Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Structural Regressions.....	442
U8.3	Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Residual & Latent Variances	443
V1.1	Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Std. Factor Loadings	444
V1.2	Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Structural Regressions.....	445
V1.3	Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Residual & Latent Variances	446
V2.1	Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Std. Factor Loadings	447
V2.2	Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Structural Regressions.....	448
V2.3	Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Residual & Latent Variances	449
V3.1	Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Std. Factor Loadings	450
V3.2	Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Structural Regressions.....	451
V3.3	Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Residual & Latent Variances	452
V4.1	Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Std. Factor Loadings	453
V4.2	Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Structural Regressions.....	454
V4.3	Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Residual & Latent Variances	455

Appendix A

Confirmatory Factor Analysis - Self-Regulation - Wave I

Table A1.1

CFA Factor Loadings with SEs, z-values, and Std. Estimates

Factor	Indicator	Estimate	SE	<i>z</i>	<i>p</i>	β
Self-Regulation	ES	1.000	0.000	—	—	0.332
Self-Regulation	ER/I	1.665	0.184	9.055	<0.001	0.554
Self-Regulation	PS	1.725	0.178	9.699	<0.001	0.508
Self-Regulation	SC/SA	2.962	0.319	9.293	<0.001	0.809
ES	SR1	1.000	0.000	—	—	0.661
ES	SR2	1.049	0.054	19.592	<0.001	0.693
ES	SR3	0.954	0.050	19.023	<0.001	0.630
ES	SR4	0.804	0.051	15.792	<0.001	0.531
ER/I	SR5	1.000	0.000	—	—	0.658
ER/I	SR6	1.007	0.048	21.111	<0.001	0.663
ER/I	SR7	0.867	0.047	18.298	<0.001	0.571
PS	SR10	1.000	0.000	—	—	0.745
PS	SR11	0.994	0.022	45.990	<0.001	0.741
PS	SR12	0.953	0.021	45.779	<0.001	0.710
PS	SR13	0.923	0.022	42.789	<0.001	0.688
SC/SA	SR14	1.000	0.000	—	—	0.803
SC/SA	SR15	1.026	0.020	50.454	<0.001	0.824
SC/SA	SR16	0.872	0.018	47.353	<0.001	0.700

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table A1.2

Residual Variances with SEs, z-values, and Std. Estimates

Item	Residual Var	SE	<i>z</i>	<i>p</i>	Residual Var (Std.)
SR1	0.564	0.000	---	---	0.564
SR2	0.520	0.000	---	---	0.520
SR3	0.603	0.000	---	---	0.603
SR4	0.718	0.000	---	---	0.718
SR5	0.567	0.000	---	---	0.567
SR6	0.560	0.000	---	---	0.560
SR7	0.674	0.000	---	---	0.674
SR10	0.445	0.000	---	---	0.445
SR11	0.451	0.000	---	---	0.451
SR12	0.496	0.000	---	---	0.496
SR13	0.527	0.000	---	---	0.527
SR14	0.356	0.000	---	---	0.356
SR15	0.321	0.000	---	---	0.321
SR16	0.510	0.000	---	---	0.510
Self-Regulation	0.048	0.009	5.282	<0.001	1.000
ES	0.388	0.028	13.681	<0.001	0.890
ER/I	0.300	0.022	13.950	<0.001	0.693
PS	0.412	0.020	20.997	<0.001	0.742
SC/SA	0.223	0.031	7.075	<0.001	0.346

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table A1.3

Threshold Estimates with SEs and z-values

Item	Threshold	Estimate	SE	z	p
SR1	t1	−2.824	0.117	−24.048	<0.001
SR1	t2	−1.881	0.045	−41.580	<0.001
SR1	t3	−0.161	0.023	−6.986	<0.001
SR2	t1	−2.801	0.111	−25.219	<0.001
SR2	t2	−2.382	0.072	−33.071	<0.001
SR2	t3	−1.235	0.030	−40.891	<0.001
SR2	t4	0.264	0.023	11.362	<0.001
SR3	t1	−2.505	0.083	−30.146	<0.001
SR3	t2	−1.110	0.029	−37.952	<0.001
SR3	t3	−0.173	0.023	−7.494	<0.001
SR4	t1	−0.533	0.024	−21.930	<0.001
SR5	t1	−0.863	0.027	−32.406	<0.001
SR5	t2	0.628	0.025	25.410	<0.001
SR5	t3	1.211	0.031	39.280	<0.001
SR5	t4	1.946	0.053	36.914	<0.001
SR6	t1	−1.133	0.029	−38.633	<0.001
SR6	t2	0.476	0.024	19.967	<0.001
SR6	t3	1.099	0.029	38.296	<0.001
SR6	t4	1.819	0.044	41.067	<0.001
SR7	t1	−1.588	0.040	−39.334	<0.001
SR7	t2	−0.042	0.023	−1.819	0.069
SR7	t3	0.709	0.025	28.128	<0.001
SR7	t4	1.559	0.038	41.537	<0.001
SR10	t1	−2.330	0.076	−30.839	<0.001
SR10	t2	−1.365	0.033	−41.240	<0.001
SR10	t3	−0.595	0.025	−24.018	<0.001
SR10	t4	0.934	0.027	35.009	<0.001
SR11	t1	−2.455	0.103	−23.852	<0.001
SR11	t2	−1.581	0.040	−39.078	<0.001
SR11	t3	−0.861	0.027	−31.660	<0.001
SR11	t4	0.827	0.026	31.850	<0.001
SR12	t1	−2.262	0.068	−33.472	<0.001
SR12	t2	−1.190	0.031	−38.533	<0.001
SR12	t3	−0.268	0.023	−11.430	<0.001
SR12	t4	1.159	0.029	39.563	<0.001
SR13	t1	−2.390	0.083	−28.918	<0.001

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Item	Threshold	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>
SR13	t2	−1.278	0.032	−40.436	<0.001
SR13	t3	−0.548	0.025	−22.277	<0.001
SR13	t4	1.038	0.028	37.315	<0.001
SR14	t1	−2.446	0.070	−34.855	<0.001
SR14	t2	−1.334	0.031	−42.611	<0.001
SR14	t3	−0.754	0.025	−30.024	<0.001
SR14	t4	0.396	0.024	16.675	<0.001
SR15	t1	−2.508	0.072	−34.831	<0.001
SR15	t2	−1.339	0.031	−42.992	<0.001
SR15	t3	−0.515	0.024	−21.340	<0.001
SR15	t4	0.901	0.027	33.910	<0.001
SR16	t1	−2.703	0.091	−29.804	<0.001
SR16	t2	−1.718	0.040	−42.836	<0.001
SR16	t3	−1.066	0.029	−36.954	<0.001
SR16	t4	0.535	0.024	22.130	<0.001

Appendix B

Wave I Educational Outcomes and Achievement

Model 1: Grade Average (Item constructed from last reported grades in English / Language Arts, Math, Science, and Social Studies / History subjects.)

Table B1.1

Wave I Educational Outcomes Model 1 (Grade Average) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.350	0.032	10.821	0.287	0.413
ER/I	Self-Regulation	0.570	0.030	18.910	0.511	0.629
PS	Self-Regulation	0.528	0.027	19.885	0.476	0.580
SC/SA	Self-Regulation	0.763	0.030	25.172	0.704	0.823
SR1	ES	0.634	0.026	24.067	0.583	0.686
SR2	ES	0.701	0.025	27.982	0.652	0.750
SR3	ES	0.634	0.025	25.505	0.585	0.682
SR4	ES	0.530	0.031	17.242	0.470	0.590
SR5	ER/I	0.643	0.022	28.984	0.599	0.686
SR6	ER/I	0.647	0.021	30.299	0.605	0.689
SR7	ER/I	0.593	0.025	23.274	0.543	0.643
SR10	PS	0.739	0.013	57.659	0.714	0.764
SR11	PS	0.734	0.013	54.410	0.707	0.760
SR12	PS	0.713	0.013	52.985	0.687	0.739
SR13	PS	0.674	0.014	46.565	0.646	0.702
SR14	SC/SA	0.787	0.012	66.031	0.764	0.811
SR15	SC/SA	0.825	0.012	69.419	0.801	0.848
SR16	SC/SA	0.682	0.013	51.174	0.656	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table B1.2

Wave I Educational Outcomes Model 1 (Grade Average) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.155***	0.020	7.743	0.000	0.116	0.195
High participation	0.186***	0.020	9.440	0.000	0.147	0.224
Sport Participation						
Moderate participation	0.020	0.020	0.983	0.325	−0.020	0.059
High participation	0.038 [†]	0.022	1.755	0.079	−0.004	0.080
Religious Youth Activity						
Less than once per month	0.045*	0.019	2.407	0.016	0.008	0.083
Less than once per week	0.059**	0.019	3.070	0.002	0.021	0.097
More than once per week	0.080***	0.020	4.065	0.000	0.041	0.119
Self-Regulation	0.177***	0.023	7.646	0.000	0.132	0.223
Demographics						
Age	−0.060**	0.019	−3.196	0.001	−0.097	−0.023
Female	0.124***	0.019	6.551	0.000	0.087	0.161
Socioeconomic Status	0.197***	0.019	10.167	0.000	0.159	0.235
Hispanic	−0.034 [†]	0.018	−1.866	0.062	−0.070	0.002
Black	−0.094***	0.017	−5.441	0.000	−0.128	−0.060
Other Race	−0.001	0.018	−0.034	0.973	−0.036	0.034
Dwelling Condition						
Fairly well kept	−0.111***	0.021	−5.270	0.000	−0.152	−0.070
Poorly kept	−0.077***	0.020	−3.816	0.000	−0.117	−0.038
Very poorly kept	−0.054*	0.023	−2.318	0.020	−0.099	−0.008
Neighborhood Condition						
Fairly well kept	−0.019	0.024	−0.823	0.410	−0.066	0.027
Poorly kept	−0.012	0.024	−0.486	0.627	−0.059	0.035
Very poorly kept	0.027	0.022	1.223	0.221	−0.016	0.070
Rural area	−0.042 [†]	0.022	−1.951	0.051	−0.085	0.000

Table B1.3

Wave I Educational Outcomes Model 1 (Grade Average) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.675	0.034	19.662	0.608	0.743	NA
ES	0.877	0.023	38.741	0.833	0.922	NA
PS	0.721	0.028	25.737	0.666	0.776	NA
SC/SA	0.417	0.046	9.013	0.327	0.508	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.598	0.033	17.890	0.532	0.663	0.402
SR2	0.508	0.035	14.461	0.439	0.577	0.492
SR3	0.599	0.031	19.016	0.537	0.660	0.401
SR4	0.719	0.033	22.044	0.655	0.783	0.281
SR5	0.587	0.029	20.575	0.531	0.643	0.413
SR6	0.582	0.028	21.053	0.527	0.636	0.418
SR7	0.648	0.030	21.409	0.589	0.707	0.352
SR10	0.454	0.019	23.931	0.416	0.491	0.546
SR11	0.461	0.020	23.307	0.423	0.500	0.539
SR12	0.492	0.019	25.623	0.454	0.529	0.508
SR13	0.546	0.020	27.971	0.507	0.584	0.454
SR14	0.380	0.019	20.237	0.343	0.417	0.620
SR15	0.320	0.020	16.345	0.282	0.359	0.680
SR16	0.534	0.018	29.344	0.499	0.570	0.466
Grade Average	0.763	0.015	49.464	0.733	0.793	0.237

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: During this school year, how many times have you skipped school for a full day without an excuse?

Table B2.1

Wave I Educational Outcomes Model 2 (Unexcused Absences) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.331	0.029	11.481	0.274	0.387
ER/I	Self-Regulation	0.565	0.027	21.133	0.513	0.618
PS	Self-Regulation	0.523	0.025	21.277	0.474	0.571
SC/SA	Self-Regulation	0.759	0.028	27.287	0.704	0.813
SR1	ES	0.636	0.023	27.794	0.591	0.681
SR2	ES	0.702	0.022	31.481	0.658	0.745
SR3	ES	0.640	0.023	28.376	0.596	0.685
SR4	ES	0.543	0.027	20.045	0.490	0.596
SR5	ER/I	0.653	0.020	32.823	0.614	0.692
SR6	ER/I	0.632	0.019	33.154	0.595	0.670
SR7	ER/I	0.599	0.022	27.099	0.556	0.643
SR10	PS	0.747	0.011	65.029	0.724	0.769
SR11	PS	0.736	0.012	61.434	0.713	0.760
SR12	PS	0.701	0.012	56.891	0.676	0.725
SR13	PS	0.682	0.013	53.921	0.657	0.706
SR14	SC/SA	0.793	0.011	74.086	0.772	0.814
SR15	SC/SA	0.827	0.011	75.556	0.806	0.849
SR16	SC/SA	0.690	0.012	57.004	0.666	0.714

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table B2.2

Wave I Educational Outcomes Model 2 (Unexcused Absences) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.091***	0.025	−3.600	0.000	−0.140	−0.041
High participation	−0.063*	0.025	−2.571	0.010	−0.111	−0.015
Sport Participation						
Moderate participation	−0.017	0.024	−0.700	0.484	−0.065	0.031
High participation	−0.033	0.027	−1.233	0.218	−0.085	0.019
Religious Youth Activity						
Less than once per month	−0.004	0.023	−0.171	0.864	−0.049	0.042
Less than once per week	−0.058*	0.024	−2.399	0.016	−0.106	−0.011
More than once per week	−0.110***	0.025	−4.377	0.000	−0.159	−0.061
Self-Regulation						
	−0.226***	0.026	−8.829	0.000	−0.276	−0.175
Demographics						
Age	0.332***	0.022	15.253	0.000	0.290	0.375
Female	−0.006	0.023	−0.255	0.799	−0.052	0.040
Socioeconomic Status	−0.059*	0.025	−2.397	0.017	−0.107	−0.011
Hispanic	0.031	0.022	1.415	0.157	−0.012	0.074
Black	−0.033	0.021	−1.556	0.120	−0.076	0.009
Other Race	0.031	0.021	1.451	0.147	−0.011	0.073
Dwelling Condition						
Fairly well kept	0.058*	0.027	2.151	0.032	0.005	0.111
Poorly kept	0.076**	0.025	3.086	0.002	0.028	0.125
Very poorly kept	0.010	0.026	0.397	0.691	−0.041	0.061
Neighborhood Condition						
Fairly well kept	0.013	0.030	0.454	0.650	−0.045	0.072
Poorly kept	0.030	0.027	1.103	0.270	−0.023	0.082
Very poorly kept	0.054*	0.026	2.133	0.033	0.004	0.105
Rural area	−0.010	0.028	−0.350	0.727	−0.064	0.045

Table B2.3

Wave I Educational Outcomes Model 2 (Unexcused Absences) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.680	0.030	22.481	0.621	0.740	NA
ES	0.891	0.019	46.731	0.853	0.928	NA
PS	0.727	0.026	28.328	0.677	0.777	NA
SC/SA	0.424	0.042	10.050	0.341	0.507	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.596	0.029	20.469	0.539	0.653	0.404
SR2	0.508	0.031	16.241	0.447	0.569	0.492
SR3	0.590	0.029	20.408	0.533	0.647	0.410
SR4	0.705	0.029	23.995	0.648	0.763	0.295
SR5	0.574	0.026	22.083	0.523	0.625	0.426
SR6	0.600	0.024	24.904	0.553	0.648	0.400
SR7	0.641	0.027	24.184	0.589	0.693	0.359
SR10	0.443	0.017	25.821	0.409	0.476	0.557
SR11	0.458	0.018	25.965	0.424	0.493	0.542
SR12	0.509	0.017	29.523	0.475	0.543	0.491
SR13	0.535	0.017	31.073	0.502	0.569	0.465
SR14	0.371	0.017	21.884	0.338	0.405	0.629
SR15	0.316	0.018	17.432	0.280	0.351	0.684
SR16	0.524	0.017	31.399	0.491	0.557	0.476
Unexcused Absences	0.770	0.019	40.991	0.733	0.807	0.230

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: Have you ever received an out-of-school suspension?

Table B3.1

Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.339	0.029	11.779	0.282	0.395
ER/I	Self-Regulation	0.566	0.027	21.062	0.513	0.618
PS	Self-Regulation	0.519	0.025	21.007	0.471	0.568
SC/SA	Self-Regulation	0.760	0.028	27.210	0.705	0.815
SR1	ES	0.637	0.023	27.852	0.592	0.682
SR2	ES	0.702	0.022	31.679	0.658	0.745
SR3	ES	0.639	0.023	28.413	0.595	0.683
SR4	ES	0.544	0.027	20.108	0.491	0.597
SR5	ER/I	0.653	0.020	33.096	0.614	0.692
SR6	ER/I	0.634	0.019	33.331	0.597	0.671
SR7	ER/I	0.598	0.022	27.422	0.555	0.641
SR10	PS	0.745	0.012	64.784	0.723	0.768
SR11	PS	0.737	0.012	61.533	0.713	0.760
SR12	PS	0.700	0.012	56.640	0.676	0.724
SR13	PS	0.682	0.013	53.880	0.657	0.707
SR14	SC/SA	0.793	0.011	74.089	0.772	0.814
SR15	SC/SA	0.824	0.011	75.441	0.803	0.846
SR16	SC/SA	0.692	0.012	57.219	0.668	0.715

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table B3.2

Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.074**	0.026	−2.901	0.004	−0.124	−0.024
High participation	−0.074**	0.027	−2.783	0.005	−0.126	−0.022
Sport Participation						
Moderate participation	−0.033	0.025	−1.298	0.194	−0.083	0.017
High participation	0.011	0.027	0.414	0.679	−0.041	0.063
Religious Youth Activity						
Less than once per month	−0.045 [†]	0.024	−1.890	0.059	−0.092	0.002
Less than once per week	−0.051*	0.025	−2.027	0.043	−0.100	−0.002
More than once per week	−0.094***	0.025	−3.707	0.000	−0.144	−0.044
Self-Regulation	−0.196***	0.030	−6.542	0.000	−0.254	−0.137
Demographics						
Age	0.068**	0.025	2.757	0.006	0.020	0.117
Female	−0.241***	0.023	−10.281	0.000	−0.287	−0.195
Socioeconomic Status	−0.201***	0.024	−8.282	0.000	−0.249	−0.154
Hispanic	0.043 [†]	0.022	1.932	0.053	−0.001	0.086
Black	0.205***	0.020	10.335	0.000	0.166	0.244
Other Race	0.064**	0.023	2.823	0.005	0.020	0.109
Dwelling Condition						
Fairly well kept	0.101***	0.027	3.674	0.000	0.047	0.155
Poorly kept	0.083***	0.024	3.428	0.001	0.036	0.131
Very poorly kept	0.068**	0.026	2.633	0.008	0.017	0.119
Neighborhood Condition						
Fairly well kept	0.009	0.031	0.281	0.779	−0.051	0.069
Poorly kept	0.042	0.028	1.536	0.124	−0.012	0.096
Very poorly kept	0.008	0.027	0.290	0.772	−0.045	0.061
Rural area	0.018	0.028	0.658	0.511	−0.036	0.073

Table B3.3

Wave I Educational Outcomes Model 3 (Out-of-School Suspension) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.680	0.030	22.361	0.620	0.739	NA
ES	0.885	0.019	45.411	0.847	0.923	NA
PS	0.730	0.026	28.429	0.680	0.781	NA
SC/SA	0.422	0.042	9.948	0.339	0.506	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.594	0.029	20.387	0.537	0.651	0.406
SR2	0.507	0.031	16.311	0.446	0.568	0.493
SR3	0.591	0.029	20.549	0.535	0.648	0.409
SR4	0.704	0.029	23.867	0.646	0.761	0.296
SR5	0.573	0.026	22.244	0.523	0.624	0.427
SR6	0.598	0.024	24.787	0.551	0.645	0.402
SR7	0.642	0.026	24.611	0.591	0.693	0.358
SR10	0.444	0.017	25.894	0.411	0.478	0.556
SR11	0.457	0.018	25.943	0.423	0.492	0.543
SR12	0.510	0.017	29.444	0.476	0.544	0.490
SR13	0.535	0.017	30.975	0.501	0.569	0.465
SR14	0.371	0.017	21.864	0.338	0.404	0.629
SR15	0.320	0.018	17.767	0.285	0.356	0.680
SR16	0.521	0.017	31.176	0.489	0.554	0.479
Out of School Suspension	0.713	0.021	33.623	0.671	0.754	0.287

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Have you ever been expelled from school?

Table B4.1

Wave I Educational Outcomes Model 4 (Expulsion) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.323	0.029	11.238	0.267	0.380
ER/I	Self-Regulation	0.562	0.027	20.936	0.510	0.615
PS	Self-Regulation	0.518	0.025	20.911	0.470	0.567
SC/SA	Self-Regulation	0.772	0.029	26.824	0.715	0.828
SR1	ES	0.634	0.023	27.785	0.589	0.678
SR2	ES	0.705	0.022	31.866	0.662	0.749
SR3	ES	0.639	0.022	28.475	0.595	0.683
SR4	ES	0.544	0.027	20.155	0.491	0.597
SR5	ER/I	0.651	0.020	32.897	0.612	0.690
SR6	ER/I	0.637	0.019	33.519	0.600	0.674
SR7	ER/I	0.597	0.022	27.169	0.554	0.640
SR10	PS	0.745	0.011	64.826	0.723	0.768
SR11	PS	0.736	0.012	61.566	0.713	0.760
SR12	PS	0.701	0.012	56.860	0.677	0.725
SR13	PS	0.682	0.013	53.936	0.657	0.707
SR14	SC/SA	0.793	0.011	74.169	0.772	0.814
SR15	SC/SA	0.824	0.011	75.325	0.803	0.846
SR16	SC/SA	0.692	0.012	57.471	0.669	0.716

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table B4.2

Wave I Educational Outcomes Model 4 (Expulsion) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.010	0.057	0.171	0.864	−0.102	0.121
High participation	−0.031	0.053	−0.580	0.562	−0.135	0.074
Sport Participation						
Moderate participation	−0.051	0.050	−1.027	0.304	−0.149	0.047
High participation	0.049	0.053	0.940	0.347	−0.054	0.153
Religious Youth Activity						
Less than once per month	−0.062	0.054	−1.154	0.249	−0.168	0.044
Less than once per week	−0.099 [†]	0.052	−1.919	0.055	−0.200	0.002
More than once per week	0.012	0.048	0.247	0.805	−0.082	0.105
Self-Regulation	−0.206***	0.042	−4.916	0.000	−0.288	−0.124
Demographics						
Age	0.039	0.053	0.743	0.458	−0.064	0.142
Female	−0.269***	0.052	−5.185	0.000	−0.371	−0.167
Socioeconomic Status	−0.135**	0.046	−2.936	0.003	−0.225	−0.045
Hispanic	0.079 [†]	0.041	1.917	0.055	−0.002	0.160
Black	0.183***	0.040	4.625	0.000	0.105	0.261
Other Race	−0.063	0.050	−1.243	0.214	−0.162	0.036
Dwelling Condition						
Fairly well kept	0.102 [†]	0.054	1.891	0.059	−0.004	0.208
Poorly kept	0.014	0.048	0.300	0.764	−0.080	0.109
Very poorly kept	0.072 [†]	0.043	1.661	0.097	−0.013	0.157
Neighborhood Condition						
Fairly well kept	0.016	0.057	0.281	0.779	−0.096	0.128
Poorly kept	0.046	0.043	1.069	0.285	−0.038	0.129
Very poorly kept	0.045	0.038	1.181	0.238	−0.030	0.119
Rural area	−0.024	0.055	−0.445	0.656	−0.132	0.083

Table B4.3

Wave I Educational Outcomes Model 4 (Expulsion) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.684	0.030	22.661	0.625	0.743	NA
ES	0.895	0.019	48.077	0.859	0.932	NA
PS	0.731	0.026	28.461	0.681	0.782	NA
SC/SA	0.404	0.044	9.108	0.317	0.491	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.598	0.029	20.695	0.542	0.655	0.402
SR2	0.502	0.031	16.084	0.441	0.564	0.498
SR3	0.592	0.029	20.634	0.536	0.648	0.408
SR4	0.704	0.029	23.995	0.647	0.762	0.296
SR5	0.576	0.026	22.360	0.526	0.627	0.424
SR6	0.594	0.024	24.559	0.547	0.642	0.406
SR7	0.643	0.026	24.481	0.592	0.695	0.357
SR10	0.445	0.017	25.970	0.411	0.478	0.555
SR11	0.458	0.018	26.019	0.424	0.493	0.542
SR12	0.509	0.017	29.447	0.475	0.543	0.491
SR13	0.535	0.017	30.981	0.501	0.568	0.465
SR14	0.371	0.017	21.917	0.338	0.405	0.629
SR15	0.321	0.018	17.770	0.285	0.356	0.679
SR16	0.521	0.017	31.229	0.488	0.553	0.479
Expulsion	0.745	0.036	20.654	0.674	0.816	0.255

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix C

Wave I Attachment to School

Model 1: How much do you agree or disagree with the following statement: You feel close to people at your school.

Table C1.1

Wave I Attachment to School Model 1 (Feel Close to People at School) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.323	0.028	11.600	0.269	0.378
ER/I	Self-Regulation	0.551	0.025	21.614	0.501	0.601
PS	Self-Regulation	0.506	0.023	21.583	0.460	0.552
SC/SA	Self-Regulation	0.795	0.027	29.965	0.743	0.847
SR1	ES	0.645	0.023	28.255	0.600	0.690
SR2	ES	0.700	0.022	31.417	0.657	0.744
SR3	ES	0.636	0.023	28.178	0.592	0.681
SR4	ES	0.540	0.027	19.976	0.487	0.593
SR5	ER/I	0.651	0.020	32.870	0.613	0.690
SR6	ER/I	0.638	0.019	33.530	0.600	0.675
SR7	ER/I	0.596	0.022	26.680	0.552	0.640
SR10	PS	0.745	0.012	64.643	0.722	0.768
SR11	PS	0.737	0.012	61.513	0.713	0.760
SR12	PS	0.700	0.012	56.604	0.676	0.724
SR13	PS	0.681	0.013	53.590	0.656	0.706
SR14	SC/SA	0.787	0.011	73.153	0.766	0.808
SR15	SC/SA	0.814	0.011	74.782	0.793	0.836
SR16	SC/SA	0.710	0.012	59.926	0.686	0.733

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table C1.2

Wave I Attachment to School Model 1 (Feel Close to People at School) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.044*	0.022	2.002	0.045	0.001	0.086
High participation	0.069***	0.020	3.381	0.001	0.029	0.109
Sport Participation						
Moderate participation	0.100***	0.021	4.765	0.000	0.059	0.140
High participation	0.096***	0.022	4.389	0.000	0.053	0.139
Religious Youth Activity						
Less than once per month	0.043*	0.020	2.176	0.030	0.004	0.081
Less than once per week	0.040 [†]	0.021	1.918	0.055	−0.001	0.080
More than once per week	0.059**	0.020	2.918	0.004	0.020	0.099
Self-Regulation	0.344***	0.022	15.467	0.000	0.300	0.387
Demographics						
Age	−0.048*	0.020	−2.418	0.016	−0.087	−0.009
Female	−0.017	0.020	−0.833	0.405	−0.057	0.023
Socioeconomic Status	−0.014	0.021	−0.641	0.521	−0.055	0.028
Hispanic	0.030	0.020	1.514	0.130	−0.009	0.068
Black	−0.036*	0.017	−2.092	0.036	−0.070	−0.002
Other Race	0.014	0.018	0.763	0.446	−0.022	0.049
Dwelling Condition						
Fairly well kept	−0.095***	0.024	−3.995	0.000	−0.142	−0.049
Poorly kept	−0.071**	0.022	−3.197	0.001	−0.115	−0.028
Very poorly kept	−0.081***	0.024	−3.407	0.001	−0.128	−0.035
Neighborhood Condition						
Fairly well kept	0.039	0.025	1.541	0.123	−0.011	0.089
Poorly kept	0.038 [†]	0.023	1.649	0.099	−0.007	0.084
Very poorly kept	−0.006	0.025	−0.253	0.800	−0.056	0.043
Rural area	0.017	0.023	0.742	0.458	−0.028	0.062

Table C1.3

Wave I Attachment to School Model 1 (Feel Close to People at School) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.697	0.028	24.830	0.642	0.752	NA
ES	0.895	0.018	49.679	0.860	0.931	NA
PS	0.744	0.024	31.412	0.698	0.791	NA
SC/SA	0.369	0.042	8.749	0.286	0.451	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.584	0.029	19.853	0.527	0.642	0.416
SR2	0.510	0.031	16.324	0.448	0.571	0.490
SR3	0.595	0.029	20.713	0.539	0.651	0.405
SR4	0.708	0.029	24.220	0.651	0.765	0.292
SR5	0.576	0.026	22.298	0.525	0.626	0.424
SR6	0.593	0.024	24.476	0.546	0.641	0.407
SR7	0.645	0.027	24.214	0.593	0.697	0.355
SR10	0.445	0.017	25.902	0.411	0.479	0.555
SR11	0.457	0.018	25.879	0.422	0.492	0.543
SR12	0.510	0.017	29.470	0.476	0.544	0.490
SR13	0.536	0.017	30.971	0.502	0.570	0.464
SR14	0.380	0.017	22.449	0.347	0.414	0.620
SR15	0.337	0.018	18.977	0.302	0.371	0.663
SR16	0.497	0.017	29.548	0.464	0.529	0.503
Feel Close to People at School	0.836	0.017	50.505	0.804	0.869	0.164

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: How much do you agree or disagree with the following statement: You feel like you are part of your school.

Table C2.1

Wave I Attachment to School Model 2 (Feel Like a Part of School) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.320	0.027	11.678	0.267	0.374
ER/I	Self-Regulation	0.524	0.025	21.063	0.476	0.573
PS	Self-Regulation	0.502	0.023	22.221	0.458	0.546
SC/SA	Self-Regulation	0.822	0.025	33.088	0.773	0.871
SR1	ES	0.646	0.023	28.185	0.601	0.691
SR2	ES	0.701	0.022	31.398	0.657	0.745
SR3	ES	0.635	0.023	28.044	0.590	0.679
SR4	ES	0.539	0.027	19.890	0.486	0.592
SR5	ER/I	0.651	0.020	32.390	0.611	0.690
SR6	ER/I	0.636	0.019	33.092	0.599	0.674
SR7	ER/I	0.598	0.022	27.370	0.555	0.641
SR10	PS	0.746	0.012	64.782	0.724	0.769
SR11	PS	0.738	0.012	61.559	0.714	0.761
SR12	PS	0.699	0.012	56.557	0.675	0.724
SR13	PS	0.681	0.013	53.516	0.656	0.706
SR14	SC/SA	0.785	0.011	73.069	0.764	0.806
SR15	SC/SA	0.814	0.011	74.913	0.793	0.836
SR16	SC/SA	0.712	0.012	60.780	0.689	0.735

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table C2.2

Wave I Attachment to School Model 2 (Feel Like a Part of School) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.058**	0.022	2.634	0.008	0.015	0.102
High participation	0.102***	0.020	5.030	0.000	0.063	0.142
Sport Participation						
Moderate participation	0.164***	0.021	7.759	0.000	0.123	0.206
High participation	0.152***	0.022	6.998	0.000	0.109	0.194
Religious Youth Activity						
Less than once per month	0.028	0.020	1.378	0.168	−0.012	0.068
Less than once per week	0.053*	0.021	2.541	0.011	0.012	0.094
More than once per week	0.079***	0.021	3.777	0.000	0.038	0.121
Self-Regulation						
	0.420***	0.022	19.125	0.000	0.377	0.464
Demographics						
Age	−0.049*	0.020	−2.416	0.016	−0.089	−0.009
Female	−0.010	0.021	−0.487	0.626	−0.051	0.031
Socioeconomic Status	0.002	0.021	0.093	0.926	−0.039	0.043
Hispanic	−0.009	0.020	−0.450	0.653	−0.048	0.030
Black	−0.013	0.018	−0.704	0.482	−0.049	0.023
Other Race	−0.022	0.019	−1.194	0.233	−0.059	0.014
Dwelling Condition						
Fairly well kept	−0.078**	0.024	−3.255	0.001	−0.124	−0.031
Poorly kept	−0.082***	0.023	−3.595	0.000	−0.126	−0.037
Very poorly kept	−0.048 [†]	0.026	−1.887	0.059	−0.099	0.002
Neighborhood Condition						
Fairly well kept	0.006	0.026	0.241	0.810	−0.045	0.057
Poorly kept	0.027	0.025	1.064	0.288	−0.023	0.076
Very poorly kept	0.004	0.025	0.156	0.876	−0.045	0.053
Rural area	−0.004	0.023	−0.162	0.871	−0.050	0.042

Table C2.3

Wave I Attachment to School Model 2 (Feel Like a Part of School) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.725	0.026	27.779	0.674	0.776	NA
ES	0.897	0.018	51.021	0.863	0.932	NA
PS	0.748	0.023	32.956	0.703	0.792	NA
SC/SA	0.325	0.041	7.949	0.245	0.405	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.582	0.030	19.657	0.524	0.641	0.418
SR2	0.508	0.031	16.232	0.447	0.570	0.492
SR3	0.597	0.029	20.784	0.541	0.653	0.403
SR4	0.709	0.029	24.260	0.652	0.767	0.291
SR5	0.576	0.026	22.034	0.525	0.628	0.424
SR6	0.595	0.024	24.327	0.547	0.643	0.405
SR7	0.642	0.026	24.559	0.591	0.693	0.358
SR10	0.443	0.017	25.781	0.409	0.477	0.557
SR11	0.455	0.018	25.743	0.421	0.490	0.545
SR12	0.511	0.017	29.550	0.477	0.545	0.489
SR13	0.537	0.017	30.996	0.503	0.571	0.463
SR14	0.384	0.017	22.747	0.351	0.417	0.616
SR15	0.337	0.018	19.030	0.302	0.372	0.663
SR16	0.493	0.017	29.506	0.460	0.525	0.507
Feel Like a Part of School	0.746	0.020	37.408	0.707	0.785	0.254

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: How much do you agree or disagree with the following statement: You feel safe in your school.

Table C3.1

Wave I Attachment to School Model 3 (Feel Safe in School) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.324	0.028	11.414	0.268	0.380
ER/I	Self-Regulation	0.558	0.026	21.539	0.507	0.609
PS	Self-Regulation	0.512	0.024	21.774	0.466	0.558
SC/SA	Self-Regulation	0.783	0.027	29.493	0.731	0.835
SR1	ES	0.638	0.023	27.780	0.593	0.683
SR2	ES	0.702	0.022	31.530	0.659	0.746
SR3	ES	0.640	0.023	28.364	0.596	0.684
SR4	ES	0.542	0.027	19.956	0.488	0.595
SR5	ER/I	0.652	0.020	32.917	0.613	0.691
SR6	ER/I	0.638	0.019	33.403	0.600	0.675
SR7	ER/I	0.596	0.022	26.789	0.553	0.640
SR10	PS	0.744	0.012	64.719	0.722	0.767
SR11	PS	0.738	0.012	61.546	0.715	0.762
SR12	PS	0.699	0.012	56.628	0.675	0.723
SR13	PS	0.682	0.013	53.762	0.657	0.707
SR14	SC/SA	0.792	0.011	74.413	0.771	0.813
SR15	SC/SA	0.819	0.011	75.130	0.798	0.840
SR16	SC/SA	0.700	0.012	58.359	0.676	0.723

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table C3.2

Wave I Attachment to School Model 3 (Feel Safe in School) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.020	0.022	0.892	0.372	−0.024	0.064
High participation	0.059**	0.021	2.804	0.005	0.018	0.101
Sport Participation						
Moderate participation	0.089***	0.022	4.058	0.000	0.046	0.132
High participation	0.087***	0.022	3.961	0.000	0.044	0.130
Religious Youth Activity						
Less than once per month	0.009	0.021	0.450	0.653	−0.031	0.050
Less than once per week	0.005	0.021	0.254	0.800	−0.037	0.047
More than once per week	0.041 [†]	0.021	1.943	0.052	0.000	0.083
Self-Regulation	0.311***	0.023	13.513	0.000	0.266	0.356
Demographics						
Age	0.028	0.021	1.323	0.186	−0.013	0.068
Female	−0.022	0.021	−1.054	0.292	−0.064	0.019
Socioeconomic Status	0.059**	0.022	2.716	0.007	0.016	0.102
Hispanic	−0.028	0.020	−1.374	0.169	−0.068	0.012
Black	−0.083***	0.018	−4.585	0.000	−0.119	−0.048
Other Race	−0.053**	0.020	−2.687	0.007	−0.092	−0.014
Dwelling Condition						
Fairly well kept	−0.050*	0.024	−2.067	0.039	−0.097	−0.003
Poorly kept	−0.021	0.022	−0.959	0.338	−0.064	0.022
Very poorly kept	−0.002	0.024	−0.080	0.936	−0.049	0.046
Neighborhood Condition						
Fairly well kept	0.021	0.026	0.815	0.415	−0.029	0.071
Poorly kept	−0.029	0.024	−1.234	0.217	−0.075	0.017
Very poorly kept	−0.025	0.024	−1.058	0.290	−0.072	0.022
Rural area	0.011	0.024	0.446	0.656	−0.036	0.057

Table C3.3

Wave I Attachment to School Model 3 (Feel Safe in School) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ER/I	0.689	0.029	23.808	0.632	0.745	NA
ES	0.895	0.018	48.652	0.859	0.931	NA
PS	0.738	0.024	30.665	0.691	0.785	NA
SC/SA	0.387	0.042	9.296	0.305	0.468	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.593	0.029	20.247	0.536	0.651	0.407
SR2	0.507	0.031	16.203	0.446	0.568	0.493
SR3	0.590	0.029	20.423	0.534	0.647	0.410
SR4	0.707	0.029	24.028	0.649	0.764	0.293
SR5	0.575	0.026	22.270	0.524	0.626	0.425
SR6	0.593	0.024	24.368	0.546	0.641	0.407
SR7	0.644	0.027	24.257	0.592	0.696	0.356
SR10	0.446	0.017	26.055	0.412	0.480	0.554
SR11	0.455	0.018	25.660	0.420	0.489	0.545
SR12	0.511	0.017	29.589	0.477	0.545	0.489
SR13	0.535	0.017	30.886	0.501	0.569	0.465
SR14	0.373	0.017	22.139	0.340	0.406	0.627
SR15	0.329	0.018	18.457	0.294	0.364	0.671
SR16	0.511	0.017	30.455	0.478	0.544	0.489
Feel Safe in School	0.859	0.016	53.812	0.828	0.891	0.141

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?

Table C4.1

Wave I Attachment to School Model 4 (Trouble With Teachers) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.339	0.029	11.820	0.282	0.395
ER/I	Self-Regulation	0.589	0.026	22.459	0.537	0.640
PS	Self-Regulation	0.516	0.024	21.959	0.470	0.562
SC/SA	Self-Regulation	0.745	0.025	29.369	0.695	0.795
SR1	ES	0.637	0.023	27.809	0.592	0.682
SR2	ES	0.700	0.022	31.465	0.657	0.744
SR3	ES	0.639	0.023	28.379	0.595	0.683
SR4	ES	0.548	0.027	20.231	0.495	0.601
SR5	ER/I	0.657	0.020	33.402	0.619	0.696
SR6	ER/I	0.629	0.019	33.369	0.592	0.665
SR7	ER/I	0.600	0.022	27.071	0.556	0.643
SR10	PS	0.746	0.012	64.343	0.723	0.768
SR11	PS	0.734	0.012	61.163	0.711	0.758
SR12	PS	0.701	0.012	56.727	0.677	0.725
SR13	PS	0.683	0.013	53.684	0.658	0.708
SR14	SC/SA	0.793	0.011	74.250	0.772	0.814
SR15	SC/SA	0.825	0.011	75.057	0.803	0.847
SR16	SC/SA	0.691	0.012	56.949	0.667	0.715

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table C4.2

Wave I Attachment to School Model 4 (Trouble With Teachers) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.052*	0.023	-2.288	0.022	-0.096	-0.007
High participation	-0.031	0.022	-1.383	0.167	-0.074	0.013
Sport Participation						
Moderate participation	0.029	0.022	1.328	0.184	-0.014	0.072
High participation	0.068**	0.023	3.017	0.003	0.024	0.112
Religious Youth Activity						
Less than once per month	0.003	0.022	0.147	0.883	-0.039	0.046
Less than once per week	-0.022	0.021	-1.074	0.283	-0.063	0.018
More than once per week	-0.066**	0.022	-3.045	0.002	-0.109	-0.024
Self-Regulation	-0.339***	0.024	-14.345	0.000	-0.385	-0.293
Demographics						
Age	-0.089***	0.021	-4.303	0.000	-0.130	-0.049
Female	-0.133***	0.021	-6.374	0.000	-0.174	-0.092
Socioeconomic Status	-0.051*	0.022	-2.322	0.020	-0.094	-0.008
Hispanic	-0.028	0.021	-1.341	0.180	-0.069	0.013
Black	0.044*	0.018	2.408	0.016	0.008	0.080
Other Race	0.008	0.020	0.401	0.688	-0.032	0.048
Dwelling Condition						
Fairly well kept	0.059*	0.025	2.357	0.018	0.010	0.108
Poorly kept	0.043 [†]	0.023	1.899	0.058	-0.001	0.088
Very poorly kept	0.033	0.023	1.428	0.153	-0.012	0.079
Neighborhood Condition						
Fairly well kept	-0.017	0.027	-0.617	0.537	-0.070	0.037
Poorly kept	-0.008	0.025	-0.302	0.763	-0.057	0.041
Very poorly kept	0.006	0.024	0.269	0.788	-0.040	0.053
Rural area	0.010	0.024	0.415	0.678	-0.036	0.056

Table C4.3

Wave I Attachment to School Model 4 (Trouble With Teachers) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.653	0.031	21.166	0.593	0.714	NA
ES	0.885	0.019	45.621	0.847	0.923	NA
PS	0.733	0.024	30.199	0.686	0.781	NA
SC/SA	0.445	0.038	11.761	0.371	0.519	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.594	0.029	20.379	0.537	0.652	0.406
SR2	0.509	0.031	16.335	0.448	0.571	0.491
SR3	0.592	0.029	20.551	0.535	0.648	0.408
SR4	0.700	0.030	23.610	0.642	0.758	0.300
SR5	0.568	0.026	21.962	0.517	0.619	0.432
SR6	0.605	0.024	25.544	0.558	0.651	0.395
SR7	0.640	0.027	24.110	0.588	0.693	0.360
SR10	0.444	0.017	25.677	0.410	0.478	0.556
SR11	0.461	0.018	26.106	0.426	0.495	0.539
SR12	0.508	0.017	29.343	0.475	0.542	0.492
SR13	0.533	0.017	30.689	0.499	0.568	0.467
SR14	0.371	0.017	21.861	0.337	0.404	0.629
SR15	0.319	0.018	17.608	0.284	0.355	0.681
SR16	0.523	0.017	31.200	0.490	0.556	0.477
Trouble With Teachers	0.832	0.017	48.416	0.798	0.866	0.168

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix D

Wave I Attachment to Parents and Family

Model 1: How much do you feel that your parents care about you?

Table D1.1

Wave I Attachment to Parents and Family Model 1 (Parental Care) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.347	0.028	12.249	0.291	0.403
ER/I	Self-Regulation	0.540	0.026	20.957	0.489	0.590
PS	Self-Regulation	0.505	0.024	21.232	0.459	0.552
SC/SA	Self-Regulation	0.789	0.027	29.451	0.737	0.842
SR1	ES	0.641	0.023	28.033	0.596	0.686
SR2	ES	0.703	0.022	31.742	0.660	0.747
SR3	ES	0.633	0.023	28.108	0.589	0.677
SR4	ES	0.546	0.027	20.148	0.493	0.599
SR5	ER/I	0.655	0.020	32.998	0.616	0.693
SR6	ER/I	0.636	0.019	33.236	0.598	0.673
SR7	ER/I	0.594	0.022	26.862	0.551	0.637
SR10	PS	0.745	0.012	63.982	0.722	0.767
SR11	PS	0.734	0.012	60.820	0.711	0.758
SR12	PS	0.700	0.012	56.412	0.676	0.725
SR13	PS	0.681	0.013	53.427	0.656	0.706
SR14	SC/SA	0.793	0.011	74.402	0.772	0.813
SR15	SC/SA	0.822	0.011	76.751	0.801	0.843
SR16	SC/SA	0.694	0.012	57.956	0.671	0.718

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table D1.2

Wave I Attachment to Parents and Family Model 1 (Parental Care) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.036	0.030	1.175	0.240	−0.024	0.096
High participation	0.012	0.031	0.405	0.686	−0.048	0.073
Sport Participation						
Moderate participation	0.023	0.031	0.741	0.459	−0.037	0.083
High participation	0.018	0.031	0.571	0.568	−0.044	0.079
Religious Youth Activity						
Less than once per month	0.002	0.030	0.073	0.942	−0.057	0.061
Less than once per week	−0.015	0.029	−0.516	0.606	−0.072	0.042
More than once per week	0.091**	0.030	2.993	0.003	0.031	0.151
Self-Regulation	0.366***	0.032	11.594	0.000	0.304	0.428
Demographics						
Age	−0.113***	0.030	−3.713	0.000	−0.173	−0.053
Female	−0.018	0.029	−0.625	0.532	−0.076	0.039
Socioeconomic Status	0.070*	0.030	2.331	0.020	0.011	0.129
Hispanic	0.036	0.029	1.235	0.217	−0.021	0.092
Black	0.025	0.026	0.957	0.339	−0.026	0.075
Other Race	−0.051*	0.025	−2.006	0.045	−0.101	−0.001
Dwelling Condition						
Fairly well kept	−0.043	0.033	−1.292	0.196	−0.109	0.022
Poorly kept	−0.089**	0.030	−3.004	0.003	−0.148	−0.031
Very poorly kept	−0.036	0.033	−1.084	0.278	−0.101	0.029
Neighborhood Condition						
Fairly well kept	0.026	0.036	0.711	0.477	−0.045	0.097
Poorly kept	0.077*	0.035	2.195	0.028	0.008	0.145
Very poorly kept	0.061	0.038	1.622	0.105	−0.013	0.135
Rural area	0.002	0.033	0.063	0.950	−0.063	0.067

Table D1.3

Wave I Attachment to Parents and Family Model 1 (Parental Care) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.709	0.028	25.512	0.654	0.763	NA
ES	0.880	0.020	44.745	0.841	0.918	NA
PS	0.745	0.024	30.963	0.698	0.792	NA
SC/SA	0.377	0.042	8.927	0.295	0.460	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.589	0.029	20.066	0.531	0.646	0.411
SR2	0.506	0.031	16.231	0.445	0.567	0.494
SR3	0.599	0.029	21.022	0.543	0.655	0.401
SR4	0.702	0.030	23.744	0.644	0.760	0.298
SR5	0.572	0.026	22.007	0.521	0.622	0.428
SR6	0.596	0.024	24.509	0.548	0.644	0.404
SR7	0.647	0.026	24.634	0.596	0.699	0.353
SR10	0.446	0.017	25.714	0.412	0.480	0.554
SR11	0.461	0.018	25.982	0.426	0.495	0.539
SR12	0.510	0.017	29.326	0.476	0.544	0.490
SR13	0.536	0.017	30.899	0.502	0.570	0.464
SR14	0.372	0.017	22.027	0.339	0.405	0.628
SR15	0.324	0.018	18.356	0.289	0.358	0.676
SR16	0.518	0.017	31.146	0.485	0.551	0.482
Parental Care	0.821	0.025	32.275	0.771	0.871	0.179

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: How much do you feel that people in your family understand you?

Table D2.1

Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.355	0.026	13.671	0.304	0.406
ER/I	Self-Regulation	0.547	0.024	22.937	0.500	0.594
PS	Self-Regulation	0.491	0.022	22.444	0.448	0.534
SC/SA	Self-Regulation	0.795	0.021	38.032	0.754	0.836
SR1	ES	0.642	0.023	27.624	0.597	0.688
SR2	ES	0.705	0.022	31.563	0.662	0.749
SR3	ES	0.630	0.023	27.820	0.585	0.674
SR4	ES	0.546	0.027	19.963	0.492	0.599
SR5	ER/I	0.654	0.020	32.916	0.615	0.693
SR6	ER/I	0.640	0.019	33.221	0.602	0.677
SR7	ER/I	0.591	0.022	26.939	0.548	0.634
SR10	PS	0.745	0.012	63.843	0.722	0.767
SR11	PS	0.734	0.012	61.053	0.711	0.758
SR12	PS	0.703	0.012	56.525	0.679	0.728
SR13	PS	0.680	0.013	53.113	0.655	0.705
SR14	SC/SA	0.791	0.010	75.643	0.770	0.811
SR15	SC/SA	0.826	0.011	78.110	0.805	0.846
SR16	SC/SA	0.693	0.012	58.100	0.670	0.717

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table D2.2

Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.019	0.021	−0.868	0.385	−0.060	0.023
High participation	−0.023	0.021	−1.082	0.279	−0.064	0.018
Sport Participation						
Moderate participation	0.035 [†]	0.021	1.682	0.093	−0.006	0.076
High participation	0.044 [*]	0.022	2.047	0.041	0.002	0.086
Religious Youth Activity						
Less than once per month	0.004	0.019	0.217	0.828	−0.034	0.042
Less than once per week	0.045 [*]	0.021	2.164	0.030	0.004	0.086
More than once per week	0.129 ^{***}	0.020	6.361	0.000	0.089	0.168
Self-Regulation	0.559 ^{***}	0.020	28.169	0.000	0.520	0.598
Demographics						
Age	−0.119 ^{***}	0.020	−6.072	0.000	−0.157	−0.080
Female	−0.096 ^{***}	0.020	−4.743	0.000	−0.135	−0.056
Socioeconomic Status	−0.042 [*]	0.021	−2.026	0.043	−0.083	−0.001
Hispanic	0.012	0.019	0.631	0.528	−0.026	0.050
Black	0.006	0.017	0.326	0.744	−0.028	0.039
Other Race	−0.020	0.018	−1.080	0.280	−0.055	0.016
Dwelling Condition						
Fairly well kept	−0.077 ^{**}	0.024	−3.256	0.001	−0.123	−0.031
Poorly kept	−0.031	0.022	−1.389	0.165	−0.074	0.013
Very poorly kept	−0.044 [†]	0.024	−1.832	0.067	−0.091	0.003
Neighborhood Condition						
Fairly well kept	−0.027	0.026	−1.036	0.300	−0.077	0.024
Poorly kept	−0.024	0.024	−0.973	0.330	−0.072	0.024
Very poorly kept	−0.004	0.024	−0.146	0.884	−0.051	0.044
Rural area	−0.014	0.023	−0.623	0.533	−0.059	0.031

Table D2.3

Wave I Attachment to Parents and Family Model 2 (Family Understanding) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.701	0.026	26.884	0.650	0.752	NA
ES	0.874	0.018	47.353	0.838	0.910	NA
PS	0.759	0.021	35.387	0.717	0.801	NA
SC/SA	0.368	0.033	11.091	0.303	0.433	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.588	0.030	19.674	0.529	0.646	0.412
SR2	0.502	0.032	15.927	0.440	0.564	0.498
SR3	0.603	0.029	21.171	0.548	0.659	0.397
SR4	0.702	0.030	23.548	0.644	0.761	0.298
SR5	0.572	0.026	21.975	0.521	0.623	0.428
SR6	0.591	0.025	24.002	0.543	0.639	0.409
SR7	0.650	0.026	25.053	0.599	0.701	0.350
SR10	0.446	0.017	25.666	0.412	0.480	0.554
SR11	0.461	0.018	26.075	0.426	0.495	0.539
SR12	0.505	0.018	28.849	0.471	0.539	0.495
SR13	0.537	0.017	30.834	0.503	0.571	0.463
SR14	0.374	0.017	22.643	0.342	0.407	0.626
SR15	0.318	0.017	18.232	0.284	0.352	0.682
SR16	0.519	0.017	31.401	0.487	0.552	0.481
Family Understanding	0.634	0.022	28.528	0.590	0.677	0.366

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: How much do you feel that your family pays attention to you?

Table D3.1

Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.352	0.028	12.805	0.298	0.406
ER/I	Self-Regulation	0.531	0.025	21.520	0.483	0.580
PS	Self-Regulation	0.513	0.022	22.977	0.469	0.557
SC/SA	Self-Regulation	0.782	0.022	34.925	0.738	0.826
SR1	ES	0.636	0.023	27.596	0.591	0.682
SR2	ES	0.708	0.022	31.522	0.664	0.752
SR3	ES	0.634	0.023	27.910	0.589	0.678
SR4	ES	0.546	0.027	20.070	0.492	0.599
SR5	ER/I	0.656	0.020	32.755	0.617	0.696
SR6	ER/I	0.634	0.019	32.732	0.596	0.672
SR7	ER/I	0.595	0.023	26.425	0.551	0.639
SR10	PS	0.746	0.012	63.875	0.723	0.769
SR11	PS	0.735	0.012	60.187	0.711	0.759
SR12	PS	0.701	0.012	56.385	0.676	0.725
SR13	PS	0.680	0.013	53.272	0.655	0.705
SR14	SC/SA	0.792	0.011	74.814	0.772	0.813
SR15	SC/SA	0.823	0.011	76.262	0.802	0.844
SR16	SC/SA	0.695	0.012	57.657	0.671	0.719

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table D3.2

Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Neighborhood Condition						
Fairly well kept	0.006	0.027	0.244	0.807	−0.046	0.059
Poorly kept	0.005	0.024	0.187	0.851	−0.043	0.052
Very poorly kept	0.018	0.025	0.726	0.468	−0.030	0.066
Rural area	0.007	0.024	0.299	0.765	−0.039	0.053
Non-Sport Participation						
Moderate participation	0.020	0.022	0.929	0.353	−0.022	0.063
High participation	0.006	0.021	0.256	0.798	−0.037	0.048
Sport Participation						
Moderate participation	0.044*	0.022	2.038	0.042	0.002	0.086
High participation	0.052*	0.022	2.315	0.021	0.008	0.095
Religious Youth Activity						
Less than once per month	0.002	0.021	0.083	0.934	−0.039	0.043
Less than once per week	0.022	0.021	1.067	0.286	−0.019	0.063
More than once per week	0.081***	0.021	3.882	0.000	0.040	0.122
Self-Regulation	0.494***	0.021	23.801	0.000	0.453	0.534
Demographics						
Age	−0.083***	0.021	−3.957	0.000	−0.124	−0.042
Female	−0.023	0.021	−1.112	0.266	−0.064	0.018
Socioeconomic Status	0.069**	0.021	3.242	0.001	0.027	0.111
Hispanic	0.008	0.019	0.399	0.690	−0.030	0.046
Black	−0.002	0.018	−0.118	0.906	−0.037	0.033
Other Race	−0.039*	0.020	−2.011	0.044	−0.077	−0.001
Dwelling Condition						
Fairly well kept	−0.059*	0.025	−2.383	0.017	−0.107	−0.010
Poorly kept	−0.044*	0.022	−1.994	0.046	−0.087	−0.001
Very poorly kept	−0.040	0.025	−1.595	0.111	−0.088	0.009

Table D3.3

Wave I Attachment to Parents and Family Model 3 (Family Pays Attention) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.718	0.026	27.344	0.666	0.769	NA
ES	0.876	0.019	45.205	0.838	0.914	NA
PS	0.737	0.023	32.124	0.692	0.782	NA
SC/SA	0.389	0.035	11.107	0.320	0.457	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.595	0.029	20.280	0.538	0.653	0.405
SR2	0.499	0.032	15.713	0.437	0.562	0.501
SR3	0.598	0.029	20.792	0.542	0.655	0.402
SR4	0.702	0.030	23.660	0.644	0.760	0.298
SR5	0.569	0.026	21.651	0.518	0.621	0.431
SR6	0.598	0.025	24.371	0.550	0.646	0.402
SR7	0.646	0.027	24.087	0.593	0.698	0.354
SR10	0.444	0.017	25.478	0.410	0.478	0.556
SR11	0.460	0.018	25.675	0.425	0.496	0.540
SR12	0.509	0.017	29.210	0.475	0.543	0.491
SR13	0.538	0.017	30.975	0.504	0.572	0.462
SR14	0.372	0.017	22.167	0.339	0.405	0.628
SR15	0.323	0.018	18.174	0.288	0.358	0.677
SR16	0.517	0.017	30.863	0.484	0.550	0.483
Family Pays Attention	0.721	0.021	34.537	0.681	0.762	0.279

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: How much do you feel that you want to leave home?

Table D4.1

Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.357	0.028	12.631	0.301	0.412
ER/I	Self-Regulation	0.569	0.026	22.243	0.519	0.620
PS	Self-Regulation	0.498	0.024	20.929	0.452	0.545
SC/SA	Self-Regulation	0.766	0.025	30.929	0.717	0.815
SR1	ES	0.639	0.023	27.700	0.594	0.684
SR2	ES	0.702	0.022	31.505	0.658	0.746
SR3	ES	0.632	0.023	27.857	0.588	0.676
SR4	ES	0.543	0.027	19.972	0.490	0.596
SR5	ER/I	0.655	0.020	33.049	0.616	0.694
SR6	ER/I	0.640	0.019	33.602	0.603	0.677
SR7	ER/I	0.587	0.022	26.576	0.544	0.631
SR10	PS	0.746	0.012	64.379	0.724	0.769
SR11	PS	0.735	0.012	60.534	0.711	0.759
SR12	PS	0.702	0.012	56.470	0.678	0.727
SR13	PS	0.680	0.013	53.196	0.655	0.705
SR14	SC/SA	0.793	0.011	74.544	0.773	0.814
SR15	SC/SA	0.825	0.011	76.121	0.804	0.846
SR16	SC/SA	0.690	0.012	57.168	0.666	0.713

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table D4.2

Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.001	0.021	0.052	0.958	−0.040	0.042
High participation	0.001	0.021	0.030	0.976	−0.040	0.041
Sport Participation						
Moderate participation	−0.014	0.021	−0.676	0.499	−0.055	0.027
High participation	−0.063**	0.021	−2.930	0.003	−0.104	−0.021
Religious Youth Activity						
Less than once per month	−0.006	0.020	−0.308	0.758	−0.046	0.034
Less than once per week	−0.033	0.020	−1.638	0.101	−0.073	0.006
More than once per week	−0.063**	0.021	−2.967	0.003	−0.104	−0.021
Self-Regulation	−0.375***	0.022	−16.924	0.000	−0.419	−0.332
Demographics						
Age	0.326***	0.018	17.721	0.000	0.290	0.362
Female	0.022	0.020	1.109	0.267	−0.017	0.061
Socioeconomic Status	0.028	0.021	1.353	0.176	−0.012	0.068
Hispanic	−0.030	0.020	−1.513	0.130	−0.068	0.009
Black	0.054**	0.017	3.127	0.002	0.020	0.088
Other Race	0.020	0.020	0.982	0.326	−0.019	0.058
Dwelling Condition						
Fairly well kept	0.032	0.023	1.377	0.168	−0.013	0.077
Poorly kept	0.079***	0.021	3.668	0.000	0.037	0.121
Very poorly kept	0.068**	0.026	2.653	0.008	0.018	0.118
Neighborhood Condition						
Fairly well kept	0.003	0.025	0.132	0.895	−0.046	0.052
Poorly kept	−0.001	0.024	−0.040	0.968	−0.047	0.046
Very poorly kept	−0.040	0.025	−1.599	0.110	−0.089	0.009
Rural area	0.025	0.023	1.102	0.270	−0.019	0.070

Table D4.3

Wave I Attachment to Parents and Family Model 4 (Desire to Leave Home) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.676	0.029	23.175	0.619	0.733	NA
ES	0.873	0.020	43.298	0.833	0.912	NA
PS	0.752	0.024	31.679	0.705	0.798	NA
SC/SA	0.413	0.038	10.892	0.339	0.488	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.592	0.029	20.060	0.534	0.649	0.408
SR2	0.507	0.031	16.204	0.446	0.568	0.493
SR3	0.601	0.029	20.945	0.544	0.657	0.399
SR4	0.705	0.030	23.862	0.647	0.763	0.295
SR5	0.571	0.026	21.988	0.520	0.622	0.429
SR6	0.590	0.024	24.202	0.542	0.638	0.410
SR7	0.655	0.026	25.249	0.604	0.706	0.345
SR10	0.443	0.017	25.613	0.409	0.477	0.557
SR11	0.460	0.018	25.736	0.425	0.495	0.540
SR12	0.507	0.017	29.020	0.473	0.541	0.493
SR13	0.538	0.017	30.957	0.504	0.572	0.462
SR14	0.370	0.017	21.936	0.337	0.404	0.630
SR15	0.320	0.018	17.893	0.285	0.355	0.680
SR16	0.524	0.017	31.489	0.492	0.557	0.476
Desire to Leave Home	0.722	0.019	37.633	0.685	0.760	0.278

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix E

Wave I Tobacco, Alcohol, and Drug Use

Model 1: Have you ever smoked cigarettes regularly, that is, at least 1 cigarette every day for 30 days?

Table E1.1

Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.349	0.029	12.151	0.293	0.405
ER/I	Self-Regulation	0.562	0.027	21.054	0.510	0.615
PS	Self-Regulation	0.519	0.025	20.931	0.471	0.568
SC/SA	Self-Regulation	0.753	0.027	27.428	0.699	0.807
SR1	ES	0.640	0.023	27.975	0.595	0.685
SR2	ES	0.699	0.022	31.591	0.656	0.742
SR3	ES	0.639	0.023	28.370	0.595	0.683
SR4	ES	0.545	0.027	20.171	0.492	0.598
SR5	ER/I	0.653	0.020	32.837	0.614	0.692
SR6	ER/I	0.634	0.019	33.340	0.597	0.671
SR7	ER/I	0.597	0.022	27.004	0.554	0.641
SR10	PS	0.746	0.012	64.522	0.724	0.769
SR11	PS	0.735	0.012	61.196	0.711	0.758
SR12	PS	0.701	0.012	56.791	0.677	0.725
SR13	PS	0.681	0.013	53.711	0.657	0.706
SR14	SC/SA	0.793	0.011	73.878	0.772	0.814
SR15	SC/SA	0.825	0.011	74.886	0.803	0.846
SR16	SC/SA	0.690	0.012	56.864	0.666	0.713

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table E1.2

Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.054*	0.027	−1.975	0.048	−0.108	0.000
High participation	−0.054*	0.027	−2.004	0.045	−0.108	−0.001
Sport Participation						
Moderate participation	−0.052 [†]	0.027	−1.926	0.054	−0.105	0.001
High participation	−0.097***	0.029	−3.321	0.001	−0.154	−0.040
Religious Youth Activity						
Less than once per month	−0.040	0.025	−1.598	0.110	−0.089	0.009
Less than once per week	−0.076**	0.027	−2.800	0.005	−0.129	−0.023
More than once per week	−0.203***	0.028	−7.183	0.000	−0.258	−0.147
Self-Regulation	−0.274***	0.031	−8.750	0.000	−0.335	−0.212
Demographics						
Age	0.234***	0.027	8.713	0.000	0.181	0.286
Female	0.032	0.026	1.229	0.219	−0.019	0.083
Socioeconomic Status	−0.066*	0.028	−2.415	0.016	−0.120	−0.013
Hispanic	−0.117***	0.026	−4.551	0.000	−0.168	−0.067
Black	−0.240***	0.026	−9.231	0.000	−0.291	−0.189
Other Race	−0.033	0.024	−1.394	0.163	−0.081	0.014
Dwelling Condition						
Fairly well kept	0.049	0.031	1.606	0.108	−0.011	0.109
Poorly kept	0.060*	0.029	2.076	0.038	0.003	0.117
Very poorly kept	0.021	0.032	0.665	0.506	−0.041	0.084
Neighborhood Condition						
Fairly well kept	−0.016	0.035	−0.476	0.634	−0.084	0.051
Poorly kept	−0.030	0.033	−0.915	0.360	−0.094	0.034
Very poorly kept	0.015	0.031	0.483	0.629	−0.045	0.075
Rural area	−0.007	0.030	−0.222	0.824	−0.064	0.051

Table E1.3

Wave I Tobacco, Alcohol, and Drug Use Model 1 (Cigarette Smoking) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.684	0.030	22.753	0.625	0.743	NA
ES	0.878	0.020	43.843	0.839	0.918	NA
PS	0.730	0.026	28.326	0.680	0.781	NA
SC/SA	0.433	0.041	10.456	0.352	0.514	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.590	0.029	20.126	0.533	0.647	0.410
SR2	0.511	0.031	16.534	0.451	0.572	0.489
SR3	0.591	0.029	20.530	0.535	0.648	0.409
SR4	0.703	0.029	23.878	0.645	0.761	0.297
SR5	0.574	0.026	22.135	0.523	0.625	0.426
SR6	0.598	0.024	24.793	0.551	0.645	0.402
SR7	0.643	0.026	24.340	0.591	0.695	0.357
SR10	0.443	0.017	25.653	0.409	0.477	0.557
SR11	0.460	0.018	26.113	0.426	0.495	0.540
SR12	0.509	0.017	29.385	0.475	0.542	0.491
SR13	0.536	0.017	30.990	0.502	0.570	0.464
SR14	0.371	0.017	21.782	0.338	0.404	0.629
SR15	0.320	0.018	17.587	0.284	0.355	0.680
SR16	0.525	0.017	31.370	0.492	0.557	0.475
Cigarette Smoking	0.730	0.024	30.972	0.684	0.776	0.270

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: Over the past 12 months, on how many days did you drink 5 or more drinks in a row?

Table E2.1

Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.334	0.029	11.619	0.278	0.390
ER/I	Self-Regulation	0.570	0.027	21.310	0.518	0.623
PS	Self-Regulation	0.517	0.025	20.890	0.468	0.565
SC/SA	Self-Regulation	0.761	0.028	27.306	0.707	0.816
SR1	ES	0.633	0.023	27.588	0.588	0.678
SR2	ES	0.703	0.022	31.493	0.659	0.747
SR3	ES	0.642	0.023	28.389	0.597	0.686
SR4	ES	0.541	0.027	19.907	0.488	0.594
SR5	ER/I	0.654	0.020	33.042	0.615	0.692
SR6	ER/I	0.634	0.019	33.251	0.596	0.671
SR7	ER/I	0.599	0.022	27.166	0.556	0.643
SR10	PS	0.746	0.012	64.743	0.723	0.769
SR11	PS	0.736	0.012	61.502	0.713	0.760
SR12	PS	0.701	0.012	56.811	0.677	0.725
SR13	PS	0.682	0.013	53.785	0.657	0.707
SR14	SC/SA	0.793	0.011	74.365	0.772	0.814
SR15	SC/SA	0.827	0.011	76.046	0.806	0.849
SR16	SC/SA	0.689	0.012	57.176	0.665	0.713

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table E2.2

Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.032	0.025	-1.269	0.204	-0.081	0.017
High participation	-0.042 [†]	0.024	-1.757	0.079	-0.090	0.005
Sport Participation						
Moderate participation	0.070**	0.024	2.887	0.004	0.022	0.117
High participation	0.024	0.025	0.973	0.330	-0.024	0.073
Religious Youth Activity						
Less than once per month	-0.021	0.022	-0.962	0.336	-0.065	0.022
Less than once per week	-0.051*	0.024	-2.117	0.034	-0.098	-0.004
More than once per week	-0.204***	0.025	-8.252	0.000	-0.252	-0.155
Self-Regulation	-0.197***	0.026	-7.460	0.000	-0.248	-0.145
Demographics						
Age	0.329***	0.022	14.663	0.000	0.285	0.373
Female	-0.045 [†]	0.023	-1.923	0.054	-0.091	0.001
Socioeconomic Status	-0.026	0.025	-1.050	0.294	-0.075	0.023
Hispanic	-0.021	0.022	-0.951	0.342	-0.065	0.022
Black	-0.163***	0.022	-7.403	0.000	-0.206	-0.119
Other Race	-0.040 [†]	0.022	-1.835	0.066	-0.083	0.003
Dwelling Condition						
Fairly well kept	0.041	0.026	1.562	0.118	-0.010	0.093
Poorly kept	0.052*	0.024	2.148	0.032	0.005	0.100
Very poorly kept	-0.012	0.024	-0.516	0.606	-0.059	0.035
Neighborhood Condition						
Fairly well kept	-0.024	0.030	-0.814	0.416	-0.082	0.034
Poorly kept	0.049 [†]	0.026	1.875	0.061	-0.002	0.100
Very poorly kept	0.018	0.024	0.749	0.454	-0.029	0.065
Rural area	-0.003	0.027	-0.103	0.918	-0.056	0.050

Table E2.3

Wave I Tobacco, Alcohol, and Drug Use Model 2 (Binge Drinking) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.675	0.031	22.112	0.615	0.735	NA
ES	0.888	0.019	46.283	0.851	0.926	NA
PS	0.733	0.026	28.695	0.683	0.783	NA
SC/SA	0.421	0.042	9.913	0.337	0.504	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.600	0.029	20.666	0.543	0.657	0.400
SR2	0.506	0.031	16.129	0.445	0.567	0.494
SR3	0.588	0.029	20.269	0.531	0.645	0.412
SR4	0.707	0.029	24.073	0.650	0.765	0.293
SR5	0.573	0.026	22.142	0.522	0.623	0.427
SR6	0.598	0.024	24.781	0.551	0.646	0.402
SR7	0.641	0.026	24.220	0.589	0.693	0.359
SR10	0.444	0.017	25.809	0.410	0.477	0.556
SR11	0.458	0.018	25.980	0.423	0.492	0.542
SR12	0.509	0.017	29.433	0.475	0.543	0.491
SR13	0.535	0.017	30.954	0.501	0.569	0.465
SR14	0.371	0.017	21.955	0.338	0.404	0.629
SR15	0.315	0.018	17.510	0.280	0.351	0.685
SR16	0.525	0.017	31.633	0.493	0.558	0.475
Binge Drinking	0.757	0.019	39.325	0.719	0.794	0.243

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: During your life, how many times have you used marijuana?

Table E3.1

Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.329	0.030	11.068	0.271	0.388
ER/I	Self-Regulation	0.564	0.027	20.538	0.511	0.618
PS	Self-Regulation	0.519	0.025	20.379	0.469	0.569
SC/SA	Self-Regulation	0.748	0.028	26.502	0.692	0.803
SR1	ES	0.626	0.024	25.932	0.578	0.673
SR2	ES	0.705	0.024	29.633	0.659	0.752
SR3	ES	0.631	0.024	26.412	0.584	0.678
SR4	ES	0.538	0.028	19.072	0.482	0.593
SR5	ER/I	0.650	0.020	31.758	0.610	0.690
SR6	ER/I	0.636	0.020	32.073	0.597	0.675
SR7	ER/I	0.609	0.023	26.718	0.564	0.654
SR10	PS	0.745	0.012	62.404	0.722	0.769
SR11	PS	0.740	0.012	59.641	0.716	0.765
SR12	PS	0.701	0.013	55.060	0.676	0.726
SR13	PS	0.682	0.013	51.275	0.656	0.708
SR14	SC/SA	0.789	0.011	70.697	0.767	0.811
SR15	SC/SA	0.826	0.011	72.379	0.804	0.849
SR16	SC/SA	0.691	0.012	55.583	0.667	0.715

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table E3.2

Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.026	0.029	−0.896	0.370	−0.082	0.030
High participation	−0.052 [†]	0.028	−1.864	0.062	−0.106	0.003
Sport Participation						
Moderate participation	0.033	0.028	1.184	0.236	−0.021	0.087
High participation	0.016	0.029	0.536	0.592	−0.042	0.074
Religious Youth Activity						
Less than once per month	−0.049 [†]	0.026	−1.884	0.060	−0.100	0.002
Less than once per week	−0.138***	0.028	−4.883	0.000	−0.193	−0.083
More than once per week	−0.179***	0.030	−6.035	0.000	−0.237	−0.121
Self-Regulation	−0.271***	0.030	−9.042	0.000	−0.330	−0.212
Demographics						
Age	0.239***	0.027	8.771	0.000	0.186	0.293
Female	−0.021	0.028	−0.768	0.442	−0.076	0.033
Socioeconomic Status	0.016	0.028	0.556	0.578	−0.039	0.070
Hispanic	0.015	0.025	0.605	0.545	−0.033	0.063
Black	−0.003	0.026	−0.102	0.919	−0.054	0.049
Other Race	0.006	0.024	0.267	0.789	−0.041	0.054
Dwelling Condition						
Fairly well kept	0.017	0.031	0.552	0.581	−0.044	0.079
Poorly kept	0.001	0.029	0.044	0.965	−0.055	0.058
Very poorly kept	0.012	0.030	0.404	0.686	−0.046	0.070
Neighborhood Condition						
Fairly well kept	−0.013	0.034	−0.384	0.701	−0.080	0.053
Poorly kept	0.046	0.030	1.515	0.130	−0.014	0.106
Very poorly kept	0.007	0.027	0.267	0.789	−0.046	0.060
Rural area	−0.045	0.031	−1.462	0.144	−0.105	0.015

Table E3.3

Wave I Tobacco, Alcohol, and Drug Use Model 3 (Marijuana Use) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.681	0.031	21.963	0.621	0.742	NA
ES	0.892	0.020	45.490	0.853	0.930	NA
PS	0.730	0.026	27.572	0.678	0.782	NA
SC/SA	0.441	0.042	10.462	0.359	0.524	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.609	0.030	20.160	0.549	0.668	0.391
SR2	0.503	0.034	14.969	0.437	0.568	0.497
SR3	0.601	0.030	19.927	0.542	0.661	0.399
SR4	0.711	0.030	23.465	0.652	0.770	0.289
SR5	0.578	0.027	21.706	0.525	0.630	0.422
SR6	0.595	0.025	23.586	0.546	0.645	0.405
SR7	0.629	0.028	22.675	0.575	0.684	0.371
SR10	0.445	0.018	24.995	0.410	0.480	0.555
SR11	0.452	0.018	24.607	0.416	0.488	0.548
SR12	0.508	0.018	28.460	0.473	0.543	0.492
SR13	0.534	0.018	29.421	0.499	0.570	0.466
SR14	0.378	0.018	21.463	0.343	0.412	0.622
SR15	0.317	0.019	16.795	0.280	0.354	0.683
SR16	0.523	0.017	30.413	0.489	0.556	0.477
Marijuana Use	0.813	0.022	37.584	0.771	0.856	0.187

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Have you ever driven while drunk?

Table E4.1

Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.330	0.041	8.139	0.251	0.410
ER/I	Self-Regulation	0.516	0.040	13.026	0.438	0.594
PS	Self-Regulation	0.491	0.037	13.332	0.419	0.563
SC/SA	Self-Regulation	0.745	0.044	16.911	0.658	0.831
SR1	ES	0.607	0.031	19.347	0.546	0.669
SR2	ES	0.751	0.032	23.504	0.688	0.813
SR3	ES	0.623	0.032	19.300	0.560	0.686
SR4	ES	0.565	0.037	15.102	0.492	0.638
SR5	ER/I	0.687	0.025	26.947	0.637	0.737
SR6	ER/I	0.643	0.027	24.169	0.591	0.695
SR7	ER/I	0.637	0.026	24.831	0.586	0.687
SR10	PS	0.743	0.015	51.156	0.715	0.772
SR11	PS	0.775	0.014	56.543	0.748	0.802
SR12	PS	0.713	0.016	44.566	0.682	0.745
SR13	PS	0.689	0.015	44.773	0.659	0.719
SR14	SC/SA	0.813	0.015	54.176	0.784	0.843
SR15	SC/SA	0.813	0.015	52.903	0.783	0.843
SR16	SC/SA	0.700	0.017	41.788	0.667	0.733

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table E4.2

Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.019	0.048	−0.391	0.696	−0.113	0.075
High participation	0.001	0.045	0.015	0.988	−0.088	0.090
Sport Participation						
Moderate participation	0.077	0.049	1.580	0.114	−0.018	0.172
High participation	0.009	0.044	0.214	0.830	−0.076	0.095
Religious Youth Activity						
Less than once per month	−0.007	0.041	−0.160	0.873	−0.088	0.074
Less than once per week	−0.021	0.045	−0.465	0.642	−0.110	0.068
More than once per week	−0.173***	0.050	−3.468	0.001	−0.271	−0.075
Self-Regulation	−0.226***	0.053	−4.288	0.000	−0.329	−0.123
Demographics						
Age	0.240***	0.045	5.291	0.000	0.151	0.329
Female	−0.169***	0.046	−3.681	0.000	−0.260	−0.079
Socioeconomic Status	0.086 [†]	0.046	1.876	0.061	−0.004	0.177
Hispanic	−0.060	0.055	−1.075	0.282	−0.168	0.049
Black	−0.230***	0.053	−4.351	0.000	−0.333	−0.126
Other Race	−0.006	0.037	−0.162	0.872	−0.079	0.067
Dwelling Condition						
Fairly well kept	−0.023	0.053	−0.434	0.664	−0.127	0.081
Poorly kept	−0.022	0.049	−0.441	0.659	−0.117	0.074
Very poorly kept	−0.050	0.060	−0.839	0.402	−0.167	0.067
Neighborhood Condition						
Fairly well kept	0.009	0.057	0.150	0.881	−0.104	0.121
Poorly kept	−0.052	0.060	−0.868	0.386	−0.169	0.065
Very poorly kept	−0.018	0.053	−0.339	0.735	−0.122	0.086
Rural area	0.056	0.048	1.155	0.248	−0.039	0.151

Table E4.3

Wave I Tobacco, Alcohol, and Drug Use Model 4 (Drunk Driving) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.734	0.041	17.947	0.654	0.814	NA
ES	0.891	0.027	33.283	0.839	0.944	NA
PS	0.759	0.036	20.983	0.688	0.830	NA
SC/SA	0.445	0.066	6.793	0.317	0.574	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.631	0.038	16.555	0.556	0.706	0.369
SR2	0.437	0.048	9.104	0.343	0.530	0.563
SR3	0.612	0.040	15.202	0.533	0.691	0.388
SR4	0.681	0.042	16.096	0.598	0.764	0.319
SR5	0.528	0.035	15.082	0.460	0.597	0.472
SR6	0.587	0.034	17.167	0.520	0.654	0.413
SR7	0.595	0.033	18.226	0.531	0.659	0.405
SR10	0.447	0.022	20.703	0.405	0.490	0.553
SR11	0.400	0.021	18.811	0.358	0.441	0.600
SR12	0.491	0.023	21.514	0.446	0.536	0.509
SR13	0.525	0.021	24.737	0.483	0.567	0.475
SR14	0.339	0.024	13.867	0.291	0.386	0.661
SR15	0.339	0.025	13.564	0.290	0.388	0.661
SR16	0.510	0.023	21.785	0.465	0.556	0.490
Drunk Driving	0.732	0.041	17.659	0.651	0.813	0.268

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix F

Wave I Delinquency

Model 1: In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?

Table F1.1

Wave I Delinquency Model 1 (Lying to Parents) – Std. Factor Loadings

Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
ES	Self-Regulation	0.353	0.029	12.385	0.297	0.409
ER/I	Self-Regulation	0.574	0.026	21.974	0.523	0.626
PS	Self-Regulation	0.512	0.024	21.709	0.466	0.558
SC/SA	Self-Regulation	0.747	0.026	29.035	0.696	0.797
SR1	ES	0.632	0.023	27.374	0.587	0.678
SR2	ES	0.701	0.022	31.527	0.657	0.744
SR3	ES	0.642	0.023	28.323	0.597	0.686
SR4	ES	0.547	0.027	20.160	0.494	0.601
SR5	ER/I	0.655	0.020	32.847	0.616	0.694
SR6	ER/I	0.632	0.019	33.078	0.595	0.670
SR7	ER/I	0.596	0.022	26.810	0.552	0.639
SR10	PS	0.744	0.012	63.652	0.721	0.767
SR11	PS	0.733	0.012	60.306	0.709	0.757
SR12	PS	0.700	0.012	56.078	0.676	0.724
SR13	PS	0.679	0.013	53.017	0.654	0.704
SR14	SC/SA	0.791	0.011	73.790	0.770	0.812
SR15	SC/SA	0.829	0.011	76.867	0.808	0.851
SR16	SC/SA	0.688	0.012	57.117	0.664	0.711

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),

PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table F1.2

Wave I Delinquency Model 1 (Lying to Parents) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.017	0.022	0.738	0.461	−0.027	0.060
High participation	0.002	0.021	0.099	0.921	−0.040	0.044
Sport Participation						
Moderate participation	0.077***	0.022	3.522	0.000	0.034	0.120
High participation	0.059*	0.023	2.556	0.011	0.014	0.103
Religious Youth Activity						
Less than once per month	0.026	0.020	1.311	0.190	−0.013	0.066
Less than once per week	−0.008	0.021	−0.382	0.702	−0.050	0.034
More than once per week	−0.048*	0.022	−2.171	0.030	−0.091	−0.005
Self-Regulation	−0.375***	0.024	−15.838	0.000	−0.421	−0.329
Demographics						
Age	0.144***	0.021	6.842	0.000	0.103	0.185
Female	0.064**	0.021	3.049	0.002	0.023	0.105
Socioeconomic Status	0.031	0.022	1.403	0.161	−0.012	0.073
Hispanic	0.037†	0.021	1.785	0.074	−0.004	0.078
Black	−0.005	0.020	−0.243	0.808	−0.043	0.034
Other Race	0.045*	0.019	2.349	0.019	0.008	0.083
Dwelling Condition						
Fairly well kept	−0.016	0.025	−0.665	0.506	−0.065	0.032
Poorly kept	0.052*	0.023	2.239	0.025	0.006	0.097
Very poorly kept	−0.018	0.025	−0.695	0.487	−0.067	0.032
Neighborhood Condition						
Fairly well kept	−0.023	0.027	−0.872	0.383	−0.075	0.029
Poorly kept	−0.024	0.025	−0.947	0.344	−0.074	0.026
Very poorly kept	−0.009	0.026	−0.346	0.730	−0.059	0.041
Rural area	−0.057*	0.024	−2.381	0.017	−0.103	−0.010

Table F1.3

Wave I Delinquency Model 1 (Lying to Parents) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.670	0.030	22.306	0.611	0.729	NA
ES	0.875	0.020	43.437	0.836	0.915	NA
PS	0.738	0.024	30.516	0.690	0.785	NA
SC/SA	0.442	0.038	11.510	0.367	0.518	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.600	0.029	20.528	0.543	0.657	0.400
SR2	0.509	0.031	16.350	0.448	0.570	0.491
SR3	0.588	0.029	20.238	0.531	0.645	0.412
SR4	0.700	0.030	23.547	0.642	0.759	0.300
SR5	0.571	0.026	21.836	0.520	0.622	0.429
SR6	0.600	0.024	24.843	0.553	0.648	0.400
SR7	0.645	0.026	24.355	0.593	0.697	0.355
SR10	0.447	0.017	25.682	0.413	0.481	0.553
SR11	0.462	0.018	25.937	0.427	0.497	0.538
SR12	0.510	0.017	29.184	0.476	0.544	0.490
SR13	0.538	0.017	30.928	0.504	0.573	0.462
SR14	0.375	0.017	22.103	0.341	0.408	0.625
SR15	0.312	0.018	17.430	0.277	0.347	0.688
SR16	0.527	0.017	31.859	0.495	0.560	0.473
Lying to Parents	0.818	0.019	43.408	0.781	0.855	0.182

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: In the past 12 months, how often did you run away from home?

Table F2.1

Wave I Delinquency Model 2 (Running Away from Home) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.338	0.029	11.815	0.282	0.394
ER/I	Self-Regulation	0.562	0.027	21.185	0.510	0.614
PS	Self-Regulation	0.519	0.024	21.356	0.471	0.567
SC/SA	Self-Regulation	0.758	0.027	28.085	0.705	0.811
SR1	ES	0.634	0.023	27.544	0.589	0.679
SR2	ES	0.704	0.022	31.531	0.661	0.748
SR3	ES	0.636	0.023	28.111	0.592	0.680
SR4	ES	0.549	0.027	20.265	0.496	0.602
SR5	ER/I	0.653	0.020	32.552	0.614	0.693
SR6	ER/I	0.635	0.019	33.078	0.598	0.673
SR7	ER/I	0.594	0.022	26.728	0.551	0.638
SR10	PS	0.745	0.012	64.184	0.722	0.767
SR11	PS	0.734	0.012	60.650	0.710	0.758
SR12	PS	0.699	0.012	55.937	0.674	0.723
SR13	PS	0.680	0.013	53.055	0.655	0.705
SR14	SC/SA	0.789	0.011	73.812	0.768	0.809
SR15	SC/SA	0.830	0.011	77.201	0.809	0.851
SR16	SC/SA	0.689	0.012	57.178	0.666	0.713

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table F2.2

Wave I Delinquency Model 2 (Running Away from Home) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.066	0.041	-1.616	0.106	-0.146	0.014
High participation	-0.102**	0.039	-2.597	0.009	-0.179	-0.025
Sport Participation						
Moderate participation	0.069 [†]	0.041	1.675	0.094	-0.012	0.150
High participation	0.045	0.042	1.089	0.276	-0.036	0.127
Religious Youth Activity						
Less than once per month	-0.008	0.038	-0.205	0.838	-0.083	0.067
Less than once per week	0.003	0.038	0.069	0.945	-0.072	0.077
More than once per week	-0.061	0.041	-1.477	0.140	-0.142	0.020
Self-Regulation	-0.399***	0.037	-10.661	0.000	-0.472	-0.326
Demographics						
Age	0.062	0.040	1.537	0.124	-0.017	0.140
Female	0.065 [†]	0.038	1.691	0.091	-0.010	0.140
Socioeconomic Status	-0.051	0.040	-1.282	0.200	-0.129	0.027
Hispanic	-0.043	0.036	-1.190	0.234	-0.113	0.028
Black	-0.012	0.034	-0.363	0.717	-0.079	0.055
Other Race	0.044	0.031	1.414	0.157	-0.017	0.104
Dwelling Condition						
Fairly well kept	0.139**	0.043	3.219	0.001	0.054	0.223
Poorly kept	0.126**	0.039	3.217	0.001	0.049	0.203
Very poorly kept	0.103**	0.040	2.590	0.010	0.025	0.181
Neighborhood Condition						
Fairly well kept	-0.052	0.048	-1.091	0.275	-0.146	0.042
Poorly kept	-0.047	0.049	-0.964	0.335	-0.143	0.049
Very poorly kept	-0.059	0.044	-1.352	0.176	-0.145	0.027
Rural area	-0.068	0.045	-1.498	0.134	-0.157	0.021

Table F2.3

Wave I Delinquency Model 2 (Running Away from Home) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.684	0.030	22.957	0.626	0.743	NA
ES	0.886	0.019	45.775	0.848	0.924	NA
PS	0.731	0.025	28.979	0.681	0.780	NA
SC/SA	0.425	0.041	10.384	0.345	0.505	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.598	0.029	20.520	0.541	0.656	0.402
SR2	0.504	0.031	16.017	0.442	0.566	0.496
SR3	0.596	0.029	20.709	0.539	0.652	0.404
SR4	0.699	0.030	23.502	0.640	0.757	0.301
SR5	0.573	0.026	21.859	0.522	0.625	0.427
SR6	0.596	0.024	24.443	0.549	0.644	0.404
SR7	0.647	0.026	24.454	0.595	0.698	0.353
SR10	0.446	0.017	25.800	0.412	0.480	0.554
SR11	0.461	0.018	25.953	0.426	0.496	0.539
SR12	0.512	0.017	29.345	0.478	0.546	0.488
SR13	0.538	0.017	30.883	0.504	0.572	0.462
SR14	0.378	0.017	22.449	0.345	0.411	0.622
SR15	0.311	0.018	17.438	0.276	0.346	0.689
SR16	0.525	0.017	31.558	0.492	0.557	0.475
Running Away from Home	0.788	0.032	24.410	0.724	0.851	0.212

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: In the past 12 months, how often did you steal something worth less than \$50?

Table F3.1

Wave I Delinquency Model 3 (Minor Theft) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.338	0.029	11.776	0.282	0.394
ER/I	Self-Regulation	0.564	0.026	21.368	0.512	0.615
PS	Self-Regulation	0.527	0.024	21.631	0.479	0.575
SC/SA	Self-Regulation	0.745	0.027	28.081	0.693	0.797
SR1	ES	0.632	0.023	27.563	0.587	0.677
SR2	ES	0.703	0.022	31.550	0.659	0.747
SR3	ES	0.641	0.023	28.354	0.596	0.685
SR4	ES	0.549	0.027	20.298	0.496	0.602
SR5	ER/I	0.651	0.020	32.675	0.612	0.690
SR6	ER/I	0.630	0.019	32.793	0.592	0.667
SR7	ER/I	0.601	0.022	26.961	0.557	0.644
SR10	PS	0.747	0.012	64.236	0.724	0.770
SR11	PS	0.732	0.012	60.445	0.708	0.756
SR12	PS	0.700	0.012	56.365	0.675	0.724
SR13	PS	0.679	0.013	52.737	0.654	0.704
SR14	SC/SA	0.792	0.011	73.850	0.771	0.813
SR15	SC/SA	0.829	0.011	76.592	0.808	0.850
SR16	SC/SA	0.690	0.012	57.106	0.666	0.714

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table F3.2

Wave I Delinquency Model 3 (Minor Theft) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.014	0.028	0.525	0.599	-0.040	0.068
High participation	-0.003	0.027	-0.112	0.911	-0.056	0.050
Sport Participation						
Moderate participation	0.058*	0.027	2.111	0.035	0.004	0.111
High participation	0.003	0.028	0.112	0.911	-0.051	0.058
Religious Youth Activity						
Less than once per month	0.014	0.025	0.575	0.565	-0.035	0.064
Less than once per week	-0.041	0.027	-1.550	0.121	-0.093	0.011
More than once per week	-0.092***	0.027	-3.411	0.001	-0.145	-0.039
Self-Regulation	-0.355***	0.030	-12.006	0.000	-0.413	-0.297
Demographics						
Age	-0.027	0.028	-0.981	0.326	-0.082	0.027
Female	-0.133***	0.025	-5.229	0.000	-0.183	-0.083
Socioeconomic Status	0.046	0.028	1.642	0.101	-0.009	0.100
Hispanic	0.100***	0.025	4.045	0.000	0.051	0.148
Black	-0.009	0.025	-0.366	0.714	-0.057	0.039
Other Race	0.047*	0.023	2.023	0.043	0.001	0.093
Dwelling Condition						
Fairly well kept	0.091**	0.030	2.985	0.003	0.031	0.150
Poorly kept	0.028	0.028	0.995	0.320	-0.027	0.083
Very poorly kept	0.005	0.028	0.165	0.869	-0.050	0.059
Neighborhood Condition						
Fairly well kept	-0.064†	0.033	-1.914	0.056	-0.130	0.002
Poorly kept	-0.008	0.031	-0.252	0.801	-0.068	0.052
Very poorly kept	-0.039	0.026	-1.460	0.144	-0.091	0.013
Rural area	-0.074*	0.030	-2.447	0.014	-0.133	-0.015

Table F3.3

Wave I Delinquency Model 3 (Minor Theft) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.682	0.030	22.930	0.624	0.740	NA
ES	0.886	0.019	45.625	0.848	0.924	NA
PS	0.722	0.026	28.133	0.672	0.773	NA
SC/SA	0.445	0.040	11.236	0.367	0.522	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.600	0.029	20.713	0.544	0.657	0.400
SR2	0.506	0.031	16.147	0.444	0.567	0.494
SR3	0.590	0.029	20.373	0.533	0.646	0.410
SR4	0.699	0.030	23.540	0.641	0.757	0.301
SR5	0.576	0.026	22.209	0.525	0.627	0.424
SR6	0.604	0.024	24.967	0.556	0.651	0.396
SR7	0.639	0.027	23.883	0.587	0.692	0.361
SR10	0.442	0.017	25.475	0.408	0.476	0.558
SR11	0.464	0.018	26.145	0.429	0.499	0.536
SR12	0.510	0.017	29.378	0.476	0.544	0.490
SR13	0.539	0.017	30.857	0.505	0.573	0.461
SR14	0.373	0.017	21.960	0.340	0.406	0.627
SR15	0.313	0.018	17.421	0.277	0.348	0.687
SR16	0.524	0.017	31.422	0.491	0.557	0.476
Minor Theft	0.817	0.023	35.423	0.772	0.862	0.183

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: In the past 12 months, how often did you get into a serious physical fight?

Table F4.1

Wave I Delinquency Model 4 (Serious Fighting) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
ES	Self-Regulation	0.336	0.029	11.594	0.279	0.392
ER/I	Self-Regulation	0.570	0.027	21.315	0.518	0.623
PS	Self-Regulation	0.520	0.024	21.437	0.473	0.568
SC/SA	Self-Regulation	0.752	0.027	27.604	0.698	0.805
SR1	ES	0.632	0.023	27.579	0.587	0.677
SR2	ES	0.704	0.022	31.741	0.661	0.748
SR3	ES	0.637	0.023	28.254	0.593	0.682
SR4	ES	0.551	0.027	20.378	0.498	0.604
SR5	ER/I	0.656	0.020	32.875	0.617	0.695
SR6	ER/I	0.631	0.019	33.200	0.594	0.668
SR7	ER/I	0.597	0.022	27.099	0.554	0.640
SR10	PS	0.744	0.012	64.219	0.722	0.767
SR11	PS	0.734	0.012	60.757	0.710	0.757
SR12	PS	0.700	0.012	56.341	0.676	0.724
SR13	PS	0.680	0.013	53.112	0.654	0.705
SR14	SC/SA	0.790	0.011	73.814	0.769	0.811
SR15	SC/SA	0.828	0.011	76.358	0.807	0.849
SR16	SC/SA	0.690	0.012	57.351	0.667	0.714

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table F4.2

Wave I Delinquency Model 4 (Serious Fighting) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.065**	0.024	−2.655	0.008	−0.112	−0.017
High participation	−0.096***	0.025	−3.892	0.000	−0.144	−0.048
Sport Participation						
Moderate participation	0.028	0.024	1.164	0.244	−0.019	0.076
High participation	0.060*	0.024	2.484	0.013	0.013	0.108
Religious Youth Activity						
Less than once per month	−0.009	0.023	−0.387	0.699	−0.054	0.036
Less than once per week	−0.002	0.023	−0.089	0.929	−0.048	0.044
More than once per week	−0.031	0.025	−1.256	0.209	−0.079	0.017
Self-Regulation						
	−0.222***	0.027	−8.195	0.000	−0.276	−0.169
Demographics						
Age	−0.132***	0.023	−5.659	0.000	−0.177	−0.086
Female	−0.237***	0.022	−10.683	0.000	−0.281	−0.194
Socioeconomic Status	−0.135***	0.023	−5.884	0.000	−0.180	−0.090
Hispanic	0.061**	0.021	2.825	0.005	0.019	0.103
Black	0.102***	0.020	5.198	0.000	0.064	0.140
Other Race	0.018	0.023	0.797	0.426	−0.026	0.062
Dwelling Condition						
Fairly well kept	0.104***	0.026	3.948	0.000	0.052	0.156
Poorly kept	0.041 [†]	0.023	1.782	0.075	−0.004	0.086
Very poorly kept	0.034	0.025	1.373	0.170	−0.015	0.083
Neighborhood Condition						
Fairly well kept	0.006	0.029	0.225	0.822	−0.050	0.063
Poorly kept	0.013	0.026	0.506	0.613	−0.038	0.065
Very poorly kept	0.007	0.024	0.271	0.786	−0.041	0.054
Rural area	0.003	0.027	0.110	0.913	−0.049	0.055

Table F4.3

Wave I Delinquency Model 4 (Serious Fighting) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.675	0.030	22.134	0.615	0.735	NA
ES	0.887	0.019	45.672	0.849	0.925	NA
PS	0.729	0.025	28.905	0.680	0.779	NA
SC/SA	0.435	0.041	10.630	0.355	0.515	NA
Self-Regulation	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
SR1	0.600	0.029	20.699	0.543	0.657	0.400
SR2	0.504	0.031	16.139	0.443	0.565	0.496
SR3	0.594	0.029	20.655	0.537	0.650	0.406
SR4	0.696	0.030	23.361	0.638	0.755	0.304
SR5	0.570	0.026	21.792	0.519	0.621	0.430
SR6	0.602	0.024	25.109	0.555	0.649	0.398
SR7	0.644	0.026	24.464	0.592	0.695	0.356
SR10	0.446	0.017	25.840	0.412	0.480	0.554
SR11	0.462	0.018	26.080	0.427	0.497	0.538
SR12	0.510	0.017	29.309	0.476	0.544	0.490
SR13	0.538	0.017	30.958	0.504	0.572	0.462
SR14	0.376	0.017	22.250	0.343	0.409	0.624
SR15	0.315	0.018	17.524	0.279	0.350	0.685
SR16	0.524	0.017	31.523	0.491	0.556	0.476
Serious Fighting	0.789	0.019	41.474	0.752	0.826	0.211

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix G

Developmental Cascade Model of Self-Regulation - Wave I

Table G1.1

Fit Indices for the Developmental Cascade Model

Scaled χ^2 (df)	382.392*** (73)
Scaled CFI	0.981
Scaled TLI	0.976
Scaled RMSEA	0.043
Scaled RMSEA CI Lower	0.038
Scaled RMSEA CI Upper	0.048
SRMR	0.036

Table G1.2

Std. Latent Structural Paths with SEs and z-values

Path	β	<i>SE</i>	<i>z</i>	<i>p</i>
PS $\leftarrow$ SCSA	0.441	0.020	21.993	< .001
SCSA $\leftarrow$ ERI	0.443	0.023	19.159	< .001
ERI $\leftarrow$ ES	0.196	0.028	6.921	< .001
SCSA $\leftarrow$ ES	0.199	0.026	7.729	< .001

ES (Emotional Stability)

ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving)

SC/SA (Self-Concept / Social Acceptance)

Table G1.3

Std. Factor Loadings with SEs and z-values

Factor Indicator		β	SE	z	p
ES	SR1	0.663	0.023	28.861	< .001
ES	SR2	0.692	0.022	31.445	< .001
ES	SR3	0.629	0.023	27.706	< .001
ES	SR4	0.533	0.027	19.516	< .001
ERI	SR5	0.657	0.020	32.904	< .001
ERI	SR6	0.673	0.019	35.241	< .001
ERI	SR7	0.561	0.023	24.556	< .001
PS	SR10	0.743	0.012	62.581	< .001
PS	SR11	0.743	0.013	59.092	< .001
PS	SR12	0.708	0.013	56.306	< .001
PS	SR13	0.689	0.013	52.732	< .001
SCSA	SR14	0.796	0.011	75.576	< .001
SCSA	SR15	0.817	0.011	76.869	< .001
SCSA	SR16	0.695	0.012	56.849	< .001

ES (Emotional Stability)

ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving)

SC/SA (Self-Concept / Social Acceptance)

Table G1.4

Std. Residual Variances with SEs and z-values

Indicator/ Variable	Residual Variance (Std.)	<i>SE</i>	<i>z</i>	<i>p</i>
SR1	0.560	0.030	18.390	< .001
SR2	0.522	0.030	17.142	< .001
SR3	0.605	0.029	21.213	< .001
SR4	0.716	0.029	24.598	< .001
SR5	0.568	0.026	21.638	< .001
SR6	0.547	0.026	21.274	< .001
SR7	0.686	0.026	26.802	< .001
SR10	0.447	0.018	25.319	< .001
SR11	0.448	0.019	23.935	< .001
SR12	0.498	0.018	27.977	< .001
SR13	0.525	0.018	29.190	< .001
SR14	0.366	0.017	21.788	< .001
SR15	0.332	0.017	19.115	< .001
SR16	0.516	0.017	30.348	< .001
ES	1.000	0.000	—	—
ERI	0.961	0.011	86.421	< .001
PS	0.806	0.018	45.572	< .001
SCSA	0.729	0.021	34.025	< .001

ES (Emotional Stability)

ER/I (Emotional Reactivity / Impulsivity)

PS (Problem Solving)

SC/SA (Self-Concept / Social Acceptance)

Table G1.5

Threshold Estimates with SEs and z-values

Item	Threshold	Estimate	SE	z	p
SR1	t1	-2.824	0.117	-24.048	<0.001
SR1	t2	-1.881	0.045	-41.580	<0.001
SR1	t3	-0.161	0.023	-6.986	<0.001
SR2	t1	-2.801	0.111	-25.219	<0.001
SR2	t2	-2.382	0.072	-33.071	<0.001
SR2	t3	-1.235	0.030	-40.891	<0.001
SR2	t4	0.264	0.023	11.362	<0.001
SR3	t1	-2.505	0.083	-30.146	<0.001
SR3	t2	-1.110	0.029	-37.952	<0.001
SR3	t3	-0.173	0.023	-7.494	<0.001
SR4	t1	-0.533	0.024	-21.930	<0.001
SR5	t1	-0.863	0.027	-32.406	<0.001
SR5	t2	0.628	0.025	25.410	<0.001
SR5	t3	1.211	0.031	39.280	<0.001
SR5	t4	1.946	0.053	36.914	<0.001
SR6	t1	-1.133	0.029	-38.633	<0.001
SR6	t2	0.476	0.024	19.967	<0.001
SR6	t3	1.099	0.029	38.296	<0.001
SR6	t4	1.819	0.044	41.067	<0.001
SR7	t1	-1.588	0.040	-39.334	<0.001
SR7	t2	-0.042	0.023	-1.819	0.069
SR7	t3	0.709	0.025	28.128	<0.001
SR7	t4	1.559	0.038	41.537	<0.001
SR10	t1	-2.330	0.076	-30.839	<0.001
SR10	t2	-1.365	0.033	-41.240	<0.001
SR10	t3	-0.595	0.025	-24.018	<0.001
SR10	t4	0.934	0.027	35.009	<0.001
SR11	t1	-2.455	0.103	-23.852	<0.001
SR11	t2	-1.581	0.040	-39.078	<0.001
SR11	t3	-0.861	0.027	-31.660	<0.001
SR11	t4	0.827	0.026	31.850	<0.001
SR12	t1	-2.262	0.068	-33.472	<0.001
SR12	t2	-1.190	0.031	-38.533	<0.001
SR12	t3	-0.268	0.023	-11.430	<0.001
SR12	t4	1.159	0.029	39.563	<0.001
SR13	t1	-2.390	0.083	-28.918	<0.001
SR13	t2	-1.278	0.032	-40.436	<0.001
SR13	t3	-0.548	0.025	-22.277	<0.001
SR13	t4	1.038	0.028	37.315	<0.001
SR14	t1	-2.446	0.070	-34.855	<0.001
SR14	t2	-1.334	0.031	-42.611	<0.001
SR14	t3	-0.754	0.025	-30.024	<0.001
SR14	t4	0.396	0.024	16.675	<0.001

Continued on next page

Table G1.5

Threshold Estimates with Standard Errors and z-values

Indicator	Threshold	Estimate	SE	z	p
SR15	t1	-2.508	0.072	-34.831	<0.001
SR15	t2	-1.339	0.031	-42.992	<0.001
SR15	t3	-0.515	0.024	-21.340	<0.001
SR15	t4	0.901	0.027	33.910	<0.001
SR16	t1	-2.703	0.091	-29.804	<0.001
SR16	t2	-1.718	0.040	-42.836	<0.001
SR16	t3	-1.066	0.029	-36.954	<0.001
SR16	t4	0.535	0.024	22.130	<0.001

Appendix H

Wave I Educational Outcomes and Achievement

Developmental Cascade Models

Model 1: Grade Average (Item constructed from last reported grades in English / Language Arts, Math, Science, and Social Studies / History subjects.)

Table H1.1

Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.630	0.026	24.225	0.579	0.681
SR2	ES	0.707	0.025	28.568	0.659	0.756
SR3	ES	0.629	0.025	25.576	0.581	0.677
SR4	ES	0.533	0.030	17.568	0.474	0.593
SR5	ER/I	0.643	0.022	29.222	0.600	0.686
SR6	ER/I	0.658	0.021	31.006	0.616	0.699
SR7	ER/I	0.583	0.025	23.131	0.533	0.632
SR10	PS	0.735	0.013	57.439	0.710	0.760
SR11	PS	0.736	0.013	54.656	0.709	0.762
SR12	PS	0.710	0.013	52.894	0.684	0.736
SR13	PS	0.674	0.014	46.844	0.646	0.702
SR14	SC/SA	0.779	0.012	64.715	0.755	0.803
SR15	SC/SA	0.815	0.012	68.495	0.792	0.838
SR16	SC/SA	0.677	0.013	50.272	0.651	0.704

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H1.2

Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.155***	0.020	7.743	0.000	0.116	0.195
High participation	0.186***	0.020	9.440	0.000	0.147	0.224
Sport Participation						
Moderate participation	0.020	0.020	0.983	0.325	-0.020	0.059
High participation	0.038 [†]	0.022	1.755	0.079	-0.004	0.080
Religious Youth Activity						
Less than once per month	0.045*	0.019	2.407	0.016	0.008	0.083
Once per month or more	0.059**	0.019	3.070	0.002	0.021	0.097
Once per week or more	0.080***	0.020	4.065	0.000	0.041	0.119
Problem Solving						
SC/SA → PS	0.457***	0.021	21.972	0.000	0.417	0.498
ER/I → SC/SA	0.445***	0.027	16.696	0.000	0.393	0.497
ES → ER/I	0.229***	0.032	7.100	0.000	0.166	0.293
ES → SC/SA	0.166***	0.030	5.543	0.000	0.107	0.224
Demographics						
Age	-0.060**	0.019	-3.196	0.001	-0.097	-0.023
Female	0.124***	0.019	6.551	0.000	0.087	0.161
Socio-economic Status	0.197***	0.019	10.167	0.000	0.159	0.235
Hispanic	-0.034 [†]	0.018	-1.866	0.062	-0.070	0.002
Black	-0.094***	0.017	-5.441	0.000	-0.128	-0.060
Other Race	-0.001	0.018	-0.034	0.973	-0.036	0.034
Dwelling Condition						
Fairly well kept	-0.111***	0.021	-5.270	0.000	-0.152	-0.070
Poorly kept	-0.077***	0.020	-3.816	0.000	-0.117	-0.038
Very poorly kept	-0.054*	0.023	-2.318	0.020	-0.099	-0.008
Neighborhood Condition						
Fairly well kept	-0.019	0.024	-0.823	0.410	-0.066	0.027
Poorly kept	-0.012	0.024	-0.486	0.627	-0.059	0.035
Very poorly kept	0.027	0.022	1.223	0.221	-0.016	0.070
Rural area	-0.042 [†]	0.022	-1.951	0.051	-0.085	0.000

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H1.3

Wave I Educational Outcomes - Developmental Cascade - Model 1 (Grade Average, Constructed) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.947	0.015	63.910	0.918	0.976	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.791	0.019	41.541	0.754	0.828	NA
SC/SA	0.741	0.024	31.056	0.694	0.788	NA
Residual Variances						
SR1	0.603	0.033	18.411	0.539	0.667	0.397
SR2	0.499	0.035	14.252	0.431	0.568	0.501
SR3	0.604	0.031	19.513	0.543	0.665	0.396
SR4	0.716	0.032	22.107	0.652	0.779	0.284
SR5	0.587	0.028	20.761	0.532	0.642	0.413
SR6	0.568	0.028	20.355	0.513	0.622	0.432
SR7	0.661	0.029	22.509	0.603	0.718	0.339
SR10	0.460	0.019	24.463	0.423	0.497	0.540
SR11	0.459	0.020	23.189	0.420	0.498	0.541
SR12	0.496	0.019	26.040	0.459	0.533	0.504
SR13	0.546	0.019	28.154	0.508	0.584	0.454
SR14	0.393	0.019	20.953	0.356	0.430	0.607
SR15	0.336	0.019	17.318	0.298	0.374	0.664
SR16	0.541	0.018	29.626	0.505	0.577	0.459
Grade Average	0.783	0.014	55.043	0.755	0.810	0.217

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: During this school year, how many times have you skipped school for a full day without an excuse?

Table H2.1

Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.636	0.023	28.042	0.592	0.681
SR2	ES		0.702	0.022	31.940	0.659	0.745
SR3	ES		0.637	0.022	28.384	0.593	0.681
SR4	ES		0.546	0.027	20.345	0.494	0.599
SR5	ER/I		0.652	0.020	33.090	0.614	0.691
SR6	ER/I		0.646	0.019	34.100	0.609	0.683
SR7	ER/I		0.585	0.022	26.660	0.542	0.629
SR10	PS		0.743	0.011	64.788	0.720	0.765
SR11	PS		0.738	0.012	61.448	0.714	0.762
SR12	PS		0.697	0.012	56.763	0.673	0.721
SR13	PS		0.681	0.013	54.266	0.657	0.706
SR14	SC/SA		0.786	0.011	73.136	0.765	0.807
SR15	SC/SA		0.816	0.011	74.276	0.795	0.838
SR16	SC/SA		0.685	0.012	55.963	0.661	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H2.2

Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.091***	0.025	−3.600	0.000	−0.140	−0.041
High participation	−0.063*	0.025	−2.571	0.010	−0.111	−0.015
Sport Participation						
Moderate participation	−0.017	0.024	−0.701	0.484	−0.065	0.031
High participation	−0.033	0.027	−1.233	0.217	−0.085	0.019
Religious Youth Activity						
Less than once per month	−0.004	0.023	−0.171	0.864	−0.049	0.042
Once per month or more	−0.058*	0.024	−2.399	0.016	−0.106	−0.011
Once per week or more	−0.110***	0.025	−4.377	0.000	−0.159	−0.061
Problem Solving						
SC/SA → PS	0.445***	0.019	22.862	0.000	0.407	0.483
ER/I → SC/SA	0.439***	0.023	18.990	0.000	0.393	0.484
ES → ER/I	0.204***	0.028	7.227	0.000	0.149	0.260
ES → SC/SA	0.178***	0.026	6.931	0.000	0.128	0.228
Demographics						
Age	0.332***	0.022	15.253	0.000	0.290	0.375
Female	−0.006	0.023	−0.254	0.799	−0.052	0.040
Socio-economic Status	−0.059*	0.025	−2.397	0.017	−0.107	−0.011
Hispanic	0.031	0.022	1.415	0.157	−0.012	0.074
Black	−0.033	0.021	−1.556	0.120	−0.076	0.009
Other Race	0.031	0.021	1.452	0.147	−0.011	0.073
Dwelling Condition						
Fairly well kept	0.058*	0.027	2.151	0.031	0.005	0.111
Poorly kept	0.076**	0.025	3.085	0.002	0.028	0.125
Very poorly kept	0.010	0.026	0.398	0.691	−0.041	0.061
Neighborhood Condition						
Fairly well kept	0.013	0.030	0.454	0.650	−0.045	0.072
Poorly kept	0.030	0.027	1.103	0.270	−0.023	0.082
Very poorly kept	0.054*	0.026	2.133	0.033	0.004	0.105
Rural area	−0.010	0.028	−0.350	0.727	−0.064	0.045

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H2.3

Wave I Educational Outcomes - Developmental Cascade - Model 2 (Unexcused Absences) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ER/I	0.958	0.012	83.000	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.802	0.017	46.267	0.768	0.836	NA
SC/SA	0.744	0.021	35.393	0.703	0.785	NA
Residual Variances						
SR1	0.595	0.029	20.619	0.539	0.652	0.405
SR2	0.507	0.031	16.429	0.447	0.568	0.493
SR3	0.594	0.029	20.749	0.538	0.650	0.406
SR4	0.701	0.029	23.894	0.644	0.759	0.299
SR5	0.575	0.026	22.350	0.524	0.625	0.425
SR6	0.582	0.024	23.776	0.534	0.630	0.418
SR7	0.657	0.026	25.558	0.607	0.708	0.343
SR10	0.448	0.017	26.311	0.415	0.482	0.552
SR11	0.455	0.018	25.692	0.421	0.490	0.545
SR12	0.514	0.017	29.999	0.480	0.547	0.486
SR13	0.536	0.017	31.302	0.502	0.569	0.464
SR14	0.382	0.017	22.632	0.349	0.415	0.618
SR15	0.334	0.018	18.603	0.299	0.369	0.666
SR16	0.530	0.017	31.584	0.497	0.563	0.470
Unexcused Absences	0.795	0.017	45.920	0.761	0.829	0.205

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: Have you ever received an out-of-school suspension?

Table H3.1

Wave I Educational Outcomes - Developmental Cascade - Model 3 (Out of School Suspension) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.637	0.023	28.139	0.593	0.681
SR2	ES		0.703	0.022	32.090	0.660	0.746
SR3	ES		0.637	0.022	28.463	0.593	0.681
SR4	ES		0.546	0.027	20.374	0.494	0.599
SR5	ER/I		0.652	0.020	33.245	0.614	0.691
SR6	ER/I		0.648	0.019	34.252	0.611	0.685
SR7	ER/I		0.585	0.022	26.790	0.542	0.628
SR10	PS		0.742	0.011	64.739	0.720	0.765
SR11	PS		0.739	0.012	61.717	0.715	0.762
SR12	PS		0.697	0.012	56.523	0.673	0.721
SR13	PS		0.683	0.013	54.303	0.658	0.707
SR14	SC/SA		0.785	0.011	73.139	0.764	0.806
SR15	SC/SA		0.815	0.011	74.255	0.794	0.837
SR16	SC/SA		0.686	0.012	56.124	0.663	0.710

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H3.2

Wave I Educational Outcomes - Developmental Cascade - Model 3 (Out of School Suspension) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.074**	0.026	-2.901	0.004	-0.124	-0.024
High participation	-0.074**	0.027	-2.783	0.005	-0.126	-0.022
Sport Participation						
Moderate participation	-0.033	0.025	-1.298	0.194	-0.083	0.017
High participation	0.011	0.027	0.414	0.679	-0.041	0.063
Religious Youth Activity						
Less than once per month	-0.045 [†]	0.024	-1.889	0.059	-0.092	0.002
Once per month or more	-0.051*	0.025	-2.027	0.043	-0.100	-0.002
Once per week or more	-0.094***	0.025	-3.707	0.000	-0.144	-0.044
Problem Solving						
SC/SA → PS	0.443***	0.019	22.801	0.000	0.405	0.481
ER/I → SC/SA	0.439***	0.023	19.012	0.000	0.393	0.484
ES → ER/I	0.205***	0.028	7.274	0.000	0.150	0.260
ES → SC/SA	0.179***	0.026	7.002	0.000	0.129	0.230
Demographics						
Age	0.068**	0.025	2.757	0.006	0.020	0.117
Female	-0.241***	0.023	-10.281	0.000	-0.287	-0.195
Socio-economic Status	-0.201***	0.024	-8.282	0.000	-0.249	-0.154
Hispanic	0.043 [†]	0.022	1.932	0.053	-0.001	0.086
Black	0.205***	0.020	10.335	0.000	0.166	0.244
Other Race	0.064**	0.023	2.823	0.005	0.020	0.109
Dwelling Condition						
Fairly well kept	0.101***	0.027	3.674	0.000	0.047	0.155
Poorly kept	0.083***	0.024	3.428	0.001	0.036	0.131
Very poorly kept	0.068**	0.026	2.634	0.008	0.017	0.119
Neighborhood Condition						
Fairly well kept	0.009	0.031	0.281	0.779	-0.051	0.069
Poorly kept	0.042	0.028	1.536	0.125	-0.012	0.096
Very poorly kept	0.008	0.027	0.290	0.772	-0.045	0.061
Rural area	0.018	0.028	0.658	0.511	-0.036	0.073

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H3.3

Wave I Educational Outcomes - Developmental Cascade - Model 3 - Out of School Suspension – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	82.731	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.804	0.017	46.699	0.770	0.838	NA
SC/SA	0.743	0.021	35.362	0.702	0.784	NA
Residual Variances						
SR1	0.594	0.029	20.596	0.538	0.651	0.406
SR2	0.506	0.031	16.435	0.446	0.566	0.494
SR3	0.594	0.029	20.833	0.538	0.650	0.406
SR4	0.701	0.029	23.929	0.644	0.759	0.299
SR5	0.575	0.026	22.453	0.524	0.625	0.425
SR6	0.581	0.024	23.708	0.533	0.629	0.419
SR7	0.658	0.026	25.736	0.608	0.708	0.342
SR10	0.449	0.017	26.368	0.416	0.482	0.551
SR11	0.454	0.018	25.668	0.419	0.489	0.546
SR12	0.514	0.017	29.884	0.480	0.548	0.486
SR13	0.534	0.017	31.135	0.501	0.568	0.466
SR14	0.383	0.017	22.717	0.350	0.416	0.617
SR15	0.336	0.018	18.753	0.301	0.371	0.664
SR16	0.529	0.017	31.485	0.496	0.562	0.471
Out of School Suspension	0.737	0.020	37.522	0.699	0.776	0.263

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Have you ever been expelled from school?

Table H4.1

Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Std. Factor Loadings

	Factor Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.636	0.023	28.120	0.592	0.680
SR2	ES	0.704	0.022	32.149	0.661	0.747
SR3	ES	0.637	0.022	28.486	0.593	0.681
SR4	ES	0.546	0.027	20.396	0.494	0.599
SR5	ER/I	0.652	0.020	33.203	0.613	0.690
SR6	ER/I	0.648	0.019	34.303	0.611	0.685
SR7	ER/I	0.585	0.022	26.728	0.542	0.628
SR10	PS	0.743	0.011	64.807	0.720	0.765
SR11	PS	0.739	0.012	61.762	0.715	0.762
SR12	PS	0.698	0.012	56.797	0.674	0.723
SR13	PS	0.683	0.013	54.341	0.658	0.708
SR14	SC/SA	0.786	0.011	73.200	0.765	0.807
SR15	SC/SA	0.816	0.011	74.302	0.794	0.837
SR16	SC/SA	0.687	0.012	56.251	0.663	0.711

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H4.2

Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.010	0.057	0.171	0.864	−0.102	0.121
High participation	−0.031	0.053	−0.580	0.562	−0.135	0.074
Sport Participation						
Moderate participation	−0.051	0.050	−1.028	0.304	−0.149	0.047
High participation	0.049	0.053	0.940	0.347	−0.054	0.153
Religious Youth Activity						
Less than once per month	−0.062	0.054	−1.154	0.249	−0.168	0.044
Once per month or more	−0.099 [†]	0.052	−1.919	0.055	−0.201	0.002
Once per week or more	0.012	0.048	0.247	0.805	−0.082	0.105
Problem Solving						
SC/SA → PS	−0.134***	0.039	−3.412	0.001	−0.210	−0.057
ER/I → SC/SA	0.441***	0.019	22.623	0.000	0.403	0.479
ES → ER/I	0.439***	0.023	19.030	0.000	0.394	0.484
ES → SC/SA	0.205***	0.028	7.272	0.000	0.150	0.260
ES → SC/SA	0.176***	0.026	6.863	0.000	0.126	0.226
Demographics						
Age	0.039	0.053	0.743	0.458	−0.064	0.142
Female	−0.269***	0.052	−5.185	0.000	−0.371	−0.167
Socio-economic Status	−0.135**	0.046	−2.936	0.003	−0.225	−0.045
Hispanic	0.079 [†]	0.041	1.917	0.055	−0.002	0.160
Black	0.183***	0.040	4.625	0.000	0.105	0.261
Other Race	−0.063	0.050	−1.244	0.213	−0.162	0.036
Dwelling Condition						
Fairly well kept	0.102 [†]	0.054	1.891	0.059	−0.004	0.208
Poorly kept	0.014	0.048	0.300	0.764	−0.080	0.109
Very poorly kept	0.072 [†]	0.043	1.662	0.097	−0.013	0.158
Neighborhood Condition						
Fairly well kept	0.016	0.057	0.281	0.779	−0.096	0.128
Poorly kept	0.046	0.043	1.068	0.285	−0.038	0.129
Very poorly kept	0.045	0.038	1.181	0.238	−0.030	0.119
Rural area	−0.024	0.055	−0.445	0.656	−0.132	0.083

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table H4.3

Wave I Educational Outcomes - Developmental Cascade - Model 4 (Expulsion) – Residual $\mathcal{E}$
Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ER/I	0.958	0.012	82.755	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.806	0.017	46.860	0.772	0.839	NA
SC/SA	0.745	0.021	35.584	0.704	0.786	NA
Residual Variances						
SR1	0.595	0.029	20.686	0.539	0.652	0.405
SR2	0.505	0.031	16.385	0.444	0.565	0.495
SR3	0.594	0.028	20.857	0.538	0.650	0.406
SR4	0.701	0.029	23.952	0.644	0.759	0.299
SR5	0.575	0.026	22.464	0.525	0.625	0.425
SR6	0.580	0.024	23.672	0.532	0.628	0.420
SR7	0.658	0.026	25.711	0.608	0.708	0.342
SR10	0.449	0.017	26.368	0.415	0.482	0.551
SR11	0.454	0.018	25.724	0.420	0.489	0.546
SR12	0.512	0.017	29.814	0.478	0.546	0.488
SR13	0.534	0.017	31.076	0.500	0.567	0.466
SR14	0.383	0.017	22.703	0.350	0.416	0.617
SR15	0.335	0.018	18.704	0.300	0.370	0.665
SR16	0.528	0.017	31.485	0.495	0.561	0.472
Expulsion	0.770	0.035	22.088	0.701	0.838	0.230

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix I

Wave I Attachment to School Developmental Cascade Models

Model 1: How much do you agree or disagree with the following statement: You feel close to people at your school.

Table I1.1

Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
SR1	ES		0.639	0.023	28.183	0.595	0.684
SR2	ES		0.702	0.022	31.916	0.659	0.745
SR3	ES		0.636	0.022	28.344	0.592	0.680
SR4	ES		0.545	0.027	20.294	0.493	0.598
SR5	ER/I		0.652	0.020	33.063	0.613	0.691
SR6	ER/I		0.647	0.019	34.138	0.610	0.684
SR7	ER/I		0.586	0.022	26.587	0.543	0.629
SR10	PS		0.737	0.012	63.794	0.714	0.759
SR11	PS		0.734	0.012	61.135	0.711	0.758
SR12	PS		0.692	0.012	55.939	0.668	0.717
SR13	PS		0.675	0.013	53.222	0.651	0.700
SR14	SC/SA		0.782	0.011	72.390	0.761	0.803
SR15	SC/SA		0.810	0.011	73.705	0.788	0.831
SR16	SC/SA		0.695	0.012	57.066	0.671	0.719

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I1.2

Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.044*	0.022	2.003	0.045	0.001	0.086
High participation	0.069***	0.020	3.381	0.001	0.029	0.109
Sport Participation						
Moderate participation	0.100***	0.021	4.764	0.000	0.059	0.140
High participation	0.096***	0.022	4.389	0.000	0.053	0.139
Religious Youth Activity						
Less than once per month	0.043*	0.020	2.176	0.030	0.004	0.081
Once per month or more	0.040 [†]	0.021	1.918	0.055	−0.001	0.080
Once per week or more	0.059**	0.020	2.917	0.004	0.020	0.099
Problem Solving						
SC/SA → PS	0.467***	0.019	24.551	0.000	0.430	0.504
ER/I → SC/SA	0.440***	0.023	19.111	0.000	0.395	0.485
ES → ER/I	0.205***	0.028	7.265	0.000	0.150	0.260
ES → SC/SA	0.179***	0.026	6.996	0.000	0.129	0.229
Demographics						
Age	−0.048*	0.020	−2.418	0.016	−0.087	−0.009
Female	−0.017	0.020	−0.833	0.405	−0.057	0.023
Socio-economic Status	−0.014	0.021	−0.641	0.521	−0.055	0.028
Hispanic	0.030	0.020	1.514	0.130	−0.009	0.068
Black	−0.036*	0.017	−2.092	0.036	−0.070	−0.002
Other Race	0.014	0.018	0.763	0.446	−0.022	0.049
Dwelling Condition						
Fairly well kept	−0.095***	0.024	−3.995	0.000	−0.142	−0.049
Poorly kept	−0.071**	0.022	−3.197	0.001	−0.115	−0.028
Very poorly kept	−0.081***	0.024	−3.408	0.001	−0.128	−0.035
Neighborhood Condition						
Fairly well kept	0.039	0.025	1.541	0.123	−0.011	0.089
Poorly kept	0.038 [†]	0.023	1.649	0.099	−0.007	0.084
Very poorly kept	−0.006	0.025	−0.253	0.800	−0.056	0.043
Rural area	0.017	0.023	0.742	0.458	−0.028	0.062

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I1.3

Wave I Attachment to School - Developmental Cascade - Model 1 (Feel Close to People at School) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	82.794	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.782	0.018	44.045	0.747	0.817	NA
SC/SA	0.742	0.021	35.244	0.701	0.783	NA
Residual Variances						
SR1	0.591	0.029	20.380	0.534	0.648	0.409
SR2	0.507	0.031	16.391	0.446	0.567	0.493
SR3	0.595	0.029	20.854	0.539	0.651	0.405
SR4	0.703	0.029	23.969	0.645	0.760	0.297
SR5	0.575	0.026	22.373	0.525	0.625	0.425
SR6	0.581	0.025	23.707	0.533	0.629	0.419
SR7	0.657	0.026	25.447	0.606	0.707	0.343
SR10	0.457	0.017	26.871	0.424	0.491	0.543
SR11	0.461	0.018	26.155	0.427	0.496	0.539
SR12	0.521	0.017	30.380	0.487	0.554	0.479
SR13	0.544	0.017	31.721	0.510	0.577	0.456
SR14	0.388	0.017	22.946	0.355	0.421	0.612
SR15	0.344	0.018	19.326	0.309	0.379	0.656
SR16	0.517	0.017	30.533	0.484	0.550	0.483
Feel Close to People at School	0.889	0.013	69.590	0.864	0.914	0.111

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: How much do you agree or disagree with the following statement: You feel like you are part of your school.

Table I2.1

Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.640	0.023	28.138	0.596	0.685
SR2	ES		0.702	0.022	31.853	0.659	0.746
SR3	ES		0.636	0.022	28.272	0.591	0.680
SR4	ES		0.545	0.027	20.228	0.492	0.597
SR5	ER/I		0.652	0.020	32.875	0.613	0.691
SR6	ER/I		0.645	0.019	33.874	0.607	0.682
SR7	ER/I		0.588	0.022	26.851	0.545	0.631
SR10	PS		0.735	0.012	63.586	0.712	0.757
SR11	PS		0.731	0.012	60.793	0.708	0.755
SR12	PS		0.688	0.012	55.521	0.664	0.712
SR13	PS		0.671	0.013	52.660	0.646	0.696
SR14	SC/SA		0.781	0.011	72.317	0.760	0.802
SR15	SC/SA		0.810	0.011	73.654	0.788	0.831
SR16	SC/SA		0.698	0.012	57.433	0.674	0.722

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I2.2

Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.058**	0.022	2.634	0.008	0.015	0.102
High participation	0.102***	0.020	5.030	0.000	0.063	0.142
Sport Participation						
Moderate participation	0.164***	0.021	7.759	0.000	0.123	0.206
High participation	0.152***	0.022	6.998	0.000	0.109	0.194
Religious Youth Activity						
Less than once per month	0.028	0.020	1.378	0.168	-0.012	0.068
Once per month or more	0.053*	0.021	2.541	0.011	0.012	0.094
Once per week or more	0.079***	0.021	3.777	0.000	0.038	0.121
Problem Solving						
SC/SA $\rightarrow$ PS	0.333***	0.021	16.241	0.000	0.293	0.373
ER/I $\rightarrow$ SC/SA	0.483***	0.019	25.846	0.000	0.446	0.520
ES $\rightarrow$ ER/I	0.436***	0.023	18.834	0.000	0.390	0.481
ES $\rightarrow$ SC/SA	0.205***	0.028	7.277	0.000	0.150	0.261
ES $\rightarrow$ SC/SA	0.181***	0.026	7.067	0.000	0.131	0.231
Demographics						
Age	-0.049*	0.020	-2.416	0.016	-0.089	-0.009
Female	-0.010	0.021	-0.487	0.626	-0.051	0.031
Socio-economic Status	0.002	0.021	0.093	0.926	-0.039	0.043
Hispanic	-0.009	0.020	-0.450	0.653	-0.048	0.030
Black	-0.013	0.018	-0.704	0.482	-0.049	0.023
Other Race	-0.022	0.019	-1.193	0.233	-0.059	0.014
Dwelling Condition						
Fairly well kept	-0.078**	0.024	-3.255	0.001	-0.124	-0.031
Poorly kept	-0.082***	0.023	-3.595	0.000	-0.126	-0.037
Very poorly kept	-0.048†	0.026	-1.886	0.059	-0.099	0.002
Neighborhood Condition						
Fairly well kept	0.006	0.026	0.241	0.810	-0.045	0.057
Poorly kept	0.027	0.025	1.063	0.288	-0.023	0.076
Very poorly kept	0.004	0.025	0.155	0.876	-0.045	0.053
Rural area	-0.004	0.023	-0.162	0.871	-0.050	0.042

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I2.3

Wave I Attachment to School - Developmental Cascade - Model 2 (Feel Like a Part of School) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	82.693	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.767	0.018	42.461	0.731	0.802	NA
SC/SA	0.745	0.021	35.550	0.704	0.786	NA
Residual Variances						
SR1	0.590	0.029	20.234	0.533	0.647	0.410
SR2	0.507	0.031	16.353	0.446	0.567	0.493
SR3	0.596	0.029	20.860	0.540	0.652	0.404
SR4	0.703	0.029	23.994	0.646	0.761	0.297
SR5	0.575	0.026	22.247	0.524	0.626	0.425
SR6	0.584	0.025	23.808	0.536	0.632	0.416
SR7	0.654	0.026	25.345	0.603	0.704	0.346
SR10	0.460	0.017	27.084	0.427	0.493	0.540
SR11	0.465	0.018	26.418	0.430	0.499	0.535
SR12	0.526	0.017	30.857	0.493	0.560	0.474
SR13	0.550	0.017	32.154	0.516	0.583	0.450
SR14	0.390	0.017	23.101	0.357	0.423	0.610
SR15	0.344	0.018	19.317	0.309	0.379	0.656
SR16	0.513	0.017	30.195	0.479	0.546	0.487
Feel Like a Part of School	0.812	0.016	50.276	0.781	0.844	0.188

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: How much do you agree or disagree with the following statement: You feel safe in your school.

Table I3.1

Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Std. Factor Loadings

	Factor Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.637	0.023	28.028	0.593	0.682
SR2	ES	0.702	0.022	31.967	0.659	0.746
SR3	ES	0.639	0.022	28.476	0.595	0.682
SR4	ES	0.545	0.027	20.276	0.492	0.598
SR5	ER/I	0.653	0.020	33.221	0.615	0.692
SR6	ER/I	0.647	0.019	34.172	0.610	0.684
SR7	ER/I	0.586	0.022	26.661	0.543	0.629
SR10	PS	0.737	0.012	63.950	0.715	0.760
SR11	PS	0.738	0.012	61.435	0.715	0.762
SR12	PS	0.693	0.012	56.151	0.668	0.717
SR13	PS	0.679	0.013	53.658	0.654	0.703
SR14	SC/SA	0.784	0.011	73.039	0.763	0.805
SR15	SC/SA	0.812	0.011	73.891	0.791	0.834
SR16	SC/SA	0.690	0.012	56.489	0.666	0.714

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I3.2

Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.020	0.022	0.892	0.372	−0.024	0.064
High participation	0.059**	0.021	2.804	0.005	0.018	0.101
Sport Participation						
Moderate participation	0.089***	0.022	4.058	0.000	0.046	0.132
High participation	0.087***	0.022	3.961	0.000	0.044	0.130
Religious Youth Activity						
Less than once per month	0.009	0.021	0.450	0.653	−0.031	0.050
Once per month or more	0.005	0.021	0.254	0.800	−0.037	0.047
Once per week or more	0.041 [†]	0.021	1.943	0.052	0.000	0.083
Problem Solving						
SC/SA → PS	0.460***	0.019	23.840	0.000	0.422	0.498
ER/I → SC/SA	0.441***	0.023	19.110	0.000	0.396	0.487
ES → ER/I	0.206***	0.028	7.308	0.000	0.151	0.261
ES → SC/SA	0.177***	0.026	6.885	0.000	0.127	0.227
Demographics						
Age	0.028	0.021	1.323	0.186	−0.013	0.068
Female	−0.022	0.021	−1.053	0.292	−0.064	0.019
Socio-economic Status	0.059**	0.022	2.716	0.007	0.016	0.102
Hispanic	−0.028	0.020	−1.375	0.169	−0.068	0.012
Black	−0.083***	0.018	−4.584	0.000	−0.119	−0.048
Other Race	−0.053**	0.020	−2.687	0.007	−0.092	−0.014
Dwelling Condition						
Fairly well kept	−0.050*	0.024	−2.067	0.039	−0.097	−0.003
Poorly kept	−0.021	0.022	−0.959	0.337	−0.064	0.022
Very poorly kept	−0.002	0.024	−0.082	0.935	−0.050	0.046
Neighborhood Condition						
Fairly well kept	0.021	0.026	0.815	0.415	−0.029	0.071
Poorly kept	−0.029	0.024	−1.234	0.217	−0.075	0.017
Very poorly kept	−0.025	0.024	−1.058	0.290	−0.072	0.022
Rural area	0.011	0.024	0.446	0.656	−0.036	0.057

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I3.3

Wave I Attachment to School - Developmental Cascade - Model 3 (Feel Safe in School) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.957	0.012	82.317	0.935	0.980	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.788	0.018	44.373	0.753	0.823	NA
SC/SA	0.742	0.021	35.184	0.700	0.783	NA
Residual Variances						
SR1	0.594	0.029	20.515	0.537	0.651	0.406
SR2	0.507	0.031	16.407	0.446	0.567	0.493
SR3	0.592	0.029	20.683	0.536	0.648	0.408
SR4	0.703	0.029	23.969	0.645	0.760	0.297
SR5	0.574	0.026	22.336	0.523	0.624	0.426
SR6	0.582	0.024	23.744	0.534	0.630	0.418
SR7	0.657	0.026	25.523	0.606	0.707	0.343
SR10	0.457	0.017	26.869	0.423	0.490	0.543
SR11	0.455	0.018	25.669	0.420	0.490	0.545
SR12	0.520	0.017	30.441	0.487	0.554	0.480
SR13	0.539	0.017	31.415	0.506	0.573	0.461
SR14	0.385	0.017	22.829	0.352	0.418	0.615
SR15	0.340	0.018	19.050	0.305	0.375	0.660
SR16	0.524	0.017	31.060	0.491	0.557	0.476
Feel Safe in School	0.904	0.012	73.349	0.880	0.928	0.096

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Since school started this year/During the 1994-1995 school year, how often have you had trouble getting along with your teachers?

Table I4.1

Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
SR1	ES		0.638	0.023	28.102	0.593	0.682
SR2	ES		0.702	0.022	31.958	0.659	0.745
SR3	ES		0.637	0.022	28.415	0.593	0.681
SR4	ES		0.547	0.027	20.358	0.494	0.600
SR5	ER/I		0.653	0.020	33.269	0.615	0.692
SR6	ER/I		0.645	0.019	34.197	0.608	0.682
SR7	ER/I		0.586	0.022	26.716	0.543	0.629
SR10	PS		0.739	0.012	63.501	0.716	0.762
SR11	PS		0.734	0.012	60.899	0.710	0.757
SR12	PS		0.695	0.012	56.144	0.671	0.719
SR13	PS		0.680	0.013	53.652	0.655	0.705
SR14	SC/SA		0.784	0.011	72.966	0.763	0.805
SR15	SC/SA		0.814	0.011	73.853	0.792	0.835
SR16	SC/SA		0.685	0.012	55.802	0.661	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I4.2

Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.052*	0.023	−2.288	0.022	−0.096	−0.007
High participation	−0.031	0.022	−1.384	0.167	−0.074	0.013
Sport Participation						
Moderate participation	0.029	0.022	1.328	0.184	−0.014	0.072
High participation	0.068**	0.023	3.017	0.003	0.024	0.112
Religious Youth Activity						
Less than once per month	0.003	0.022	0.147	0.883	−0.039	0.046
Once per month or more	−0.022	0.021	−1.074	0.283	−0.063	0.018
Once per week or more	−0.066**	0.022	−3.045	0.002	−0.109	−0.024
Problem Solving						
SC/SA → PS	−0.227***	0.022	−10.362	0.000	−0.270	−0.184
ER/I → SC/SA	0.459***	0.019	23.779	0.000	0.421	0.497
ES → ER/I	0.446***	0.023	19.285	0.000	0.401	0.491
ES → SC/SA	0.205***	0.028	7.278	0.000	0.150	0.261
ES → SC/SA	0.180***	0.026	7.036	0.000	0.130	0.231
Demographics						
Age	−0.089***	0.021	−4.303	0.000	−0.130	−0.049
Female	−0.133***	0.021	−6.374	0.000	−0.174	−0.092
Socio-economic Status	−0.051*	0.022	−2.322	0.020	−0.094	−0.008
Hispanic	−0.028	0.021	−1.341	0.180	−0.069	0.013
Black	0.044*	0.018	2.408	0.016	0.008	0.080
Other Race	0.008	0.020	0.401	0.688	−0.032	0.048
Dwelling Condition						
Fairly well kept	0.059*	0.025	2.357	0.018	0.010	0.108
Poorly kept	0.043†	0.023	1.899	0.058	−0.001	0.088
Very poorly kept	0.034	0.023	1.428	0.153	−0.012	0.079
Neighborhood Condition						
Fairly well kept	−0.017	0.027	−0.618	0.537	−0.071	0.037
Poorly kept	−0.008	0.025	−0.301	0.764	−0.057	0.041
Very poorly kept	0.006	0.024	0.269	0.788	−0.040	0.053
Rural area	0.010	0.024	0.415	0.678	−0.036	0.056

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table I4.3

Wave I Attachment to School - Developmental Cascade - Model 4 (Trouble With Teachers) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	82.680	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.789	0.018	44.592	0.755	0.824	NA
SC/SA	0.735	0.021	34.525	0.694	0.777	NA
Residual Variances						
SR1	0.593	0.029	20.511	0.537	0.650	0.407
SR2	0.507	0.031	16.436	0.447	0.568	0.493
SR3	0.594	0.029	20.798	0.538	0.650	0.406
SR4	0.701	0.029	23.852	0.643	0.758	0.299
SR5	0.573	0.026	22.349	0.523	0.624	0.427
SR6	0.584	0.024	23.961	0.536	0.631	0.416
SR7	0.656	0.026	25.482	0.606	0.707	0.344
SR10	0.454	0.017	26.391	0.420	0.488	0.546
SR11	0.462	0.018	26.126	0.427	0.496	0.538
SR12	0.517	0.017	30.080	0.484	0.551	0.483
SR13	0.537	0.017	31.143	0.503	0.571	0.463
SR14	0.385	0.017	22.829	0.352	0.418	0.615
SR15	0.338	0.018	18.842	0.303	0.373	0.662
SR16	0.531	0.017	31.538	0.498	0.564	0.469
Trouble With Teachers	0.895	0.012	71.811	0.871	0.920	0.105

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix J

Wave I Attachment to Parents and Family Developmental Cascade Models

Model 1: How much do you feel that your parents care about you?

Table J1.1

Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.639	0.023	28.154	0.595	0.684
SR2	ES	0.702	0.022	31.984	0.659	0.745
SR3	ES	0.635	0.022	28.301	0.591	0.679
SR4	ES	0.548	0.027	20.439	0.495	0.601
SR5	ER/I	0.653	0.020	33.094	0.614	0.691
SR6	ER/I	0.647	0.019	34.080	0.610	0.685
SR7	ER/I	0.584	0.022	26.614	0.541	0.627
SR10	PS	0.739	0.012	63.454	0.716	0.762
SR11	PS	0.733	0.012	60.585	0.709	0.757
SR12	PS	0.695	0.012	56.090	0.671	0.720
SR13	PS	0.678	0.013	53.382	0.653	0.703
SR14	SC/SA	0.784	0.011	73.027	0.763	0.805
SR15	SC/SA	0.815	0.011	75.319	0.794	0.837
SR16	SC/SA	0.687	0.012	56.322	0.663	0.711

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J1.2

Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.036	0.030	1.175	0.240	-0.024	0.096
High participation	0.012	0.031	0.405	0.686	-0.048	0.073
Sport Participation						
Moderate participation	0.023	0.031	0.741	0.459	-0.037	0.083
High participation	0.018	0.031	0.571	0.568	-0.044	0.079
Religious Youth Activity						
Less than once per month	0.002	0.030	0.073	0.942	-0.057	0.061
Once per month or more	-0.015	0.029	-0.516	0.606	-0.072	0.042
Once per week or more	0.091**	0.030	2.993	0.003	0.031	0.151
Problem Solving						
SC/SA $\rightarrow$ PS	0.255***	0.029	8.789	0.000	0.198	0.311
ER/I $\rightarrow$ SC/SA	0.454***	0.019	23.369	0.000	0.416	0.492
ES $\rightarrow$ ER/I	0.435***	0.023	18.893	0.000	0.390	0.480
ES $\rightarrow$ SC/SA	0.204***	0.028	7.209	0.000	0.148	0.259
ES $\rightarrow$ SC/SA	0.185***	0.026	7.226	0.000	0.135	0.235
Demographics						
Age	-0.113***	0.030	-3.713	0.000	-0.173	-0.053
Female	-0.018	0.029	-0.625	0.532	-0.076	0.039
Socio-economic Status	0.070*	0.030	2.331	0.020	0.011	0.129
Hispanic	0.036	0.029	1.235	0.217	-0.021	0.092
Black	0.025	0.026	0.957	0.339	-0.026	0.075
Other Race	-0.051*	0.025	-2.006	0.045	-0.101	-0.001
Dwelling Condition						
Fairly well kept	-0.043	0.033	-1.292	0.196	-0.109	0.022
Poorly kept	-0.089**	0.030	-3.004	0.003	-0.148	-0.031
Very poorly kept	-0.036	0.033	-1.084	0.278	-0.101	0.029
Neighborhood Condition						
Fairly well kept	0.026	0.036	0.711	0.477	-0.045	0.097
Poorly kept	0.077*	0.035	2.195	0.028	0.008	0.145
Very poorly kept	0.061	0.038	1.622	0.105	-0.013	0.135
Rural area	0.002	0.033	0.063	0.950	-0.063	0.067

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J1.3

Wave I Attachment to Parents and Family - Developmental Cascade - Model 1 (Parental Care) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	83.175	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.794	0.018	44.951	0.759	0.828	NA
SC/SA	0.743	0.021	35.491	0.702	0.785	NA
Residual Variances						
SR1	0.591	0.029	20.376	0.535	0.648	0.409
SR2	0.507	0.031	16.446	0.447	0.567	0.493
SR3	0.597	0.028	20.982	0.541	0.653	0.403
SR4	0.700	0.029	23.812	0.642	0.757	0.300
SR5	0.574	0.026	22.300	0.524	0.625	0.426
SR6	0.581	0.025	23.617	0.533	0.629	0.419
SR7	0.659	0.026	25.735	0.609	0.709	0.341
SR10	0.454	0.017	26.338	0.420	0.487	0.546
SR11	0.463	0.018	26.102	0.428	0.498	0.537
SR12	0.517	0.017	29.974	0.483	0.550	0.483
SR13	0.540	0.017	31.311	0.506	0.574	0.460
SR14	0.385	0.017	22.897	0.352	0.418	0.615
SR15	0.335	0.018	18.981	0.301	0.370	0.665
SR16	0.528	0.017	31.479	0.495	0.561	0.472
Parental Care	0.890	0.019	47.929	0.854	0.927	0.110

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: How much do you feel that people in your family understand you?

Table J2.1

Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.640	0.023	27.812	0.595	0.685
SR2	ES		0.703	0.022	31.665	0.660	0.747
SR3	ES		0.633	0.023	28.040	0.589	0.678
SR4	ES		0.547	0.027	20.232	0.494	0.600
SR5	ER/I		0.652	0.020	32.896	0.613	0.691
SR6	ER/I		0.645	0.019	33.702	0.607	0.682
SR7	ER/I		0.588	0.022	26.725	0.545	0.632
SR10	PS		0.721	0.012	60.922	0.698	0.745
SR11	PS		0.717	0.012	58.953	0.693	0.740
SR12	PS		0.683	0.013	54.468	0.658	0.708
SR13	PS		0.661	0.013	51.275	0.635	0.686
SR14	SC/SA		0.780	0.011	72.957	0.759	0.800
SR15	SC/SA		0.816	0.011	75.310	0.795	0.837
SR16	SC/SA		0.684	0.012	55.911	0.660	0.708

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J2.2

Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.019	0.021	−0.868	0.385	−0.060	0.023
High participation	−0.023	0.021	−1.082	0.279	−0.064	0.018
Sport Participation						
Moderate participation	0.035 [†]	0.021	1.682	0.093	−0.006	0.076
High participation	0.044 [*]	0.022	2.047	0.041	0.002	0.086
Religious Youth Activity						
Less than once per month	0.004	0.019	0.217	0.828	−0.034	0.042
Once per month or more	0.045 [*]	0.021	2.164	0.030	0.004	0.086
Once per week or more	0.129 ^{***}	0.020	6.361	0.000	0.089	0.168
Problem Solving	0.427 ^{***}	0.019	22.988	0.000	0.391	0.464
SC/SA → PS	0.523 ^{***}	0.018	29.265	0.000	0.488	0.558
ER/I → SC/SA	0.444 ^{***}	0.023	19.421	0.000	0.399	0.489
ES → ER/I	0.204 ^{***}	0.028	7.228	0.000	0.149	0.259
ES → SC/SA	0.195 ^{***}	0.025	7.672	0.000	0.145	0.244
Demographics						
Age	−0.119 ^{***}	0.020	−6.072	0.000	−0.157	−0.080
Female	−0.096 ^{***}	0.020	−4.743	0.000	−0.135	−0.056
Socio-economic Status	−0.042 [*]	0.021	−2.026	0.043	−0.083	−0.001
Hispanic	0.012	0.019	0.631	0.528	−0.026	0.050
Black	0.006	0.017	0.327	0.744	−0.028	0.039
Other Race	−0.020	0.018	−1.080	0.280	−0.055	0.016
Dwelling Condition						
Fairly well kept	−0.077 ^{**}	0.024	−3.256	0.001	−0.123	−0.031
Poorly kept	−0.031	0.022	−1.389	0.165	−0.074	0.013
Very poorly kept	−0.044 [†]	0.024	−1.832	0.067	−0.091	0.003
Neighborhood Condition						
Fairly well kept	−0.027	0.026	−1.036	0.300	−0.077	0.024
Poorly kept	−0.024	0.024	−0.973	0.330	−0.072	0.024
Very poorly kept	−0.004	0.024	−0.146	0.884	−0.051	0.044
Rural area	−0.014	0.023	−0.623	0.533	−0.059	0.031

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J2.3

Wave I Attachment to Parents and Family - Developmental Cascade - Model 2 (Family Understanding) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	83.147	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.727	0.019	38.945	0.690	0.763	NA
SC/SA	0.730	0.021	34.219	0.688	0.772	NA
Residual Variances						
SR1	0.590	0.029	20.050	0.533	0.648	0.410
SR2	0.505	0.031	16.170	0.444	0.567	0.495
SR3	0.599	0.029	20.941	0.543	0.655	0.401
SR4	0.701	0.030	23.689	0.643	0.759	0.299
SR5	0.575	0.026	22.266	0.525	0.626	0.425
SR6	0.584	0.025	23.681	0.536	0.633	0.416
SR7	0.654	0.026	25.222	0.603	0.704	0.346
SR10	0.479	0.017	28.056	0.446	0.513	0.521
SR11	0.487	0.017	27.938	0.452	0.521	0.513
SR12	0.534	0.017	31.157	0.500	0.567	0.466
SR13	0.564	0.017	33.097	0.530	0.597	0.436
SR14	0.392	0.017	23.550	0.360	0.425	0.608
SR15	0.334	0.018	18.901	0.300	0.369	0.666
SR16	0.532	0.017	31.772	0.499	0.565	0.468
Famly Understanding	0.764	0.017	45.407	0.731	0.797	0.236

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: How much do you feel that your family pays attention to you?

Table J3.1

Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.637	0.023	27.887	0.592	0.682
SR2	ES		0.704	0.022	31.780	0.661	0.748
SR3	ES		0.635	0.023	28.173	0.591	0.679
SR4	ES		0.548	0.027	20.358	0.495	0.601
SR5	ER/I		0.653	0.020	32.929	0.614	0.692
SR6	ER/I		0.644	0.019	33.694	0.607	0.682
SR7	ER/I		0.588	0.022	26.494	0.544	0.631
SR10	PS		0.731	0.012	62.029	0.708	0.754
SR11	PS		0.725	0.012	58.756	0.701	0.749
SR12	PS		0.687	0.012	55.053	0.663	0.712
SR13	PS		0.668	0.013	52.282	0.643	0.693
SR14	SC/SA		0.783	0.011	72.928	0.762	0.804
SR15	SC/SA		0.815	0.011	74.860	0.794	0.836
SR16	SC/SA		0.686	0.012	56.002	0.662	0.710

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J3.2

Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.020	0.022	0.929	0.353	-0.022	0.063
High participation	0.006	0.021	0.256	0.798	-0.037	0.048
Sport Participation						
Moderate participation	0.044*	0.022	2.038	0.042	0.002	0.086
High participation	0.052*	0.022	2.316	0.021	0.008	0.095
Religious Youth Activity						
Less than once per month	0.002	0.021	0.083	0.934	-0.039	0.043
Once per month or more	0.022	0.021	1.067	0.286	-0.019	0.063
Once per week or more	0.081***	0.021	3.883	0.000	0.040	0.122
Problem Solving						
SC/SA $\rightarrow$ PS	0.494***	0.019	26.647	0.000	0.457	0.530
ER/I $\rightarrow$ SC/SA	0.435***	0.023	18.790	0.000	0.390	0.481
ES $\rightarrow$ ER/I	0.204***	0.028	7.225	0.000	0.149	0.259
ES $\rightarrow$ SC/SA	0.193***	0.026	7.496	0.000	0.142	0.243
Demographics						
Age	-0.083***	0.021	-3.957	0.000	-0.124	-0.042
Female	-0.023	0.021	-1.112	0.266	-0.064	0.018
Socio-economic Status	0.069**	0.021	3.242	0.001	0.027	0.111
Hispanic	0.008	0.019	0.400	0.690	-0.030	0.046
Black	-0.002	0.018	-0.118	0.906	-0.037	0.033
Other Race	-0.039*	0.020	-2.012	0.044	-0.077	-0.001
Dwelling Condition						
Fairly well kept	-0.059*	0.025	-2.383	0.017	-0.107	-0.010
Poorly kept	-0.044*	0.022	-1.994	0.046	-0.087	-0.001
Very poorly kept	-0.040	0.025	-1.595	0.111	-0.088	0.009
Neighborhood Condition						
Fairly well kept	0.006	0.027	0.244	0.807	-0.046	0.059
Poorly kept	0.005	0.024	0.186	0.852	-0.043	0.052
Very poorly kept	0.018	0.025	0.726	0.468	-0.030	0.066
Rural area	0.007	0.024	0.299	0.765	-0.039	0.053

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J3.3

Wave I Attachment to Parents and Family - Developmental Cascade - Model 3 (Family Pays Attention) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	83.305	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.756	0.018	41.354	0.720	0.792	NA
SC/SA	0.739	0.021	34.931	0.698	0.781	NA
Residual Variances						
SR1	0.594	0.029	20.406	0.537	0.651	0.406
SR2	0.504	0.031	16.150	0.443	0.565	0.496
SR3	0.596	0.029	20.815	0.540	0.653	0.404
SR4	0.700	0.029	23.732	0.642	0.758	0.300
SR5	0.574	0.026	22.147	0.523	0.624	0.426
SR6	0.585	0.025	23.728	0.536	0.633	0.415
SR7	0.655	0.026	25.120	0.604	0.706	0.345
SR10	0.466	0.017	27.060	0.432	0.500	0.534
SR11	0.475	0.018	26.530	0.439	0.510	0.525
SR12	0.528	0.017	30.752	0.494	0.561	0.472
SR13	0.554	0.017	32.486	0.521	0.588	0.446
SR14	0.387	0.017	22.991	0.354	0.420	0.613
SR15	0.336	0.018	18.908	0.301	0.370	0.664
SR16	0.529	0.017	31.495	0.496	0.562	0.471
Family Pays Attention	0.809	0.016	49.859	0.778	0.841	0.191

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: How much do you feel that you want to leave home?

Table J4.1

Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.635	0.023	27.740	0.590	0.680
SR2	ES		0.701	0.022	31.569	0.658	0.745
SR3	ES		0.635	0.023	27.991	0.590	0.679
SR4	ES		0.546	0.027	20.200	0.493	0.599
SR5	ER/I		0.652	0.020	32.926	0.613	0.691
SR6	ER/I		0.650	0.019	34.141	0.612	0.687
SR7	ER/I		0.581	0.022	26.390	0.538	0.624
SR10	PS		0.737	0.012	63.676	0.714	0.760
SR11	PS		0.732	0.012	60.111	0.708	0.755
SR12	PS		0.693	0.012	55.687	0.669	0.718
SR13	PS		0.674	0.013	52.945	0.649	0.699
SR14	SC/SA		0.782	0.011	72.704	0.761	0.803
SR15	SC/SA		0.815	0.011	74.695	0.794	0.836
SR16	SC/SA		0.683	0.012	55.634	0.659	0.707

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J4.2

Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.001	0.021	0.052	0.958	-0.040	0.042
High participation	0.001	0.021	0.030	0.976	-0.040	0.041
Sport Participation						
Moderate participation	-0.014	0.021	-0.676	0.499	-0.055	0.027
High participation	-0.063**	0.021	-2.930	0.003	-0.104	-0.021
Religious Youth Activity						
Less than once per month	-0.006	0.020	-0.308	0.758	-0.046	0.034
Once per month or more	-0.033	0.020	-1.638	0.101	-0.073	0.006
Once per week or more	-0.063**	0.021	-2.967	0.003	-0.104	-0.021
Problem Solving						
SC/SA $\rightarrow$ PS	0.469***	0.019	24.585	0.000	0.431	0.506
ER/I $\rightarrow$ SC/SA	0.443***	0.023	19.122	0.000	0.398	0.489
ES $\rightarrow$ ER/I	0.197***	0.028	6.951	0.000	0.142	0.253
ES $\rightarrow$ SC/SA	0.192***	0.026	7.509	0.000	0.142	0.242
Demographics						
Age	0.326***	0.018	17.721	0.000	0.290	0.362
Female	0.022	0.020	1.109	0.268	-0.017	0.061
Socio-economic Status	0.028	0.021	1.353	0.176	-0.012	0.068
Hispanic	-0.030	0.020	-1.513	0.130	-0.068	0.009
Black	0.054**	0.017	3.127	0.002	0.020	0.088
Other Race	0.020	0.020	0.982	0.326	-0.019	0.058
Dwelling Condition						
Fairly well kept	0.032	0.023	1.377	0.168	-0.013	0.077
Poorly kept	0.079***	0.021	3.668	0.000	0.037	0.121
Very poorly kept	0.068**	0.026	2.653	0.008	0.018	0.118
Neighborhood Condition						
Fairly well kept	0.003	0.025	0.132	0.895	-0.046	0.052
Poorly kept	-0.001	0.024	-0.039	0.969	-0.047	0.046
Very poorly kept	-0.040	0.025	-1.599	0.110	-0.089	0.009
Rural area	0.025	0.023	1.102	0.270	-0.019	0.070

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table J4.3

Wave I Attachment to Parents and Family - Developmental Cascade - Model 4 (Desire to Leave Home) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ER/I	0.961	0.011	85.860	0.939	0.983	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.780	0.018	43.641	0.745	0.815	NA
SC/SA	0.733	0.021	34.272	0.691	0.775	NA
Residual Variances						
SR1	0.596	0.029	20.494	0.539	0.653	0.404
SR2	0.508	0.031	16.307	0.447	0.569	0.492
SR3	0.597	0.029	20.744	0.541	0.654	0.403
SR4	0.702	0.029	23.806	0.644	0.760	0.298
SR5	0.575	0.026	22.297	0.525	0.626	0.425
SR6	0.578	0.025	23.390	0.530	0.627	0.422
SR7	0.663	0.026	25.926	0.613	0.713	0.337
SR10	0.457	0.017	26.778	0.423	0.490	0.543
SR11	0.465	0.018	26.100	0.430	0.500	0.535
SR12	0.519	0.017	30.091	0.486	0.553	0.481
SR13	0.546	0.017	31.808	0.512	0.579	0.454
SR14	0.388	0.017	23.077	0.355	0.421	0.612
SR15	0.336	0.018	18.881	0.301	0.371	0.664
SR16	0.533	0.017	31.784	0.500	0.566	0.467
Desire to Leave Home	0.804	0.015	52.506	0.774	0.834	0.196

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix K

Wave I Tobacco, Alcohol, and Drug Use

Developmental Cascade Models

Model 1: Have you ever smoked cigarettes regularly, that is, at least 1 cigarette every day for 30 days?

Table K1.1

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.638	0.023	28.155	0.594	0.682
SR2	ES	0.701	0.022	32.027	0.658	0.744
SR3	ES	0.636	0.022	28.411	0.593	0.680
SR4	ES	0.549	0.027	20.532	0.497	0.601
SR5	ER/I	0.652	0.020	33.092	0.613	0.690
SR6	ER/I	0.647	0.019	34.155	0.610	0.684
SR7	ER/I	0.585	0.022	26.668	0.542	0.628
SR10	PS	0.743	0.012	64.423	0.720	0.765
SR11	PS	0.736	0.012	61.308	0.713	0.760
SR12	PS	0.698	0.012	56.653	0.674	0.722
SR13	PS	0.681	0.013	54.145	0.657	0.706
SR14	SC/SA	0.785	0.011	72.831	0.764	0.806
SR15	SC/SA	0.815	0.011	73.862	0.793	0.837
SR16	SC/SA	0.685	0.012	55.824	0.661	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K1.2

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.054*	0.027	−1.975	0.048	−0.108	0.000
High participation	−0.054*	0.027	−2.004	0.045	−0.108	−0.001
Sport Participation						
Moderate participation	−0.052 [†]	0.027	−1.926	0.054	−0.105	0.001
High participation	−0.097***	0.029	−3.322	0.001	−0.154	−0.040
Religious Youth Activity						
Less than once per month	−0.040	0.025	−1.598	0.110	−0.089	0.009
Once per month or more	−0.076**	0.027	−2.801	0.005	−0.129	−0.023
Once per week or more	−0.203***	0.028	−7.183	0.000	−0.258	−0.147
Problem Solving	−0.179***	0.028	−6.341	0.000	−0.234	−0.123
SC/SA → PS	0.444***	0.019	22.911	0.000	0.406	0.482
ER/I → SC/SA	0.437***	0.023	18.871	0.000	0.391	0.482
ES → ER/I	0.204***	0.028	7.224	0.000	0.149	0.259
ES → SC/SA	0.183***	0.026	7.127	0.000	0.132	0.233
Demographics						
Age	0.234***	0.027	8.713	0.000	0.181	0.286
Female	0.032	0.026	1.229	0.219	−0.019	0.083
Socio-economic Status	−0.066*	0.028	−2.415	0.016	−0.120	−0.013
Hispanic	−0.117***	0.026	−4.551	0.000	−0.168	−0.067
Black	−0.240***	0.026	−9.231	0.000	−0.291	−0.189
Other Race	−0.033	0.024	−1.394	0.163	−0.081	0.014
Dwelling Condition						
Fairly well kept	0.049	0.031	1.607	0.108	−0.011	0.109
Poorly kept	0.060*	0.029	2.076	0.038	0.003	0.117
Very poorly kept	0.021	0.032	0.666	0.505	−0.041	0.084
Neighborhood Condition						
Fairly well kept	−0.016	0.035	−0.476	0.634	−0.084	0.051
Poorly kept	−0.030	0.033	−0.914	0.361	−0.094	0.034
Very poorly kept	0.015	0.031	0.483	0.629	−0.045	0.075
Rural area	−0.007	0.030	−0.223	0.824	−0.064	0.051

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K1.3

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 1 (Cigarette Smoking) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	83.112	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.803	0.017	46.579	0.769	0.836	NA
SC/SA	0.743	0.021	35.345	0.702	0.785	NA
Residual Variances						
SR1	0.593	0.029	20.502	0.536	0.650	0.407
SR2	0.508	0.031	16.543	0.448	0.568	0.492
SR3	0.595	0.029	20.869	0.539	0.651	0.405
SR4	0.699	0.029	23.806	0.641	0.756	0.301
SR5	0.575	0.026	22.404	0.525	0.626	0.425
SR6	0.582	0.024	23.751	0.534	0.630	0.418
SR7	0.658	0.026	25.621	0.607	0.708	0.342
SR10	0.449	0.017	26.210	0.415	0.482	0.551
SR11	0.458	0.018	25.928	0.424	0.493	0.542
SR12	0.513	0.017	29.873	0.480	0.547	0.487
SR13	0.536	0.017	31.248	0.502	0.569	0.464
SR14	0.384	0.017	22.699	0.351	0.417	0.616
SR15	0.336	0.018	18.675	0.301	0.371	0.664
SR16	0.531	0.017	31.600	0.498	0.564	0.469
Cigarette Smoking	0.773	0.020	38.465	0.734	0.813	0.227

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: Over the past 12 months, on how many days did you drink 5 or more drinks in a row?

Table K2.1

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.634	0.023	27.939	0.590	0.679
SR2	ES		0.703	0.022	31.916	0.660	0.746
SR3	ES		0.638	0.022	28.389	0.594	0.682
SR4	ES		0.544	0.027	20.230	0.492	0.597
SR5	ER/I		0.653	0.020	33.239	0.614	0.691
SR6	ER/I		0.647	0.019	34.223	0.610	0.684
SR7	ER/I		0.586	0.022	26.759	0.543	0.629
SR10	PS		0.742	0.011	64.610	0.720	0.765
SR11	PS		0.738	0.012	61.672	0.715	0.762
SR12	PS		0.698	0.012	56.679	0.673	0.722
SR13	PS		0.682	0.013	54.119	0.657	0.707
SR14	SC/SA		0.786	0.011	73.252	0.765	0.807
SR15	SC/SA		0.816	0.011	74.513	0.795	0.838
SR16	SC/SA		0.685	0.012	56.070	0.661	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K2.2

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.032	0.025	-1.270	0.204	-0.081	0.017
High participation	-0.042 [†]	0.024	-1.757	0.079	-0.090	0.005
Sport Participation						
Moderate participation	0.070**	0.024	2.887	0.004	0.022	0.117
High participation	0.024	0.025	0.974	0.330	-0.024	0.073
Religious Youth Activity						
Less than once per month	-0.021	0.022	-0.962	0.336	-0.065	0.022
Once per month or more	-0.051*	0.024	-2.118	0.034	-0.098	-0.004
Once per week or more	-0.204***	0.025	-8.252	0.000	-0.252	-0.155
Problem Solving						
SC/SA → PS	0.444***	0.019	22.863	0.000	0.406	0.482
ER/I → SC/SA	0.440***	0.023	19.072	0.000	0.394	0.485
ES → ER/I	0.205***	0.028	7.252	0.000	0.150	0.260
ES → SC/SA	0.177***	0.026	6.920	0.000	0.127	0.228
Demographics						
Age	0.329***	0.022	14.663	0.000	0.285	0.373
Female	-0.045 [†]	0.023	-1.923	0.054	-0.091	0.001
Socio-economic Status	-0.026	0.025	-1.050	0.294	-0.075	0.023
Hispanic	-0.021	0.022	-0.951	0.342	-0.065	0.022
Black	-0.163***	0.022	-7.403	0.000	-0.206	-0.119
Other Race	-0.040 [†]	0.022	-1.835	0.067	-0.083	0.003
Dwelling Condition						
Fairly well kept	0.041	0.026	1.562	0.118	-0.010	0.093
Poorly kept	0.052*	0.024	2.149	0.032	0.005	0.100
Very poorly kept	-0.012	0.024	-0.518	0.605	-0.059	0.035
Neighborhood Condition						
Fairly well kept	-0.024	0.030	-0.814	0.415	-0.082	0.034
Poorly kept	0.049 [†]	0.026	1.875	0.061	-0.002	0.100
Very poorly kept	0.018	0.024	0.749	0.454	-0.029	0.065
Rural area	-0.003	0.027	-0.103	0.918	-0.056	0.050

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K2.3

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 2 (Binge Drinking) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.958	0.012	82.682	0.935	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.803	0.017	46.529	0.769	0.837	NA
SC/SA	0.743	0.021	35.380	0.702	0.784	NA
Residual Variances						
SR1	0.597	0.029	20.735	0.541	0.654	0.403
SR2	0.506	0.031	16.351	0.445	0.567	0.494
SR3	0.593	0.029	20.679	0.537	0.649	0.407
SR4	0.704	0.029	24.003	0.646	0.761	0.296
SR5	0.574	0.026	22.363	0.523	0.624	0.426
SR6	0.581	0.024	23.734	0.533	0.629	0.419
SR7	0.656	0.026	25.563	0.606	0.707	0.344
SR10	0.449	0.017	26.297	0.415	0.482	0.551
SR11	0.455	0.018	25.744	0.420	0.490	0.545
SR12	0.513	0.017	29.892	0.480	0.547	0.487
SR13	0.535	0.017	31.118	0.501	0.569	0.465
SR14	0.383	0.017	22.731	0.350	0.416	0.617
SR15	0.333	0.018	18.635	0.298	0.368	0.667
SR16	0.530	0.017	31.650	0.497	0.563	0.470
Binge Drinking	0.782	0.017	44.737	0.748	0.817	0.218

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: During your life, how many times have you used marijuana?

Table K3.1

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use)
 – *Std. Factor Loadings*

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.626	0.024	26.238	0.579	0.672
SR2	ES		0.706	0.023	30.188	0.660	0.752
SR3	ES		0.627	0.024	26.411	0.580	0.673
SR4	ES		0.543	0.028	19.519	0.489	0.598
SR5	ER/I		0.649	0.020	31.993	0.609	0.688
SR6	ER/I		0.649	0.020	33.000	0.611	0.688
SR7	ER/I		0.597	0.023	26.385	0.553	0.641
SR10	PS		0.741	0.012	62.185	0.717	0.764
SR11	PS		0.742	0.012	60.011	0.718	0.767
SR12	PS		0.698	0.013	55.053	0.673	0.723
SR13	PS		0.682	0.013	51.471	0.656	0.707
SR14	SC/SA		0.781	0.011	69.501	0.759	0.803
SR15	SC/SA		0.817	0.011	71.685	0.794	0.839
SR16	SC/SA		0.687	0.013	54.590	0.662	0.711

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K3.2

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use)
 – *Structural Regressions*

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.026	0.029	−0.897	0.370	−0.082	0.030
High participation	−0.052 [†]	0.028	−1.864	0.062	−0.106	0.003
Sport Participation						
Moderate participation	0.033	0.028	1.184	0.236	−0.021	0.087
High participation	0.016	0.029	0.536	0.592	−0.042	0.074
Religious Youth Activity						
Less than once per month	−0.049 [†]	0.026	−1.884	0.060	−0.100	0.002
Once per month or more	−0.138***	0.028	−4.883	0.000	−0.193	−0.083
Once per week or more	−0.179***	0.030	−6.035	0.000	−0.237	−0.121
Problem Solving	−0.193***	0.027	−7.130	0.000	−0.246	−0.140
SC/SA → PS	0.441***	0.020	22.011	0.000	0.402	0.480
ER/I → SC/SA	0.435***	0.024	18.353	0.000	0.388	0.481
ES → ER/I	0.210***	0.029	7.191	0.000	0.153	0.267
ES → SC/SA	0.164***	0.027	6.180	0.000	0.112	0.216
Demographics						
Age	0.239***	0.027	8.771	0.000	0.186	0.293
Female	−0.021	0.028	−0.768	0.442	−0.076	0.033
Socio-economic Status	0.016	0.028	0.556	0.578	−0.039	0.070
Hispanic	0.015	0.025	0.605	0.545	−0.033	0.063
Black	−0.003	0.026	−0.102	0.919	−0.054	0.049
Other Race	0.007	0.024	0.268	0.789	−0.041	0.054
Dwelling Condition						
Fairly well kept	0.017	0.031	0.552	0.581	−0.044	0.079
Poorly kept	0.001	0.029	0.044	0.965	−0.055	0.058
Very poorly kept	0.012	0.030	0.405	0.686	−0.046	0.070
Neighborhood Condition						
Fairly well kept	−0.013	0.034	−0.384	0.701	−0.080	0.053
Poorly kept	0.046	0.030	1.514	0.130	−0.014	0.106
Very poorly kept	0.007	0.027	0.266	0.790	−0.046	0.060
Rural area	−0.045	0.031	−1.462	0.144	−0.105	0.015

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K3.3

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 3 (Marijuana Use)
– Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.956	0.012	77.865	0.932	0.980	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.805	0.018	45.571	0.771	0.840	NA
SC/SA	0.754	0.021	35.442	0.712	0.796	NA
Residual Variances						
SR1	0.609	0.030	20.402	0.550	0.667	0.391
SR2	0.501	0.033	15.161	0.436	0.566	0.499
SR3	0.607	0.030	20.422	0.549	0.666	0.393
SR4	0.705	0.030	23.288	0.645	0.764	0.295
SR5	0.579	0.026	22.029	0.528	0.631	0.421
SR6	0.578	0.026	22.630	0.528	0.628	0.422
SR7	0.644	0.027	23.837	0.591	0.697	0.356
SR10	0.451	0.018	25.589	0.417	0.486	0.549
SR11	0.449	0.018	24.434	0.413	0.485	0.551
SR12	0.513	0.018	28.986	0.478	0.548	0.487
SR13	0.535	0.018	29.669	0.500	0.571	0.465
SR14	0.390	0.018	22.259	0.356	0.425	0.610
SR15	0.333	0.019	17.916	0.297	0.370	0.667
SR16	0.528	0.017	30.567	0.494	0.562	0.472
Marijuana Use	0.849	0.018	46.138	0.813	0.885	0.151

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: Have you ever driven while drunk?

Table K4.1

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving)
 – *Std. Factor Loadings*

	Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES		0.610	0.031	19.492	0.549	0.671
SR2	ES		0.750	0.032	23.733	0.688	0.812
SR3	ES		0.621	0.032	19.340	0.558	0.684
SR4	ES		0.565	0.037	15.185	0.492	0.638
SR5	ER/I		0.685	0.025	27.056	0.635	0.734
SR6	ER/I		0.660	0.026	25.172	0.609	0.711
SR7	ER/I		0.621	0.025	24.495	0.571	0.670
SR10	PS		0.741	0.015	50.712	0.713	0.770
SR11	PS		0.778	0.014	56.857	0.751	0.805
SR12	PS		0.711	0.016	44.439	0.679	0.742
SR13	PS		0.689	0.015	45.023	0.659	0.719
SR14	SC/SA		0.807	0.015	53.884	0.778	0.836
SR15	SC/SA		0.805	0.015	52.200	0.774	0.835
SR16	SC/SA		0.694	0.017	40.712	0.661	0.728

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K4.2

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving)
 – *Structural Regressions*

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.019	0.048	−0.391	0.696	−0.113	0.076
High participation	0.001	0.045	0.015	0.988	−0.088	0.090
Sport Participation						
Moderate participation	0.077	0.049	1.580	0.114	−0.018	0.172
High participation	0.009	0.044	0.215	0.830	−0.076	0.095
Religious Youth Activity						
Less than once per month	−0.007	0.041	−0.160	0.873	−0.088	0.074
Once per month or more	−0.021	0.045	−0.465	0.642	−0.110	0.068
Once per week or more	−0.173***	0.050	−3.468	0.001	−0.271	−0.075
Problem Solving						
SC/SA → PS	0.408***	0.028	14.584	0.000	0.353	0.463
ER/I → SC/SA	0.388***	0.030	12.782	0.000	0.329	0.448
ES → ER/I	0.171***	0.038	4.522	0.000	0.097	0.245
ES → SC/SA	0.202***	0.036	5.657	0.000	0.132	0.272
Demographics						
Age	0.240***	0.045	5.291	0.000	0.151	0.329
Female	−0.169***	0.046	−3.682	0.000	−0.260	−0.079
Socio-economic Status	0.086 [†]	0.046	1.876	0.061	−0.004	0.177
Hispanic	−0.060	0.055	−1.076	0.282	−0.168	0.049
Black	−0.230***	0.053	−4.351	0.000	−0.333	−0.126
Other Race	−0.006	0.037	−0.161	0.872	−0.079	0.067
Dwelling Condition						
Fairly well kept	−0.023	0.053	−0.434	0.665	−0.127	0.081
Poorly kept	−0.021	0.049	−0.441	0.659	−0.117	0.074
Very poorly kept	−0.050	0.060	−0.840	0.401	−0.167	0.067
Neighborhood Condition						
Fairly well kept	0.009	0.057	0.150	0.881	−0.104	0.121
Poorly kept	−0.052	0.060	−0.867	0.386	−0.168	0.065
Very poorly kept	−0.018	0.053	−0.339	0.735	−0.122	0.086
Rural area	0.056	0.048	1.155	0.248	−0.039	0.151

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table K4.3

Wave I Tobacco, Alcohol, and Drug Use - Developmental Cascade - Model 4 (Drunk Driving)
– Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.971	0.013	75.098	0.945	0.996	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.834	0.023	36.528	0.789	0.878	NA
SC/SA	0.782	0.027	28.607	0.728	0.835	NA
Residual Variances						
SR1	0.628	0.038	16.459	0.553	0.703	0.372
SR2	0.437	0.047	9.219	0.344	0.530	0.563
SR3	0.614	0.040	15.382	0.536	0.692	0.386
SR4	0.680	0.042	16.170	0.598	0.763	0.320
SR5	0.531	0.035	15.339	0.463	0.599	0.469
SR6	0.564	0.035	16.310	0.497	0.632	0.436
SR7	0.615	0.031	19.547	0.553	0.676	0.385
SR10	0.450	0.022	20.779	0.408	0.493	0.550
SR11	0.395	0.021	18.563	0.353	0.437	0.605
SR12	0.495	0.023	21.790	0.451	0.540	0.505
SR13	0.525	0.021	24.913	0.484	0.567	0.475
SR14	0.349	0.024	14.441	0.302	0.396	0.651
SR15	0.353	0.025	14.225	0.304	0.401	0.647
SR16	0.518	0.024	21.853	0.471	0.564	0.482
Drunk Driving	0.769	0.037	20.905	0.697	0.841	0.231

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix L

Wave I Delinquency

Developmental Cascade Models

Model 1: In the past 12 months, how often did you lie to your parents or guardians about where you had been or whom you were with?

Table L1.1

Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.635	0.023	27.880	0.591	0.680
SR2	ES	0.702	0.022	31.861	0.659	0.745
SR3	ES	0.636	0.023	28.251	0.592	0.680
SR4	ES	0.549	0.027	20.441	0.497	0.602
SR5	ER/I	0.653	0.020	32.994	0.614	0.692
SR6	ER/I	0.645	0.019	33.932	0.607	0.682
SR7	ER/I	0.585	0.022	26.542	0.542	0.628
SR10	PS	0.736	0.012	62.945	0.713	0.759
SR11	PS	0.732	0.012	60.011	0.708	0.756
SR12	PS	0.693	0.012	55.620	0.669	0.718
SR13	PS	0.675	0.013	52.911	0.650	0.700
SR14	SC/SA	0.782	0.011	72.590	0.761	0.803
SR15	SC/SA	0.817	0.011	75.319	0.796	0.839
SR16	SC/SA	0.682	0.012	55.732	0.658	0.706

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L1.2

Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.017	0.022	0.738	0.461	-0.027	0.060
High participation	0.002	0.021	0.099	0.921	-0.040	0.044
Sport Participation						
Moderate participation	0.077***	0.022	3.522	0.000	0.034	0.120
High participation	0.059*	0.023	2.556	0.011	0.014	0.103
Religious Youth Activity						
Less than once per month	0.026	0.020	1.311	0.190	-0.013	0.066
Once per month or more	-0.008	0.021	-0.382	0.702	-0.050	0.034
Once per week or more	-0.048*	0.022	-2.171	0.030	-0.091	-0.005
Problem Solving						
SC/SA $\rightarrow$ PS	0.459***	0.019	23.666	0.000	0.421	0.497
ER/I $\rightarrow$ SC/SA	0.442***	0.023	19.094	0.000	0.396	0.487
ES $\rightarrow$ ER/I	0.203***	0.028	7.171	0.000	0.148	0.258
ES $\rightarrow$ SC/SA	0.186***	0.026	7.289	0.000	0.136	0.236
Demographics						
Age	0.144***	0.021	6.842	0.000	0.103	0.185
Female	0.064**	0.021	3.049	0.002	0.023	0.105
Socio-economic Status	0.031	0.022	1.403	0.161	-0.012	0.073
Hispanic	0.037 [†]	0.021	1.786	0.074	-0.004	0.078
Black	-0.005	0.020	-0.243	0.808	-0.043	0.034
Other Race	0.045*	0.019	2.349	0.019	0.008	0.083
Dwelling Condition						
Fairly well kept	-0.016	0.025	-0.665	0.506	-0.065	0.032
Poorly kept	0.052*	0.023	2.239	0.025	0.006	0.097
Very poorly kept	-0.018	0.025	-0.695	0.487	-0.067	0.032
Neighborhood Condition						
Fairly well kept	-0.023	0.027	-0.872	0.383	-0.075	0.029
Poorly kept	-0.024	0.025	-0.947	0.344	-0.074	0.026
Very poorly kept	-0.009	0.026	-0.346	0.730	-0.059	0.041
Rural area	-0.057*	0.024	-2.380	0.017	-0.103	-0.010

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L1.3

Wave I Delinquency - Developmental Cascade - Model 1 (Lying to Parents) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.959	0.011	83.429	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.789	0.018	44.335	0.754	0.824	NA
SC/SA	0.737	0.021	34.693	0.695	0.779	NA
Residual Variances						
SR1	0.596	0.029	20.577	0.539	0.653	0.404
SR2	0.507	0.031	16.371	0.446	0.567	0.493
SR3	0.596	0.029	20.807	0.540	0.652	0.404
SR4	0.698	0.030	23.642	0.640	0.756	0.302
SR5	0.573	0.026	22.182	0.523	0.624	0.427
SR6	0.584	0.024	23.857	0.536	0.632	0.416
SR7	0.658	0.026	25.498	0.607	0.708	0.342
SR10	0.458	0.017	26.604	0.424	0.492	0.542
SR11	0.465	0.018	26.042	0.430	0.500	0.535
SR12	0.519	0.017	30.059	0.486	0.553	0.481
SR13	0.544	0.017	31.534	0.510	0.578	0.456
SR14	0.388	0.017	23.043	0.355	0.421	0.612
SR15	0.332	0.018	18.706	0.297	0.367	0.668
SR16	0.534	0.017	31.989	0.502	0.567	0.466
Lying to Parents	0.893	0.013	67.245	0.867	0.919	0.107

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 2: In the past 12 months, how often did you run away from home?

Table L2.1

Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Std. Factor Loadings

	Factor Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.636	0.023	27.967	0.591	0.680
SR2	ES	0.704	0.022	31.951	0.660	0.747
SR3	ES	0.634	0.022	28.243	0.590	0.678
SR4	ES	0.550	0.027	20.499	0.497	0.602
SR5	ER/I	0.653	0.020	32.967	0.614	0.691
SR6	ER/I	0.647	0.019	33.996	0.609	0.684
SR7	ER/I	0.583	0.022	26.483	0.540	0.627
SR10	PS	0.740	0.012	64.000	0.718	0.763
SR11	PS	0.735	0.012	60.644	0.711	0.758
SR12	PS	0.694	0.012	55.658	0.669	0.718
SR13	PS	0.679	0.013	53.217	0.654	0.704
SR14	SC/SA	0.782	0.011	72.850	0.761	0.803
SR15	SC/SA	0.819	0.011	75.688	0.798	0.840
SR16	SC/SA	0.684	0.012	55.954	0.660	0.708

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L2.2

Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.066	0.041	−1.616	0.106	−0.146	0.014
High participation	−0.102**	0.039	−2.597	0.009	−0.179	−0.025
Sport Participation						
Moderate participation	0.069†	0.041	1.675	0.094	−0.012	0.150
High participation	0.045	0.042	1.089	0.276	−0.036	0.127
Religious Youth Activity						
Less than once per month	−0.008	0.038	−0.205	0.838	−0.083	0.067
Once per month or more	0.003	0.038	0.069	0.945	−0.072	0.077
Once per week or more	−0.061	0.041	−1.478	0.140	−0.142	0.020
Problem Solving						
SC/SA → PS	0.447***	0.019	22.987	0.000	0.409	0.485
ER/I → SC/SA	0.437***	0.023	18.896	0.000	0.392	0.482
ES → ER/I	0.203***	0.028	7.169	0.000	0.147	0.258
ES → SC/SA	0.182***	0.026	7.106	0.000	0.131	0.232
Demographics						
Age	0.062	0.040	1.537	0.124	−0.017	0.140
Female	0.065†	0.038	1.691	0.091	−0.010	0.140
Socio-economic Status	−0.051	0.040	−1.282	0.200	−0.129	0.027
Hispanic	−0.043	0.036	−1.190	0.234	−0.113	0.028
Black	−0.012	0.034	−0.363	0.717	−0.079	0.055
Other Race	0.044	0.031	1.413	0.158	−0.017	0.104
Dwelling Condition						
Fairly well kept	0.139**	0.043	3.219	0.001	0.054	0.223
Poorly kept	0.126**	0.039	3.218	0.001	0.049	0.203
Very poorly kept	0.103**	0.040	2.589	0.010	0.025	0.181
Neighborhood Condition						
Fairly well kept	−0.052	0.048	−1.091	0.275	−0.146	0.042
Poorly kept	−0.047	0.049	−0.965	0.335	−0.144	0.049
Very poorly kept	−0.059	0.044	−1.352	0.176	−0.145	0.027
Rural area	−0.068	0.045	−1.498	0.134	−0.157	0.021

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L2.3

Wave I Delinquency - Developmental Cascade - Model 2 (Running Away from Home) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.959	0.011	83.459	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.800	0.017	45.981	0.766	0.834	NA
SC/SA	0.744	0.021	35.485	0.703	0.785	NA
Residual Variances						
SR1	0.596	0.029	20.639	0.540	0.653	0.404
SR2	0.505	0.031	16.294	0.444	0.566	0.495
SR3	0.598	0.028	20.974	0.542	0.653	0.402
SR4	0.698	0.029	23.657	0.640	0.756	0.302
SR5	0.574	0.026	22.222	0.523	0.625	0.426
SR6	0.582	0.025	23.659	0.534	0.630	0.418
SR7	0.660	0.026	25.656	0.609	0.710	0.340
SR10	0.452	0.017	26.370	0.418	0.485	0.548
SR11	0.460	0.018	25.845	0.425	0.495	0.540
SR12	0.519	0.017	29.975	0.485	0.552	0.481
SR13	0.539	0.017	31.144	0.505	0.573	0.461
SR14	0.388	0.017	23.120	0.355	0.421	0.612
SR15	0.329	0.018	18.539	0.294	0.364	0.671
SR16	0.532	0.017	31.850	0.500	0.565	0.468
Running Away from Home	0.861	0.025	34.425	0.812	0.910	0.139

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 3: In the past 12 months, how often did you steal something worth less than \$50?

Table L3.1

Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) – Std. Factor Loadings

Factor	Indicator	Loading	SE	<i>z</i>	CI Lower	CI Upper
SR1	ES	0.635	0.023	27.979	0.590	0.679
SR2	ES	0.704	0.022	32.026	0.661	0.747
SR3	ES	0.636	0.022	28.349	0.592	0.680
SR4	ES	0.550	0.027	20.503	0.497	0.602
SR5	ER/I	0.652	0.020	32.922	0.613	0.691
SR6	ER/I	0.645	0.019	33.839	0.607	0.682
SR7	ER/I	0.584	0.022	26.451	0.541	0.627
SR10	PS	0.742	0.012	63.802	0.719	0.764
SR11	PS	0.733	0.012	60.404	0.709	0.757
SR12	PS	0.696	0.012	56.371	0.671	0.720
SR13	PS	0.677	0.013	52.881	0.652	0.703
SR14	SC/SA	0.784	0.011	72.741	0.763	0.805
SR15	SC/SA	0.819	0.011	75.573	0.798	0.840
SR16	SC/SA	0.685	0.012	56.059	0.661	0.709

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity), PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L3.2

Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.014	0.028	0.525	0.599	-0.040	0.068
High participation	-0.003	0.027	-0.112	0.911	-0.056	0.050
Sport Participation						
Moderate participation	0.058*	0.027	2.111	0.035	0.004	0.111
High participation	0.003	0.028	0.112	0.911	-0.051	0.058
Religious Youth Activity						
Less than once per month	0.014	0.025	0.575	0.565	-0.035	0.064
Once per month or more	-0.041	0.027	-1.550	0.121	-0.093	0.011
Once per week or more	-0.092***	0.027	-3.411	0.001	-0.145	-0.039
Problem Solving						
SC/SA $\rightarrow$ PS	0.447***	0.019	23.017	0.000	0.409	0.485
ER/I $\rightarrow$ SC/SA	0.437***	0.023	18.838	0.000	0.391	0.482
ES $\rightarrow$ ER/I	0.203***	0.028	7.166	0.000	0.148	0.259
ES $\rightarrow$ SC/SA	0.182***	0.026	7.146	0.000	0.132	0.233
Demographics						
Age	-0.027	0.028	-0.981	0.326	-0.082	0.027
Female	-0.133***	0.025	-5.229	0.000	-0.183	-0.083
Socio-economic Status	0.046	0.028	1.642	0.101	-0.009	0.100
Hispanic	0.100***	0.025	4.045	0.000	0.051	0.148
Black	-0.009	0.025	-0.366	0.714	-0.057	0.039
Other Race	0.047*	0.023	2.023	0.043	0.001	0.093
Dwelling Condition						
Fairly well kept	0.091**	0.030	2.985	0.003	0.031	0.150
Poorly kept	0.028	0.028	0.995	0.320	-0.027	0.083
Very poorly kept	0.005	0.028	0.165	0.869	-0.050	0.059
Neighborhood Condition						
Fairly well kept	-0.064 [†]	0.033	-1.913	0.056	-0.129	0.002
Poorly kept	-0.008	0.031	-0.252	0.801	-0.068	0.052
Very poorly kept	-0.039	0.026	-1.460	0.144	-0.091	0.013
Rural area	-0.074*	0.030	-2.447	0.014	-0.133	-0.015

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L3.3

Wave I Delinquency - Developmental Cascade - Model 3 (Minor Theft) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ER/I	0.959	0.012	83.230	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.800	0.017	46.030	0.766	0.834	NA
SC/SA	0.744	0.021	35.353	0.702	0.785	NA
Residual Variances						
SR1	0.597	0.029	20.729	0.541	0.654	0.403
SR2	0.504	0.031	16.289	0.444	0.565	0.496
SR3	0.595	0.029	20.819	0.539	0.651	0.405
SR4	0.698	0.029	23.691	0.640	0.756	0.302
SR5	0.575	0.026	22.253	0.524	0.625	0.425
SR6	0.584	0.025	23.786	0.536	0.632	0.416
SR7	0.659	0.026	25.544	0.608	0.709	0.341
SR10	0.450	0.017	26.119	0.416	0.484	0.550
SR11	0.463	0.018	26.040	0.428	0.498	0.537
SR12	0.516	0.017	30.068	0.483	0.550	0.484
SR13	0.541	0.017	31.166	0.507	0.575	0.459
SR14	0.386	0.017	22.834	0.353	0.419	0.614
SR15	0.329	0.018	18.518	0.294	0.364	0.671
SR16	0.531	0.017	31.730	0.498	0.564	0.469
Minor Theft	0.867	0.018	49.002	0.832	0.901	0.133

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Model 4: In the past 12 months, how often did you get into a serious physical fight?

Table L4.1

Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) – Std. Factor Loadings

	Factor	Indicator	Loading	SE	z	CI Lower	CI Upper
SR1	ES		0.635	0.023	27.988	0.590	0.679
SR2	ES		0.705	0.022	32.085	0.662	0.748
SR3	ES		0.635	0.022	28.299	0.591	0.679
SR4	ES		0.550	0.027	20.551	0.498	0.603
SR5	ER/I		0.653	0.020	33.081	0.615	0.692
SR6	ER/I		0.646	0.019	34.066	0.609	0.683
SR7	ER/I		0.584	0.022	26.600	0.541	0.627
SR10	PS		0.741	0.012	64.051	0.718	0.763
SR11	PS		0.735	0.012	60.974	0.712	0.759
SR12	PS		0.697	0.012	56.271	0.673	0.721
SR13	PS		0.680	0.013	53.437	0.655	0.704
SR14	SC/SA		0.783	0.011	72.833	0.762	0.804
SR15	SC/SA		0.818	0.011	75.416	0.797	0.839
SR16	SC/SA		0.684	0.012	55.994	0.660	0.708

Note: All loadings are significant at $p < .001$.

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L4.2

Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) - Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.065**	0.024	-2.655	0.008	-0.112	-0.017
High participation	-0.096***	0.025	-3.891	0.000	-0.144	-0.048
Sport Participation						
Moderate participation	0.028	0.024	1.164	0.244	-0.019	0.076
High participation	0.060*	0.024	2.484	0.013	0.013	0.108
Religious Youth Activity						
Less than once per month	-0.009	0.023	-0.387	0.699	-0.054	0.036
Once per month or more	-0.002	0.023	-0.089	0.929	-0.048	0.044
Once per week or more	-0.031	0.025	-1.256	0.209	-0.079	0.017
Problem Solving						
SC/SA $\rightarrow$ PS	0.443***	0.020	22.527	0.000	0.404	0.481
ER/I $\rightarrow$ SC/SA	0.439***	0.023	18.963	0.000	0.394	0.484
ES $\rightarrow$ ER/I	0.203***	0.028	7.163	0.000	0.147	0.258
ES $\rightarrow$ SC/SA	0.179***	0.026	7.015	0.000	0.129	0.229
Demographics						
Age	-0.132***	0.023	-5.659	0.000	-0.177	-0.086
Female	-0.237***	0.022	-10.683	0.000	-0.281	-0.194
Socio-economic Status	-0.135***	0.023	-5.884	0.000	-0.180	-0.090
Hispanic	0.061**	0.021	2.826	0.005	0.019	0.103
Black	0.102***	0.020	5.199	0.000	0.064	0.140
Other Race	0.018	0.023	0.797	0.425	-0.026	0.062
Dwelling Condition						
Fairly well kept	0.104***	0.026	3.948	0.000	0.052	0.156
Poorly kept	0.041 [†]	0.023	1.782	0.075	-0.004	0.086
Very poorly kept	0.034	0.025	1.374	0.170	-0.015	0.083
Neighborhood Condition						
Fairly well kept	0.006	0.029	0.225	0.822	-0.050	0.063
Poorly kept	0.013	0.026	0.505	0.613	-0.038	0.065
Very poorly kept	0.007	0.024	0.271	0.786	-0.041	0.054
Rural area	0.003	0.027	0.110	0.913	-0.049	0.055

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
 PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Table L4.3

Wave I Delinquency - Developmental Cascade - Model 4 (Serious Fighting) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ER/I	0.959	0.011	83.588	0.936	0.981	NA
ES	1.000	0.000	NA	1.000	1.000	NA
PS	0.804	0.017	46.252	0.770	0.838	NA
SC/SA	0.743	0.021	35.421	0.702	0.784	NA
Residual Variances						
SR1	0.597	0.029	20.752	0.541	0.654	0.403
SR2	0.503	0.031	16.253	0.443	0.564	0.497
SR3	0.597	0.028	20.954	0.541	0.653	0.403
SR4	0.697	0.029	23.645	0.639	0.755	0.303
SR5	0.573	0.026	22.221	0.523	0.624	0.427
SR6	0.583	0.024	23.811	0.535	0.631	0.417
SR7	0.659	0.026	25.676	0.608	0.709	0.341
SR10	0.452	0.017	26.379	0.418	0.485	0.548
SR11	0.459	0.018	25.886	0.424	0.494	0.541
SR12	0.514	0.017	29.802	0.481	0.548	0.486
SR13	0.538	0.017	31.147	0.504	0.572	0.462
SR14	0.387	0.017	23.031	0.354	0.420	0.613
SR15	0.331	0.018	18.640	0.296	0.366	0.669
SR16	0.532	0.017	31.797	0.499	0.565	0.468
Serious Fighting	0.817	0.017	48.241	0.784	0.850	0.183

ES (Emotional Stability), ER/I (Emotional Reactivity / Impulsivity),
PS (Problem Solving), SC/SA (Self-Concept / Social Acceptance)

Appendix M

Exploratory and Confirmatory Factor Analysis - Self-Regulation - Wave III

Table M1.1

Wave III Candidate Indicators for Emerging Adult Self-Regulation

Orig. Item	Indicator Wording	Retained
Suspected Domain: Emotional Stability and Regulation		
H3SP1	In the past 12 months, how often have you laughed a lot?	No
H3SP3	How satisfied are you with your life as a whole?	No
	<i>How often was the following true during the past seven days?</i>	
H3SP5	You were bothered by things that usually don't bother you.	No
H3SP6	You could not shake off the blues, even with help from your family and your friends.	Yes
H3SP7	You felt you were just as good as other people.	No
H3SP8	You had trouble keeping your mind on what you were doing.	No
H3SP11	You enjoyed life.	Yes
H3SP12	You were sad.	Yes
H3SP13	You felt that people disliked you.	Yes
Suspected Domain: Self-Concept		
H3TO97	How confident are you of yourself?	Yes
	<i>Do you agree or disagree that you</i>	
H3SP19	have many good qualities?	No
H3SP20	have a lot to be proud of?	Yes
H3SP21	like yourself just the way you are?	Yes
H3SP22	feel you are doing things just about right?	Yes
Suspected Domain: Effortful Regulation or Impulsivity		
H3TO99	How careful are you?	No
H3SP23	Do you agree or disagree that you like to take risks?	No
	<i>How true do you think the following statement is of you?</i>	
H3TO30	I often do things based on how I feel at the moment.	Yes
H3TO31	I sometimes get so excited that I lose control of myself.	Yes

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Orig.	Item	Indicator Wording	Retained
	H3TO33	I often follow my instincts, without thinking through all the details.	Yes
Suspected Domain: Problem-Solving or Decision-Making			
		<i>Do you agree or disagree that</i>	
	H3SP17	you go out of your way to avoid having to deal with problems in your life?	No
	H3SP18	when making a decision, you go with your “gut feeling” and don’t think much about the consequences of each alternative?	Yes

Table M1.2
CFA Factor Loadings with SEs, z-values, and Std. Estimates

[illegible]

Table M1.3

Residual Variances with SEs, z -values, and Std. Estimates

Item	Residual Var	<i>SE</i>	<i>z</i>	<i>p</i>	Residual Var (Std.)
W3SR1	0.487	0.000	—	—	0.487
W3SR2	0.355	0.000	—	—	0.355
W3SR3	0.414	0.000	—	—	0.414
W3SR4	0.712	0.000	—	—	0.712
W3SR5	0.617	0.000	—	—	0.617
W3SR6	0.522	0.000	—	—	0.522
W3SR7	0.245	0.000	—	—	0.245
W3SR8	0.744	0.000	—	—	0.744
W3SR9	0.500	0.000	—	—	0.500
W3SR10	0.271	0.000	—	—	0.271
W3SR11	0.364	0.000	—	—	0.364
W3SR12	0.654	0.000	—	—	0.654
ESR	0.513	0.030	17.248	<0.001	1.000
IMP	0.383	0.021	18.298	<0.001	1.000
SC	0.500	0.020	24.395	<0.001	1.000
ESR (Emotional Stability/Regulation)					
IMP (Impulsivity)					
SC (Self-Concept)					

Table M1.4

Latent Factor Covariances with SEs, z-values, and Std. Estimates

Factor 1	Factor 2	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>	Covariance (Std.)
ESR	IMP	0.108	0.013	8.263	<0.001	0.244
ESR	SC	0.279	0.016	17.688	<0.001	0.552
IMP	SC	0.031	0.011	2.779	0.005	0.072
ESR (Emotional Stability/Regulation)						
IMP (Impulsivity)						
SC (Self-Concept)						

Table M1.5

Threshold Estimates with SEs and z-values

Item	Threshold	Estimate	SE	z	p
W3SR1	t1	−2.001	0.060	−33.176	<0.001
W3SR1	t2	−1.003	0.032	−31.412	<0.001
W3SR1	t3	−0.206	0.027	−7.689	<0.001
W3SR2	t1	−2.153	0.062	−34.741	<0.001
W3SR2	t2	−1.593	0.044	−36.303	<0.001
W3SR2	t3	−0.751	0.029	−25.700	<0.001
W3SR3	t1	−2.139	0.073	−29.314	<0.001
W3SR3	t2	−1.532	0.041	−37.479	<0.001
W3SR3	t3	−0.234	0.027	−8.778	<0.001
W3SR4	t1	−2.369	0.094	−25.178	<0.001
W3SR4	t2	−1.809	0.051	−35.710	<0.001
W3SR4	t3	−0.812	0.030	−26.905	<0.001
W3SR5	t1	−0.836	0.030	−28.225	<0.001
W3SR5	t2	−0.089	0.027	−3.366	0.001
W3SR5	t3	0.697	0.029	23.883	<0.001
W3SR5	t4	1.378	0.039	35.673	<0.001
W3SR6	t1	−1.642	0.043	−38.242	<0.001
W3SR6	t2	−1.211	0.035	−34.645	<0.001
W3SR6	t3	−0.656	0.029	−22.615	<0.001
W3SR6	t4	−0.132	0.027	−4.955	<0.001
W3SR7	t1	−1.383	0.037	−37.405	<0.001
W3SR7	t2	−0.876	0.030	−29.129	<0.001
W3SR7	t3	−0.234	0.027	−8.707	<0.001
W3SR7	t4	0.405	0.027	14.923	<0.001
W3SR8	t1	−1.547	0.042	−36.610	<0.001
W3SR8	t2	−0.514	0.028	−18.350	<0.001
W3SR8	t3	−0.072	0.027	−2.707	0.007
W3SR8	t4	1.222	0.035	35.393	<0.001
W3SR9	t1	−2.536	0.089	−28.385	<0.001
W3SR9	t2	−2.251	0.070	−32.217	<0.001
W3SR9	t3	−1.634	0.047	−35.094	<0.001
W3SR9	t4	0.035	0.027	1.305	0.192
W3SR10	t1	−2.479	0.087	−28.498	<0.001
W3SR10	t2	−1.548	0.041	−37.985	<0.001
W3SR10	t3	−1.023	0.032	−32.035	<0.001
W3SR10	t4	0.419	0.028	15.176	<0.001

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Item	Threshold	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>
W3SR11	t1	−2.565	0.101	−25.491	<0.001
W3SR11	t2	−1.609	0.043	−37.055	<0.001
W3SR11	t3	−0.977	0.032	−30.200	<0.001
W3SR11	t4	0.657	0.029	22.744	<0.001
W3SR12	t1	−2.096	0.062	−33.583	<0.001
W3SR12	t2	−1.076	0.033	−32.904	<0.001
W3SR12	t3	0.094	0.027	3.541	<0.001

Appendix N

Wave III General Outcomes

Model 1: In general, how is your health?

Table N1.1

Wave III General Outcomes Model 1 (General Health) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.712	0.020	35.123	0.673	0.752
W3SR2	ESR	0.799	0.020	40.034	0.760	0.838
W3SR3	ESR	0.764	0.017	45.664	0.731	0.797
W3SR4	ESR	0.547	0.027	20.076	0.493	0.600
W3SR5	IMP	0.602	0.018	33.647	0.567	0.637
W3SR6	IMP	0.688	0.018	37.928	0.653	0.724
W3SR7	IMP	0.849	0.018	48.071	0.814	0.883
W3SR8	IMP	0.480	0.021	23.074	0.439	0.521
W3SR9	SC	0.705	0.014	50.083	0.677	0.732
W3SR10	SC	0.863	0.010	86.281	0.843	0.882
W3SR11	SC	0.795	0.012	64.606	0.771	0.819
W3SR12	SC	0.579	0.019	31.143	0.542	0.615

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N1.2

Wave III General Outcomes Model 1 (General Health) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.002	0.025	0.073	0.942	−0.048	0.051
High participation	0.017	0.025	0.660	0.509	−0.033	0.066
Sport Participation						
Moderate participation	0.077**	0.024	3.145	0.002	0.029	0.125
High participation	0.097***	0.026	3.759	0.000	0.046	0.147
Religious Youth Activity						
Less than once per month	−0.010	0.024	−0.398	0.691	−0.057	0.038
Less than once per week	0.056*	0.024	2.325	0.020	0.009	0.103
More than once per week	0.085***	0.024	3.580	0.000	0.039	0.132
Emotional Stab./Reg.						
Impulsivity	0.098**	0.034	2.921	0.003	0.032	0.164
Self-Concept	0.093***	0.024	3.846	0.000	0.046	0.141
	0.330***	0.030	11.109	0.000	0.272	0.388
Demographics						
Age	0.053*	0.025	2.107	0.035	0.004	0.101
Female	−0.101***	0.024	−4.245	0.000	−0.147	−0.054
Wave I Parent SES	0.017	0.024	0.706	0.480	−0.030	0.064
Hispanic	0.000	0.023	−0.007	0.994	−0.045	0.044
Black	0.003	0.020	0.163	0.871	−0.036	0.043
Other Race	−0.007	0.023	−0.294	0.769	−0.053	0.039
Living Situation						
Parent's home	−0.028	0.025	−1.136	0.256	−0.077	0.020
Another person's home	0.000	0.022	0.009	0.993	−0.043	0.043
Other living situation	0.081**	0.025	3.234	0.001	0.032	0.129
Education / Employment						
Currently enrolled	0.080**	0.025	3.176	0.001	0.031	0.129
Currently employed	0.021	0.023	0.934	0.350	−0.023	0.065

Table N1.3

Wave III General Outcomes Model 1 (General Health) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.492	0.029	17.039	0.436	0.549	0.508
W3SR2	0.362	0.032	11.354	0.299	0.424	0.638
W3SR3	0.417	0.026	16.305	0.367	0.467	0.583
W3SR4	0.701	0.030	23.538	0.643	0.759	0.299
W3SR5	0.637	0.022	29.542	0.595	0.679	0.363
W3SR6	0.526	0.025	21.078	0.477	0.575	0.474
W3SR7	0.280	0.030	9.338	0.221	0.339	0.720
W3SR8	0.770	0.020	38.562	0.731	0.809	0.230
W3SR9	0.503	0.020	25.359	0.464	0.542	0.497
W3SR10	0.256	0.017	14.850	0.222	0.290	0.744
W3SR11	0.368	0.020	18.814	0.330	0.406	0.632
W3SR12	0.665	0.022	30.919	0.623	0.707	0.335
General Health	0.775	0.018	42.366	0.739	0.811	0.225

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N1.4

Wave III General Outcomes Model 1 (General Health) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.963	0.194	0.302
ESR	SC	0.557	0.022	25.667	0.515	0.600
IMP	SC	0.094	0.026	3.608	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 2: What is the highest grade or year of regular school you completed?

Table N2.1

Wave III General Outcomes Model 2 (Educational Attainment) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.703	0.020	34.324	0.663	0.743
W3SR2	ESR	0.801	0.020	40.021	0.762	0.840
W3SR3	ESR	0.768	0.017	46.235	0.735	0.800
W3SR4	ESR	0.549	0.027	20.169	0.496	0.603
W3SR5	IMP	0.597	0.018	33.584	0.562	0.632
W3SR6	IMP	0.681	0.018	37.558	0.646	0.717
W3SR7	IMP	0.855	0.017	49.004	0.821	0.889
W3SR8	IMP	0.484	0.020	23.629	0.444	0.524
W3SR9	SC	0.705	0.014	49.730	0.677	0.733
W3SR10	SC	0.862	0.010	85.471	0.842	0.882
W3SR11	SC	0.797	0.012	65.056	0.773	0.821
W3SR12	SC	0.575	0.019	30.800	0.538	0.611

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N2.2

Wave III General Outcomes Model 2 (Educational Attainment) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.130***	0.020	6.515	0.000	0.091	0.169
High participation	0.133***	0.018	7.427	0.000	0.098	0.168
Sport Participation						
Moderate participation	0.095***	0.019	4.961	0.000	0.057	0.133
High participation	0.042*	0.020	2.056	0.040	0.002	0.082
Religious Youth Activity						
Less than once per month	-0.020	0.018	-1.106	0.269	-0.057	0.016
Less than once per week	0.023	0.019	1.205	0.228	-0.015	0.061
More than once per week	0.014	0.019	0.711	0.477	-0.024	0.052
Emotional Stab./Reg.						
Impulsivity	0.113***	0.030	3.743	0.000	0.054	0.173
Self-Concept	0.070***	0.021	3.329	0.001	0.029	0.112
	-0.054*	0.027	-2.003	0.045	-0.107	-0.001
Demographics						
Age	0.339***	0.019	17.547	0.000	0.301	0.377
Female	0.081***	0.019	4.335	0.000	0.044	0.117
Wave I Parent SES	0.308***	0.017	17.676	0.000	0.274	0.342
Hispanic	0.001	0.018	0.071	0.943	-0.034	0.036
Black	-0.017	0.016	-1.032	0.302	-0.048	0.015
Other Race	-0.013	0.017	-0.787	0.431	-0.047	0.020
Living Situation						
Parent's home	0.054**	0.019	2.789	0.005	0.016	0.091
Another person's home	-0.056***	0.017	-3.336	0.001	-0.089	-0.023
Other living situation	0.032	0.029	1.107	0.268	-0.025	0.089
Education / Employment						
Currently enrolled	0.334***	0.018	18.662	0.000	0.299	0.369
Currently employed	0.097***	0.019	5.167	0.000	0.060	0.133

Table N2.3

Wave III General Outcomes Model 2 (Educational Attainment) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.505	0.029	17.533	0.449	0.562	0.495
W3SR2	0.359	0.032	11.185	0.296	0.421	0.641
W3SR3	0.411	0.026	16.098	0.361	0.460	0.589
W3SR4	0.698	0.030	23.353	0.640	0.757	0.302
W3SR5	0.644	0.021	30.317	0.602	0.685	0.356
W3SR6	0.536	0.025	21.666	0.487	0.584	0.464
W3SR7	0.269	0.030	9.001	0.210	0.327	0.731
W3SR8	0.766	0.020	38.596	0.727	0.805	0.234
W3SR9	0.503	0.020	25.167	0.464	0.542	0.497
W3SR10	0.257	0.017	14.753	0.223	0.291	0.743
W3SR11	0.365	0.020	18.737	0.327	0.404	0.635
W3SR12	0.670	0.021	31.233	0.628	0.712	0.330
Educational Attainment	0.562	0.016	35.561	0.531	0.593	0.438

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N2.4

Wave III General Outcomes Model 2 (Educational Attainment) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.946	0.193	0.302
ESR	SC	0.557	0.022	25.592	0.515	0.600
IMP	SC	0.093	0.026	3.563	0.042	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 3: What was your total personal income before taxes in {2000/2001}?

Table N3.1

Wave III General Outcomes Model 3 (Prior Year Income) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.726	0.021	34.663	0.685	0.767
W3SR2	ESR	0.800	0.023	35.048	0.755	0.844
W3SR3	ESR	0.750	0.019	40.139	0.713	0.786
W3SR4	ESR	0.551	0.030	18.559	0.493	0.610
W3SR5	IMP	0.608	0.020	30.980	0.569	0.646
W3SR6	IMP	0.696	0.019	35.760	0.658	0.735
W3SR7	IMP	0.867	0.019	45.643	0.829	0.904
W3SR8	IMP	0.474	0.023	20.905	0.429	0.518
W3SR9	SC	0.714	0.015	46.705	0.684	0.744
W3SR10	SC	0.859	0.011	75.617	0.837	0.881
W3SR11	SC	0.797	0.013	59.057	0.770	0.823
W3SR12	SC	0.590	0.021	28.402	0.550	0.631

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N3.2

Wave III General Outcomes Model 3 (Prior Year Income) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.005	0.026	−0.183	0.855	−0.055	0.046
High participation	0.021	0.025	0.873	0.383	−0.027	0.070
Sport Participation						
Moderate participation	0.034	0.025	1.348	0.178	−0.015	0.084
High participation	0.047 [†]	0.026	1.837	0.066	−0.003	0.098
Religious Youth Activity						
Less than once per month	−0.043 [†]	0.023	−1.882	0.060	−0.088	0.002
Less than once per week	−0.063 ^{**}	0.023	−2.770	0.006	−0.108	−0.019
More than once per week	−0.032	0.025	−1.255	0.210	−0.081	0.018
Emotional Stab./Reg.						
	0.032	0.039	0.817	0.414	−0.045	0.110
Impulsivity						
	−0.036	0.026	−1.364	0.173	−0.087	0.016
Self-Concept						
	0.015	0.035	0.427	0.669	−0.053	0.083
Demographics						
Age	0.208 ^{***}	0.026	8.088	0.000	0.157	0.258
Female	−0.127 ^{***}	0.024	−5.317	0.000	−0.173	−0.080
Wave I Parent SES	0.030	0.024	1.273	0.203	−0.016	0.077
Hispanic	−0.008	0.024	−0.318	0.751	−0.055	0.039
Black	−0.067 ^{**}	0.022	−3.109	0.002	−0.110	−0.025
Other Race	0.007	0.022	0.313	0.754	−0.036	0.049
Living Situation						
Parent's home	−0.081 ^{**}	0.025	−3.193	0.001	−0.131	−0.031
Another person's home	0.037	0.023	1.587	0.113	−0.009	0.082
Other living situation	−0.021	0.024	−0.875	0.382	−0.068	0.026
Education / Employment						
Currently enrolled	−0.119 ^{***}	0.026	−4.518	0.000	−0.171	−0.067
Currently employed	0.239 ^{***}	0.023	10.507	0.000	0.194	0.283

Table N3.3

Wave III General Outcomes Model 3 (Prior Year Income) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.473	0.030	15.547	0.413	0.532	0.527
W3SR2	0.361	0.036	9.888	0.289	0.432	0.639
W3SR3	0.438	0.028	15.640	0.383	0.493	0.562
W3SR4	0.696	0.033	21.251	0.632	0.760	0.304
W3SR5	0.631	0.024	26.456	0.584	0.677	0.369
W3SR6	0.515	0.027	18.981	0.462	0.568	0.485
W3SR7	0.249	0.033	7.571	0.185	0.314	0.751
W3SR8	0.776	0.021	36.114	0.733	0.818	0.224
W3SR9	0.490	0.022	22.451	0.447	0.533	0.510
W3SR10	0.262	0.020	13.421	0.224	0.300	0.738
W3SR11	0.365	0.022	16.968	0.323	0.407	0.635
W3SR12	0.651	0.025	26.533	0.603	0.699	0.349
Prior Year Income	0.790	0.017	45.775	0.757	0.824	0.210

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N3.4

Wave III General Outcomes Model 3 (Prior Year Income) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.252	0.030	8.285	0.192	0.312
ESR	SC	0.577	0.023	25.328	0.533	0.622
IMP	SC	0.115	0.028	4.046	0.059	0.170

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 4: How satisfied are you with your life as a whole?

Table N4.1

Wave III General Outcomes Model 4 - Life Satisfaction – Standardized Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.732	0.019	37.651	0.694	0.771
W3SR2	ESR	0.784	0.020	39.925	0.746	0.823
W3SR3	ESR	0.761	0.016	46.410	0.728	0.793
W3SR4	ESR	0.545	0.027	20.104	0.492	0.599
W3SR5	IMP	0.601	0.018	33.562	0.566	0.636
W3SR6	IMP	0.691	0.018	38.068	0.655	0.727
W3SR7	IMP	0.848	0.018	47.996	0.813	0.883
W3SR8	IMP	0.479	0.021	22.916	0.438	0.520
W3SR9	SC	0.700	0.014	49.589	0.672	0.728
W3SR10	SC	0.844	0.010	83.505	0.824	0.864
W3SR11	SC	0.813	0.012	69.816	0.790	0.836
W3SR12	SC	0.592	0.018	32.467	0.556	0.628

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N4.2

Wave III General Outcomes Model 4 (Life Satisfaction) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.013	0.026	0.495	0.620	−0.038	0.064
High participation	0.010	0.026	0.401	0.689	−0.040	0.061
Sport Participation						
Moderate participation	0.046 [†]	0.025	1.844	0.065	−0.003	0.095
High participation	0.039	0.027	1.416	0.157	−0.015	0.092
Religious Youth Activity						
Less than once per month	0.015	0.024	0.619	0.536	−0.032	0.062
Less than once per week	0.054 [*]	0.024	2.197	0.028	0.006	0.101
More than once per week	0.056 [*]	0.025	2.219	0.027	0.007	0.106
Emotional Stab./Reg.	0.351 ^{***}	0.025	13.837	0.000	0.301	0.401
Impulsivity	0.023	0.022	1.068	0.285	−0.020	0.067
Self-Concept	0.440 ^{***}	0.023	19.278	0.000	0.395	0.485
Demographics						
Age	0.048 [†]	0.026	1.875	0.061	−0.002	0.099
Female	0.016	0.025	0.652	0.514	−0.032	0.065
Wave I Parent SES	0.000	0.025	0.002	0.999	−0.049	0.049
Hispanic	0.022	0.024	0.936	0.349	−0.024	0.069
Black	−0.032	0.020	−1.582	0.114	−0.072	0.008
Other Race	−0.049 [*]	0.024	−2.085	0.037	−0.095	−0.003
Living Situation						
Parent's home	−0.104 ^{***}	0.026	−4.045	0.000	−0.154	−0.054
Another person's home	−0.077 ^{***}	0.022	−3.555	0.000	−0.119	−0.034
Other living situation	0.072 ^{**}	0.027	2.707	0.007	0.020	0.124
Education / Employment						
Currently enrolled	0.097 ^{***}	0.026	3.700	0.000	0.046	0.149
Currently employed	0.052 [*]	0.023	2.232	0.026	0.006	0.098

Table N4.3

Wave III General Outcomes Model 4 (Life Satisfaction) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.464	0.028	16.267	0.408	0.519	0.536
W3SR2	0.385	0.031	12.509	0.325	0.446	0.615
W3SR3	0.422	0.025	16.909	0.373	0.470	0.578
W3SR4	0.702	0.030	23.732	0.644	0.760	0.298
W3SR5	0.638	0.022	29.635	0.596	0.681	0.362
W3SR6	0.522	0.025	20.827	0.473	0.572	0.478
W3SR7	0.281	0.030	9.381	0.222	0.340	0.719
W3SR8	0.771	0.020	38.550	0.732	0.810	0.229
W3SR9	0.510	0.020	25.796	0.471	0.549	0.490
W3SR10	0.287	0.017	16.822	0.254	0.321	0.713
W3SR11	0.339	0.019	17.939	0.302	0.377	0.661
W3SR12	0.650	0.022	30.108	0.607	0.692	0.350
Life Satisfaction	0.452	0.019	23.855	0.415	0.489	0.548

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table N4.4

Wave III General Outcomes Model 4 (Life Satisfaction) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.987	0.194	0.302
ESR	SC	0.557	0.022	25.733	0.515	0.600
IMP	SC	0.094	0.026	3.615	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Appendix O

Wave III Criminal Justice Interactions

Model 1: How many times have you been stopped or detained by the police for questioning about your activities? Don't count minor traffic violations

Table O1.1

Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.703	0.021	33.932	0.662	0.744
W3SR2	ESR	0.799	0.020	39.586	0.760	0.839
W3SR3	ESR	0.768	0.017	45.860	0.735	0.801
W3SR4	ESR	0.548	0.027	19.977	0.495	0.602
W3SR5	IMP	0.603	0.018	33.912	0.568	0.638
W3SR6	IMP	0.687	0.018	38.222	0.651	0.722
W3SR7	IMP	0.850	0.018	48.476	0.815	0.884
W3SR8	IMP	0.480	0.021	22.915	0.439	0.521
W3SR9	SC	0.709	0.014	50.458	0.681	0.736
W3SR10	SC	0.861	0.010	86.017	0.842	0.881
W3SR11	SC	0.799	0.012	65.559	0.775	0.823
W3SR12	SC	0.573	0.019	30.642	0.536	0.609

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table O1.2

Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.014	0.032	−0.428	0.669	−0.076	0.049
High participation	0.004	0.033	0.107	0.915	−0.061	0.068
Sport Participation						
Moderate participation	0.055 [†]	0.031	1.747	0.081	−0.007	0.116
High participation	0.024	0.031	0.760	0.447	−0.038	0.086
Religious Youth Activity						
Less than once per month	0.045	0.029	1.593	0.111	−0.010	0.101
Less than once per week	−0.010	0.031	−0.313	0.754	−0.071	0.052
More than once per week	−0.095**	0.033	−2.914	0.004	−0.158	−0.031
Emotional Stab./Reg.						
	−0.021	0.046	−0.457	0.648	−0.112	0.070
Impulsivity						
	−0.182***	0.032	−5.653	0.000	−0.245	−0.119
Self-Concept						
	−0.089*	0.038	−2.330	0.020	−0.165	−0.014
Demographics						
Age	−0.141***	0.032	−4.435	0.000	−0.204	−0.079
Female	−0.358***	0.028	−12.770	0.000	−0.413	−0.303
Wave I Parent SES	0.076*	0.031	2.488	0.013	0.016	0.136
Hispanic	0.080**	0.028	2.812	0.005	0.024	0.135
Black	0.013	0.027	0.484	0.628	−0.040	0.067
Other Race	0.047 [†]	0.027	1.744	0.081	−0.006	0.101
Living Situation						
Parent's home	0.013	0.031	0.401	0.688	−0.049	0.074
Another person's home	−0.008	0.029	−0.266	0.791	−0.064	0.049
Other living situation	−0.044	0.031	−1.412	0.158	−0.104	0.017
Education / Employment						
Currently enrolled	−0.029	0.031	−0.948	0.343	−0.090	0.031
Currently employed	−0.046	0.029	−1.591	0.112	−0.103	0.011

Table O1.3

Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.506	0.029	17.357	0.449	0.563	0.494
W3SR2	0.361	0.032	11.177	0.298	0.424	0.639
W3SR3	0.410	0.026	15.924	0.359	0.460	0.590
W3SR4	0.699	0.030	23.238	0.640	0.758	0.301
W3SR5	0.637	0.021	29.703	0.595	0.679	0.363
W3SR6	0.529	0.025	21.423	0.480	0.577	0.471
W3SR7	0.278	0.030	9.345	0.220	0.337	0.722
W3SR8	0.769	0.020	38.215	0.730	0.809	0.231
W3SR9	0.498	0.020	24.981	0.458	0.537	0.502
W3SR10	0.258	0.017	14.980	0.225	0.292	0.742
W3SR11	0.362	0.019	18.585	0.324	0.400	0.638
W3SR12	0.672	0.021	31.391	0.630	0.714	0.328
Stopped by Police	0.773	0.023	33.614	0.728	0.819	0.227

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table O1.4

Wave III Criminal Justice Interactions Model 1 (Stopped by Police) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.870	0.192	0.301
ESR	SC	0.557	0.022	25.530	0.514	0.600
IMP	SC	0.093	0.026	3.554	0.041	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 2: Have you ever been arrested or taken into custody by the police?

Table O2.1

Wave III Criminal Justice Interactions Model 2 (Arrested) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.705	0.021	34.162	0.664	0.745
W3SR2	ESR	0.800	0.020	39.859	0.761	0.840
W3SR3	ESR	0.769	0.017	46.110	0.736	0.802
W3SR4	ESR	0.546	0.027	19.941	0.492	0.600
W3SR5	IMP	0.602	0.018	33.987	0.567	0.636
W3SR6	IMP	0.683	0.018	37.787	0.648	0.719
W3SR7	IMP	0.852	0.017	48.789	0.818	0.887
W3SR8	IMP	0.480	0.021	23.060	0.440	0.521
W3SR9	SC	0.705	0.014	49.516	0.678	0.733
W3SR10	SC	0.862	0.010	85.786	0.843	0.882
W3SR11	SC	0.798	0.012	65.516	0.774	0.822
W3SR12	SC	0.575	0.019	30.783	0.538	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table O2.2

Wave III Criminal Justice Interactions Model 2 (Arrested) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.073 [†]	0.040	−1.842	0.066	−0.151	0.005
High participation	−0.050	0.042	−1.200	0.230	−0.131	0.032
Sport Participation						
Moderate participation	0.024	0.040	0.585	0.559	−0.055	0.103
High participation	0.033	0.040	0.822	0.411	−0.045	0.111
Religious Youth Activity						
Less than once per month	0.029	0.035	0.832	0.405	−0.039	0.098
Less than once per week	−0.025	0.041	−0.603	0.546	−0.105	0.056
More than once per week	−0.114**	0.040	−2.831	0.005	−0.193	−0.035
Emotional Stab./Reg.						
	−0.014	0.058	−0.247	0.805	−0.129	0.100
Impulsivity						
	−0.212***	0.040	−5.353	0.000	−0.290	−0.134
Self-Concept						
	−0.076	0.048	−1.579	0.114	−0.170	0.018
Demographics						
Age	−0.081 [†]	0.042	−1.947	0.051	−0.163	0.001
Female	−0.365***	0.034	−10.654	0.000	−0.432	−0.297
Wave I Parent SES	0.076 [†]	0.039	1.952	0.051	0.000	0.153
Hispanic	−0.007	0.037	−0.185	0.853	−0.080	0.066
Black	0.036	0.035	1.029	0.303	−0.032	0.104
Other Race	0.038	0.032	1.203	0.229	−0.024	0.101
Living Situation						
Parent's home	−0.045	0.039	−1.144	0.253	−0.122	0.032
Another person's home	−0.008	0.034	−0.222	0.824	−0.074	0.059
Other living situation	−0.070 [†]	0.038	−1.861	0.063	−0.144	0.004
Education / Employment						
Currently enrolled	−0.111**	0.040	−2.774	0.006	−0.189	−0.033
Currently employed	−0.020	0.037	−0.530	0.596	−0.092	0.053

Table O2.3

Wave III Criminal Justice Interactions Model 2 (Arrested) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.503	0.029	17.318	0.446	0.560	0.497
W3SR2	0.359	0.032	11.186	0.297	0.422	0.641
W3SR3	0.408	0.026	15.920	0.358	0.459	0.592
W3SR4	0.702	0.030	23.455	0.643	0.760	0.298
W3SR5	0.638	0.021	29.958	0.596	0.680	0.362
W3SR6	0.533	0.025	21.552	0.484	0.581	0.467
W3SR7	0.273	0.030	9.182	0.215	0.332	0.727
W3SR8	0.769	0.020	38.430	0.730	0.808	0.231
W3SR9	0.502	0.020	24.991	0.463	0.542	0.498
W3SR10	0.257	0.017	14.802	0.223	0.291	0.743
W3SR11	0.363	0.019	18.693	0.325	0.401	0.637
W3SR12	0.669	0.021	31.177	0.627	0.712	0.331
Arrested	0.749	0.031	24.118	0.688	0.810	0.251

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table O2.4

Wave III Criminal Justice Interactions Model 2 (Arrested) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.934	0.193	0.302
ESR	SC	0.557	0.022	25.598	0.515	0.600
IMP	SC	0.093	0.026	3.557	0.042	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Appendix P

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk

Model 1: Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?

Table P1.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.703	0.021	34.262	0.663	0.743
W3SR2	ESR	0.801	0.020	40.147	0.762	0.840
W3SR3	ESR	0.770	0.017	46.049	0.737	0.803
W3SR4	ESR	0.548	0.027	20.035	0.494	0.602
W3SR5	IMP	0.602	0.018	34.317	0.567	0.636
W3SR6	IMP	0.684	0.018	37.974	0.649	0.720
W3SR7	IMP	0.852	0.017	49.523	0.818	0.885
W3SR8	IMP	0.481	0.020	23.573	0.441	0.521
W3SR9	SC	0.705	0.014	49.798	0.677	0.732
W3SR10	SC	0.862	0.010	85.787	0.842	0.882
W3SR11	SC	0.798	0.012	65.405	0.774	0.822
W3SR12	SC	0.574	0.019	30.730	0.537	0.610

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P1.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.034	0.029	−1.151	0.250	−0.092	0.024
High participation	−0.064*	0.028	−2.319	0.020	−0.118	−0.010
Sport Participation						
Moderate participation	−0.008	0.028	−0.271	0.786	−0.063	0.048
High participation	0.012	0.030	0.401	0.689	−0.046	0.070
Religious Youth Activity						
Less than once per month	−0.003	0.027	−0.106	0.915	−0.055	0.049
Less than once per week	−0.057*	0.027	−2.072	0.038	−0.111	−0.003
More than once per week	−0.107***	0.028	−3.808	0.000	−0.162	−0.052
Emotional Stab./Reg.						
Impulsivity	−0.041	0.044	−0.936	0.349	−0.127	0.045
Self-Concept	−0.223***	0.030	−7.505	0.000	−0.282	−0.165
	−0.039	0.039	−0.990	0.322	−0.116	0.038
Demographics						
Age	−0.081**	0.029	−2.801	0.005	−0.138	−0.024
Female	−0.039	0.028	−1.420	0.156	−0.093	0.015
Wave I Parent SES	−0.018	0.028	−0.632	0.527	−0.072	0.037
Hispanic	−0.120***	0.027	−4.498	0.000	−0.172	−0.068
Black	−0.200***	0.025	−8.063	0.000	−0.248	−0.151
Other Race	−0.007	0.024	−0.295	0.768	−0.055	0.040
Living Situation						
Parent's home	−0.070*	0.028	−2.482	0.013	−0.125	−0.015
Another person's home	0.050†	0.025	1.949	0.051	0.000	0.099
Other living situation	−0.138***	0.031	−4.445	0.000	−0.198	−0.077
Education / Employment						
Currently enrolled	−0.185***	0.028	−6.587	0.000	−0.240	−0.130
Currently employed	−0.035	0.027	−1.311	0.190	−0.087	0.017

Table P1.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Residual $\mathcal{E}$ Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.506	0.029	17.526	0.449	0.562	0.494
W3SR2	0.358	0.032	11.201	0.295	0.421	0.642
W3SR3	0.407	0.026	15.787	0.356	0.457	0.593
W3SR4	0.700	0.030	23.348	0.641	0.759	0.300
W3SR5	0.638	0.021	30.227	0.597	0.679	0.362
W3SR6	0.532	0.025	21.549	0.483	0.580	0.468
W3SR7	0.275	0.029	9.386	0.217	0.332	0.725
W3SR8	0.769	0.020	39.246	0.731	0.807	0.231
W3SR9	0.503	0.020	25.239	0.464	0.542	0.497
W3SR10	0.257	0.017	14.836	0.223	0.291	0.743
W3SR11	0.363	0.019	18.670	0.325	0.402	0.637
W3SR12	0.671	0.021	31.289	0.629	0.713	0.329
Regular Smoking	0.801	0.020	40.602	0.763	0.840	0.199

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P1.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 1 (Regular Smoking) – Covariances

		Correlation	SE	z	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.950	0.194	0.302
ESR	SC	0.557	0.022	25.643	0.515	0.600
IMP	SC	0.094	0.026	3.622	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 2: During the past 12 months, on how many days did you drink five or more drinks in a row?

Table P2.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.706	0.021	34.235	0.665	0.746
W3SR2	ESR	0.802	0.020	40.061	0.762	0.841
W3SR3	ESR	0.770	0.017	46.161	0.737	0.803
W3SR4	ESR	0.543	0.027	19.769	0.489	0.597
W3SR5	IMP	0.611	0.018	34.793	0.577	0.646
W3SR6	IMP	0.681	0.018	37.772	0.646	0.717
W3SR7	IMP	0.848	0.017	49.351	0.814	0.881
W3SR8	IMP	0.475	0.021	22.733	0.434	0.516
W3SR9	SC	0.704	0.014	49.639	0.676	0.732
W3SR10	SC	0.862	0.010	85.738	0.842	0.882
W3SR11	SC	0.798	0.012	65.271	0.774	0.822
W3SR12	SC	0.575	0.019	30.767	0.538	0.611

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P2.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.009	0.025	−0.354	0.724	−0.058	0.040
High participation	−0.041 [†]	0.025	−1.651	0.099	−0.089	0.008
Sport Participation						
Moderate participation	0.091***	0.024	3.744	0.000	0.043	0.139
High participation	0.112***	0.025	4.470	0.000	0.063	0.162
Religious Youth Activity						
Less than once per month	−0.001	0.023	−0.057	0.955	−0.047	0.044
Less than once per week	−0.021	0.024	−0.874	0.382	−0.067	0.026
More than once per week	−0.108***	0.024	−4.529	0.000	−0.154	−0.061
Emotional Stab./Reg. Impulsivity						
Self-Concept	−0.018	0.035	−0.493	0.622	−0.087	0.052
	−0.224***	0.024	−9.418	0.000	−0.271	−0.177
	−0.074*	0.032	−2.306	0.021	−0.138	−0.011
Demographics						
Age	−0.010	0.025	−0.400	0.689	−0.059	0.039
Female	−0.212***	0.023	−9.241	0.000	−0.257	−0.167
Wave I Parent SES	0.104***	0.023	4.414	0.000	0.058	0.150
Hispanic	−0.039 [†]	0.023	−1.705	0.088	−0.083	0.006
Black	−0.242***	0.020	−12.216	0.000	−0.281	−0.203
Other Race	−0.060**	0.021	−2.878	0.004	−0.101	−0.019
Living Situation						
Parent's home	−0.041 [†]	0.024	−1.700	0.089	−0.089	0.006
Another person's home	0.036 [†]	0.020	1.813	0.070	−0.003	0.074
Other living situation	−0.010	0.025	−0.383	0.702	−0.058	0.039
Education / Employment						
Currently enrolled	0.050*	0.025	1.974	0.048	0.000	0.099
Currently employed	0.021	0.022	0.956	0.339	−0.022	0.065

Table P2.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Residual $\mathcal{E}$ Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.502	0.029	17.265	0.445	0.559	0.498
W3SR2	0.357	0.032	11.136	0.294	0.420	0.643
W3SR3	0.407	0.026	15.845	0.357	0.457	0.593
W3SR4	0.705	0.030	23.635	0.647	0.764	0.295
W3SR5	0.626	0.021	29.171	0.584	0.669	0.374
W3SR6	0.536	0.025	21.779	0.487	0.584	0.464
W3SR7	0.282	0.029	9.669	0.224	0.339	0.718
W3SR8	0.775	0.020	39.073	0.736	0.814	0.225
W3SR9	0.505	0.020	25.271	0.465	0.544	0.495
W3SR10	0.257	0.017	14.810	0.223	0.291	0.743
W3SR11	0.364	0.019	18.671	0.326	0.402	0.636
W3SR12	0.670	0.021	31.198	0.628	0.712	0.330
Binge Drinking	0.765	0.018	42.306	0.729	0.800	0.235

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P2.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 2 (Binge Drinking) – Covariances

		Correlation	SE	z	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.245	0.028	8.808	0.191	0.300
ESR	SC	0.557	0.022	25.614	0.515	0.600
IMP	SC	0.091	0.026	3.485	0.040	0.142

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 3: During the past 12 months, how many times has the following happened? You had problems with your friends because you had been drinking.

Table P3.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.701	0.021	33.736	0.661	0.742
W3SR2	ESR	0.801	0.020	40.244	0.762	0.840
W3SR3	ESR	0.770	0.017	46.363	0.737	0.802
W3SR4	ESR	0.552	0.027	20.151	0.498	0.605
W3SR5	IMP	0.603	0.018	33.880	0.568	0.638
W3SR6	IMP	0.694	0.018	38.774	0.659	0.729
W3SR7	IMP	0.844	0.017	48.615	0.810	0.878
W3SR8	IMP	0.479	0.021	23.287	0.439	0.520
W3SR9	SC	0.703	0.014	49.572	0.676	0.731
W3SR10	SC	0.861	0.010	85.038	0.841	0.881
W3SR11	SC	0.798	0.012	65.214	0.774	0.822
W3SR12	SC	0.576	0.019	30.884	0.539	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P3.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.015	0.042	-0.353	0.724	-0.096	0.067
High participation	0.011	0.042	0.266	0.790	-0.072	0.094
Sport Participation						
Moderate participation	0.092*	0.041	2.235	0.025	0.011	0.173
High participation	0.076 [†]	0.043	1.764	0.078	-0.008	0.160
Religious Youth Activity						
Less than once per month	0.007	0.038	0.181	0.856	-0.067	0.081
Less than once per week	-0.008	0.042	-0.182	0.855	-0.091	0.075
More than once per week	-0.045	0.044	-1.019	0.308	-0.130	0.041
Emotional Stab./Reg.						
	-0.155**	0.060	-2.597	0.009	-0.273	-0.038
Impulsivity						
	-0.271***	0.041	-6.655	0.000	-0.350	-0.191
Self-Concept						
	-0.068	0.052	-1.318	0.188	-0.170	0.033
Demographics						
Age	-0.072	0.047	-1.536	0.125	-0.164	0.020
Female	-0.174***	0.038	-4.601	0.000	-0.249	-0.100
Wave I Parent SES	0.117**	0.039	2.978	0.003	0.040	0.194
Hispanic	0.030	0.040	0.741	0.459	-0.049	0.108
Black	-0.147***	0.041	-3.580	0.000	-0.228	-0.067
Other Race	-0.069 [†]	0.040	-1.735	0.083	-0.146	0.009
Living Situation						
Parent's home	-0.013	0.042	-0.306	0.759	-0.095	0.070
Another person's home	0.017	0.035	0.495	0.620	-0.051	0.085
Other living situation	-0.072 [†]	0.042	-1.728	0.084	-0.154	0.010
Education / Employment						
Currently enrolled	0.018	0.044	0.415	0.678	-0.067	0.104
Currently employed	-0.024	0.040	-0.602	0.547	-0.102	0.054

Table P3.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.508	0.029	17.428	0.451	0.565	0.492
W3SR2	0.358	0.032	11.224	0.296	0.421	0.642
W3SR3	0.408	0.026	15.950	0.358	0.458	0.592
W3SR4	0.696	0.030	23.051	0.637	0.755	0.304
W3SR5	0.637	0.021	29.695	0.595	0.679	0.363
W3SR6	0.519	0.025	20.901	0.470	0.567	0.481
W3SR7	0.287	0.029	9.792	0.230	0.345	0.713
W3SR8	0.770	0.020	39.013	0.731	0.809	0.230
W3SR9	0.505	0.020	25.316	0.466	0.544	0.495
W3SR10	0.258	0.017	14.793	0.224	0.292	0.742
W3SR11	0.363	0.020	18.609	0.325	0.402	0.637
W3SR12	0.668	0.021	31.110	0.626	0.710	0.332
Problems with Friends	0.761	0.033	23.310	0.697	0.825	0.239

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P3.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 3 (Problems with Friends) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.249	0.028	8.976	0.194	0.303
ESR	SC	0.558	0.022	25.617	0.515	0.600
IMP	SC	0.096	0.026	3.673	0.045	0.147

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 4: During the past 12 months, how many times has the following happened? You had problems with someone you were dating because you had been drinking.

Table P4.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.701	0.021	33.759	0.660	0.742
W3SR2	ESR	0.800	0.020	40.038	0.761	0.839
W3SR3	ESR	0.771	0.017	46.161	0.738	0.804
W3SR4	ESR	0.550	0.027	20.114	0.496	0.603
W3SR5	IMP	0.602	0.018	33.850	0.567	0.637
W3SR6	IMP	0.688	0.018	38.311	0.653	0.723
W3SR7	IMP	0.849	0.017	48.715	0.815	0.884
W3SR8	IMP	0.475	0.021	22.877	0.434	0.516
W3SR9	SC	0.707	0.014	50.030	0.679	0.734
W3SR10	SC	0.863	0.010	85.712	0.843	0.883
W3SR11	SC	0.797	0.012	65.250	0.773	0.821
W3SR12	SC	0.575	0.019	30.872	0.539	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P4.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.029	0.041	0.711	0.477	−0.051	0.108
High participation	0.011	0.038	0.297	0.767	−0.064	0.087
Sport Participation						
Moderate participation	0.133***	0.040	3.359	0.001	0.055	0.211
High participation	0.111**	0.039	2.842	0.004	0.034	0.188
Religious Youth Activity						
Less than once per month	0.013	0.034	0.374	0.708	−0.054	0.080
Less than once per week	−0.022	0.038	−0.566	0.572	−0.096	0.053
More than once per week	−0.059	0.040	−1.466	0.143	−0.137	0.020
Emotional Stab./Reg.						
Impulsivity	−0.138*	0.057	−2.431	0.015	−0.249	−0.027
Self-Concept	−0.171***	0.038	−4.538	0.000	−0.245	−0.097
Demographics						
Age	−0.064	0.044	−1.458	0.145	−0.150	0.022
Female	−0.063 [†]	0.037	−1.688	0.091	−0.136	0.010
Wave I Parent SES	0.055	0.037	1.484	0.138	−0.018	0.128
Hispanic	−0.046	0.039	−1.188	0.235	−0.123	0.030
Black	−0.111**	0.037	−2.989	0.003	−0.184	−0.038
Other Race	0.012	0.034	0.338	0.735	−0.055	0.078
Living Situation						
Parent's home	−0.038	0.039	−0.981	0.327	−0.115	0.038
Another person's home	0.009	0.032	0.265	0.791	−0.055	0.072
Other living situation	−0.074 [†]	0.038	−1.936	0.053	−0.149	0.001
Education / Employment						
Currently enrolled	0.090*	0.039	2.274	0.023	0.012	0.167
Currently employed	0.050	0.036	1.407	0.160	−0.020	0.120

Table P4.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.509	0.029	17.475	0.452	0.566	0.491
W3SR2	0.360	0.032	11.248	0.297	0.422	0.640
W3SR3	0.406	0.026	15.756	0.355	0.456	0.594
W3SR4	0.698	0.030	23.230	0.639	0.757	0.302
W3SR5	0.637	0.021	29.731	0.595	0.679	0.363
W3SR6	0.526	0.025	21.290	0.478	0.575	0.474
W3SR7	0.278	0.030	9.401	0.220	0.337	0.722
W3SR8	0.774	0.020	39.247	0.736	0.813	0.226
W3SR9	0.501	0.020	25.081	0.462	0.540	0.499
W3SR10	0.255	0.017	14.673	0.221	0.289	0.745
W3SR11	0.365	0.019	18.779	0.327	0.403	0.635
W3SR12	0.669	0.021	31.235	0.627	0.711	0.331
Problems while Dating	0.861	0.025	35.068	0.813	0.909	0.139

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P4.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 4 (Problems while Dating) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.250	0.028	9.036	0.196	0.304
ESR	SC	0.559	0.022	25.724	0.516	0.601
IMP	SC	0.092	0.026	3.543	0.041	0.143

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 5: Since June 1995, have you driven while drunk?

Table P5.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.708	0.021	34.342	0.668	0.748
W3SR2	ESR	0.801	0.020	39.801	0.762	0.840
W3SR3	ESR	0.768	0.017	45.833	0.735	0.801
W3SR4	ESR	0.541	0.028	19.595	0.487	0.596
W3SR5	IMP	0.609	0.018	34.695	0.574	0.643
W3SR6	IMP	0.683	0.018	37.754	0.648	0.719
W3SR7	IMP	0.848	0.017	49.043	0.815	0.882
W3SR8	IMP	0.477	0.021	22.799	0.436	0.517
W3SR9	SC	0.705	0.014	49.986	0.678	0.733
W3SR10	SC	0.862	0.010	86.278	0.842	0.881
W3SR11	SC	0.802	0.012	66.567	0.779	0.826
W3SR12	SC	0.575	0.019	30.679	0.538	0.611

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P5.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.014	0.031	0.439	0.661	−0.047	0.075
High participation	−0.008	0.029	−0.267	0.789	−0.065	0.050
Sport Participation						
Moderate participation	0.134***	0.030	4.483	0.000	0.076	0.193
High participation	0.152***	0.031	4.817	0.000	0.090	0.213
Religious Youth Activity						
Less than once per month	−0.035	0.028	−1.253	0.210	−0.089	0.020
Less than once per week	−0.021	0.030	−0.709	0.478	−0.080	0.037
More than once per week	−0.083**	0.030	−2.781	0.005	−0.142	−0.025
Emotional Stab./Reg.						
	0.134**	0.047	2.869	0.004	0.043	0.226
Impulsivity						
	−0.192***	0.032	−5.930	0.000	−0.255	−0.128
Self-Concept						
	−0.191***	0.041	−4.609	0.000	−0.272	−0.109
Demographics						
Age	0.051	0.032	1.591	0.111	−0.012	0.113
Female	−0.195***	0.028	−6.938	0.000	−0.250	−0.140
Wave I Parent SES	0.136***	0.029	4.597	0.000	0.078	0.193
Hispanic	−0.094**	0.030	−3.085	0.002	−0.153	−0.034
Black	−0.188***	0.029	−6.479	0.000	−0.245	−0.131
Other Race	−0.068**	0.026	−2.582	0.010	−0.119	−0.016
Living Situation						
Parent's home	−0.062*	0.030	−2.069	0.039	−0.121	−0.003
Another person's home	−0.033	0.027	−1.202	0.229	−0.086	0.021
Other living situation	−0.102**	0.032	−3.220	0.001	−0.164	−0.040
Education / Employment						
Currently enrolled	0.062*	0.030	2.066	0.039	0.003	0.121
Currently employed	0.044	0.030	1.477	0.140	−0.014	0.102

Table P5.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Residual $\mathcal{E}$ Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.499	0.029	17.080	0.441	0.556	0.501
W3SR2	0.358	0.032	11.121	0.295	0.422	0.642
W3SR3	0.410	0.026	15.921	0.359	0.460	0.590
W3SR4	0.707	0.030	23.618	0.648	0.765	0.293
W3SR5	0.629	0.021	29.446	0.587	0.671	0.371
W3SR6	0.533	0.025	21.544	0.485	0.581	0.467
W3SR7	0.280	0.029	9.542	0.223	0.338	0.720
W3SR8	0.773	0.020	38.806	0.734	0.812	0.227
W3SR9	0.503	0.020	25.258	0.464	0.542	0.497
W3SR10	0.257	0.017	14.933	0.223	0.291	0.743
W3SR11	0.356	0.019	18.418	0.318	0.394	0.644
W3SR12	0.670	0.022	31.116	0.628	0.712	0.330
Drunk Driving	0.760	0.025	30.394	0.711	0.810	0.240

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P5.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 5 (Drunk Driving) – Covariances

		Correlation	SE	z	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.898	0.193	0.302
ESR	SC	0.557	0.022	25.559	0.514	0.600
IMP	SC	0.093	0.026	3.564	0.042	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 6: In the past year, have you used marijuana?

Table P6.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.705	0.021	34.119	0.664	0.745
W3SR2	ESR	0.800	0.020	39.884	0.761	0.839
W3SR3	ESR	0.769	0.017	46.136	0.737	0.802
W3SR4	ESR	0.547	0.027	19.952	0.493	0.600
W3SR5	IMP	0.607	0.018	34.582	0.573	0.641
W3SR6	IMP	0.685	0.018	38.084	0.650	0.720
W3SR7	IMP	0.849	0.017	49.083	0.815	0.883
W3SR8	IMP	0.477	0.021	22.896	0.436	0.518
W3SR9	SC	0.705	0.014	50.033	0.677	0.733
W3SR10	SC	0.860	0.010	85.507	0.841	0.880
W3SR11	SC	0.800	0.012	66.228	0.776	0.823
W3SR12	SC	0.574	0.019	30.825	0.537	0.610

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P6.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.012	0.030	−0.403	0.687	−0.072	0.047
High participation	−0.028	0.029	−0.975	0.330	−0.084	0.028
Sport Participation						
Moderate participation	0.051 [†]	0.029	1.752	0.080	−0.006	0.109
High participation	0.043	0.031	1.375	0.169	−0.018	0.104
Religious Youth Activity						
Less than once per month	0.017	0.027	0.633	0.527	−0.036	0.070
Less than once per week	−0.040	0.029	−1.400	0.161	−0.097	0.016
More than once per week	−0.106***	0.030	−3.570	0.000	−0.164	−0.048
Emotional Stab./Reg. Impulsivity						
Self-Concept	0.009	0.046	0.199	0.842	−0.081	0.099
	−0.235***	0.031	−7.583	0.000	−0.296	−0.174
	−0.167***	0.040	−4.168	0.000	−0.245	−0.088
Demographics						
Age	−0.152***	0.030	−5.034	0.000	−0.212	−0.093
Female	−0.118***	0.028	−4.144	0.000	−0.174	−0.062
Wave I Parent SES	0.105***	0.029	3.609	0.000	0.048	0.162
Hispanic	−0.048 [†]	0.029	−1.664	0.096	−0.105	0.009
Black	−0.064*	0.026	−2.475	0.013	−0.114	−0.013
Other Race	−0.034	0.027	−1.295	0.195	−0.087	0.018
Living Situation						
Parent's home	−0.047	0.030	−1.578	0.115	−0.105	0.011
Another person's home	0.032	0.026	1.263	0.207	−0.018	0.083
Other living situation	−0.090**	0.028	−3.157	0.002	−0.145	−0.034
Education / Employment						
Currently enrolled	−0.041	0.030	−1.352	0.177	−0.100	0.018
Currently employed	−0.055*	0.027	−2.010	0.044	−0.109	−0.001

Table P6.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.503	0.029	17.290	0.446	0.560	0.497
W3SR2	0.360	0.032	11.207	0.297	0.423	0.640
W3SR3	0.408	0.026	15.907	0.358	0.458	0.592
W3SR4	0.701	0.030	23.408	0.642	0.760	0.299
W3SR5	0.631	0.021	29.624	0.590	0.673	0.369
W3SR6	0.531	0.025	21.516	0.482	0.579	0.469
W3SR7	0.279	0.029	9.496	0.221	0.337	0.721
W3SR8	0.772	0.020	38.849	0.733	0.811	0.228
W3SR9	0.503	0.020	25.320	0.464	0.542	0.497
W3SR10	0.260	0.017	15.013	0.226	0.294	0.740
W3SR11	0.361	0.019	18.688	0.323	0.399	0.639
W3SR12	0.671	0.021	31.414	0.629	0.713	0.329
Marijuana Use	0.837	0.021	40.496	0.796	0.877	0.163

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P6.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 6 (Marijuana Use) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.948	0.194	0.302
ESR	SC	0.558	0.022	25.650	0.515	0.600
IMP	SC	0.094	0.026	3.609	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 7: Past year illicit drug use item constructed from Add Health items concerning cocaine, methamphetamine, other drugs, and injected drugs.

Table P7.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.706	0.020	34.511	0.666	0.746
W3SR2	ESR	0.799	0.020	39.933	0.760	0.838
W3SR3	ESR	0.770	0.017	46.301	0.738	0.803
W3SR4	ESR	0.546	0.027	19.965	0.492	0.600
W3SR5	IMP	0.607	0.018	34.364	0.573	0.642
W3SR6	IMP	0.687	0.018	38.542	0.652	0.722
W3SR7	IMP	0.846	0.017	48.957	0.812	0.880
W3SR8	IMP	0.479	0.021	23.121	0.438	0.519
W3SR9	SC	0.705	0.014	49.756	0.677	0.732
W3SR10	SC	0.861	0.010	85.170	0.841	0.881
W3SR11	SC	0.798	0.012	65.342	0.774	0.822
W3SR12	SC	0.575	0.019	30.882	0.539	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P7.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.002	0.036	0.057	0.954	-0.068	0.072
High participation	0.034	0.034	0.981	0.326	-0.034	0.101
Sport Participation						
Moderate participation	0.004	0.036	0.111	0.912	-0.067	0.075
High participation	-0.014	0.035	-0.404	0.686	-0.084	0.055
Religious Youth Activity						
Less than once per month	0.041	0.032	1.272	0.203	-0.022	0.105
Less than once per week	0.015	0.036	0.432	0.666	-0.054	0.085
More than once per week	-0.115**	0.036	-3.213	0.001	-0.185	-0.045
Emotional Stab./Reg.						
Impulsivity	-0.072	0.054	-1.322	0.186	-0.179	0.035
Self-Concept	-0.256***	0.036	-7.085	0.000	-0.327	-0.185
	-0.083 [†]	0.048	-1.707	0.088	-0.177	0.012
Demographics						
Age	-0.157***	0.036	-4.329	0.000	-0.228	-0.086
Female	-0.135***	0.034	-4.001	0.000	-0.201	-0.069
Wave I Parent SES	0.175***	0.034	5.131	0.000	0.108	0.242
Hispanic	-0.001	0.033	-0.020	0.984	-0.065	0.063
Black	-0.235***	0.034	-6.846	0.000	-0.303	-0.168
Other Race	-0.014	0.030	-0.455	0.649	-0.073	0.046
Living Situation						
Parent's home	-0.037	0.035	-1.049	0.294	-0.106	0.032
Another person's home	0.068*	0.027	2.506	0.012	0.015	0.122
Other living situation	-0.046	0.037	-1.254	0.210	-0.119	0.026
Education / Employment						
Currently enrolled	-0.056	0.036	-1.539	0.124	-0.127	0.015
Currently employed	-0.040	0.033	-1.215	0.224	-0.104	0.024

Table P7.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Residual $\mathcal{E}$ Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.502	0.029	17.406	0.446	0.559	0.498
W3SR2	0.362	0.032	11.325	0.299	0.425	0.638
W3SR3	0.407	0.026	15.875	0.357	0.457	0.593
W3SR4	0.702	0.030	23.509	0.643	0.760	0.298
W3SR5	0.631	0.021	29.377	0.589	0.673	0.369
W3SR6	0.528	0.024	21.560	0.480	0.576	0.472
W3SR7	0.284	0.029	9.698	0.226	0.341	0.716
W3SR8	0.771	0.020	38.908	0.732	0.810	0.229
W3SR9	0.504	0.020	25.232	0.464	0.543	0.496
W3SR10	0.258	0.017	14.828	0.224	0.292	0.742
W3SR11	0.363	0.019	18.624	0.325	0.401	0.637
W3SR12	0.669	0.021	31.196	0.627	0.711	0.331
Illicit Drug Use	0.751	0.027	27.434	0.698	0.805	0.249

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P7.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 7 (Illicit Drug Use) – Covariances

		Correlation	SE	z	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.952	0.194	0.302
ESR	SC	0.558	0.022	25.659	0.515	0.600
IMP	SC	0.094	0.026	3.608	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 8: During the past 12 months, have you ever seriously thought about committing suicide?

Table P8.1

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.702	0.020	34.412	0.662	0.742
W3SR2	ESR	0.805	0.020	40.237	0.766	0.844
W3SR3	ESR	0.763	0.017	46.206	0.730	0.795
W3SR4	ESR	0.551	0.027	20.170	0.497	0.605
W3SR5	IMP	0.605	0.018	33.699	0.570	0.640
W3SR6	IMP	0.689	0.018	37.873	0.654	0.725
W3SR7	IMP	0.848	0.018	48.282	0.813	0.882
W3SR8	IMP	0.477	0.021	22.819	0.436	0.518
W3SR9	SC	0.697	0.014	48.810	0.669	0.725
W3SR10	SC	0.859	0.010	83.155	0.839	0.879
W3SR11	SC	0.792	0.013	63.011	0.767	0.816
W3SR12	SC	0.578	0.019	30.682	0.541	0.615

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P8.2

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.000	0.045	0.010	0.992	-0.088	0.089
High participation	0.011	0.046	0.240	0.811	-0.079	0.101
Sport Participation						
Moderate participation	-0.008	0.048	-0.174	0.862	-0.102	0.085
High participation	-0.003	0.050	-0.068	0.946	-0.101	0.095
Religious Youth Activity						
Less than once per month	-0.077 [†]	0.044	-1.744	0.081	-0.163	0.010
Less than once per week	-0.090 [†]	0.048	-1.880	0.060	-0.183	0.004
More than once per week	-0.166***	0.046	-3.636	0.000	-0.255	-0.076
Emotional Stab./Reg.						
	-0.422***	0.057	-7.446	0.000	-0.533	-0.311
Impulsivity						
	-0.122**	0.044	-2.787	0.005	-0.208	-0.036
Self-Concept						
	-0.146**	0.047	-3.096	0.002	-0.239	-0.054
Demographics						
Age	-0.182***	0.047	-3.851	0.000	-0.274	-0.089
Female	-0.011	0.045	-0.245	0.807	-0.100	0.077
Wave I Parent SES	0.086*	0.042	2.035	0.042	0.003	0.170
Hispanic	0.031	0.042	0.736	0.461	-0.051	0.112
Black	-0.048	0.040	-1.207	0.227	-0.125	0.030
Other Race	0.010	0.040	0.239	0.811	-0.069	0.088
Living Situation						
Parent's home	0.056	0.047	1.191	0.234	-0.036	0.149
Another person's home	0.043	0.037	1.175	0.240	-0.029	0.115
Other living situation	-0.071	0.053	-1.344	0.179	-0.176	0.033
Education / Employment						
Currently enrolled	-0.055	0.045	-1.204	0.228	-0.144	0.034
Currently employed	-0.031	0.043	-0.734	0.463	-0.115	0.052

Table P8.3

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.507	0.029	17.670	0.450	0.563	0.493
W3SR2	0.352	0.032	10.912	0.288	0.415	0.648
W3SR3	0.418	0.025	16.611	0.369	0.468	0.582
W3SR4	0.696	0.030	23.131	0.637	0.755	0.304
W3SR5	0.634	0.022	29.180	0.591	0.677	0.366
W3SR6	0.525	0.025	20.924	0.476	0.574	0.475
W3SR7	0.281	0.030	9.446	0.223	0.340	0.719
W3SR8	0.772	0.020	38.651	0.733	0.811	0.228
W3SR9	0.514	0.020	25.841	0.475	0.553	0.486
W3SR10	0.262	0.018	14.768	0.227	0.297	0.738
W3SR11	0.373	0.020	18.778	0.334	0.412	0.627
W3SR12	0.666	0.022	30.590	0.623	0.709	0.334
Suicidal Ideation	0.611	0.042	14.559	0.529	0.693	0.389

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table P8.4

Wave III Tobacco, Alcohol, Drugs, and Suicide Risk Model 8 (Suicidal Ideation) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.249	0.028	8.928	0.194	0.304
ESR	SC	0.557	0.022	25.587	0.515	0.600
IMP	SC	0.092	0.026	3.503	0.041	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Appendix Q

Wave III Civic Engagement and Institutional Trust

Model 1: At any time during your adolescence, when you were between 12 to 18 years old, did you regularly participate in volunteer or community service work? Don't count things like washing cars or selling candy to raise money

Table Q1.1

Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.705	0.021	34.252	0.665	0.745
W3SR2	ESR	0.800	0.020	39.955	0.761	0.839
W3SR3	ESR	0.769	0.017	46.027	0.736	0.802
W3SR4	ESR	0.546	0.027	19.950	0.492	0.600
W3SR5	IMP	0.602	0.018	34.096	0.568	0.637
W3SR6	IMP	0.684	0.018	37.863	0.649	0.719
W3SR7	IMP	0.853	0.017	49.053	0.819	0.887
W3SR8	IMP	0.481	0.021	23.279	0.441	0.522
W3SR9	SC	0.705	0.014	49.808	0.678	0.733
W3SR10	SC	0.862	0.010	85.646	0.843	0.882
W3SR11	SC	0.796	0.012	64.989	0.772	0.820
W3SR12	SC	0.577	0.019	31.034	0.540	0.613

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q1.2

Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.072*	0.029	2.506	0.012	0.016	0.128
High participation	0.107***	0.027	3.938	0.000	0.054	0.160
Sport Participation						
Moderate participation	0.050 [†]	0.028	1.804	0.071	−0.004	0.104
High participation	0.035	0.029	1.205	0.228	−0.022	0.092
Religious Youth Activity						
Less than once per month	0.065*	0.026	2.526	0.012	0.015	0.115
Less than once per week	0.087**	0.027	3.251	0.001	0.035	0.140
More than once per week	0.118***	0.027	4.329	0.000	0.064	0.171
Emotional Stab./Reg.						
Impulsivity	−0.017	0.043	−0.390	0.696	−0.101	0.068
Self-Concept	0.035	0.030	1.158	0.247	−0.024	0.094
	0.067 [†]	0.039	1.711	0.087	−0.010	0.145
Demographics						
Age	0.015	0.028	0.541	0.589	−0.040	0.071
Female	0.041	0.027	1.503	0.133	−0.012	0.094
Wave I Parent SES	0.183***	0.027	6.854	0.000	0.130	0.235
Hispanic	0.025	0.027	0.919	0.358	−0.028	0.078
Black	−0.017	0.023	−0.738	0.460	−0.062	0.028
Other Race	0.035	0.025	1.429	0.153	−0.013	0.083
Living Situation						
Parent's home	0.027	0.028	0.988	0.323	−0.027	0.082
Another person's home	−0.053*	0.025	−2.090	0.037	−0.103	−0.003
Other living situation	0.066*	0.028	2.303	0.021	0.010	0.121
Education / Employment						
Currently enrolled	0.129***	0.028	4.596	0.000	0.074	0.184
Currently employed	0.021	0.026	0.793	0.428	−0.031	0.073

Table Q1.3

Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.503	0.029	17.318	0.446	0.560	0.497
W3SR2	0.360	0.032	11.244	0.297	0.423	0.640
W3SR3	0.409	0.026	15.909	0.358	0.459	0.591
W3SR4	0.702	0.030	23.477	0.643	0.760	0.298
W3SR5	0.637	0.021	29.927	0.595	0.679	0.363
W3SR6	0.532	0.025	21.536	0.484	0.581	0.468
W3SR7	0.272	0.030	9.165	0.214	0.330	0.728
W3SR8	0.768	0.020	38.632	0.729	0.807	0.232
W3SR9	0.502	0.020	25.151	0.463	0.542	0.498
W3SR10	0.257	0.017	14.775	0.222	0.291	0.743
W3SR11	0.366	0.019	18.794	0.328	0.405	0.634
W3SR12	0.668	0.021	31.151	0.626	0.710	0.332
Adolescent Volunteering	0.855	0.017	50.446	0.822	0.888	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q1.4

Wave III Civic Engagement and Institutional Trust Model 1 (Adolescent Volunteering) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.936	0.193	0.302
ESR	SC	0.558	0.022	25.630	0.515	0.600
IMP	SC	0.094	0.026	3.625	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 2: During the last 12 months did you perform any unpaid volunteer or community service work?

Table Q2.1

Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.708	0.021	34.351	0.667	0.748
W3SR2	ESR	0.801	0.020	40.065	0.762	0.840
W3SR3	ESR	0.769	0.017	45.983	0.736	0.801
W3SR4	ESR	0.545	0.027	19.924	0.492	0.599
W3SR5	IMP	0.600	0.018	33.855	0.566	0.635
W3SR6	IMP	0.683	0.018	37.726	0.647	0.718
W3SR7	IMP	0.855	0.017	48.903	0.820	0.889
W3SR8	IMP	0.481	0.021	23.280	0.441	0.522
W3SR9	SC	0.705	0.014	49.796	0.677	0.733
W3SR10	SC	0.861	0.010	85.590	0.842	0.881
W3SR11	SC	0.797	0.012	65.323	0.773	0.821
W3SR12	SC	0.577	0.019	31.087	0.541	0.614

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q2.2

Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.094**	0.029	3.207	0.001	0.036	0.151
High participation	0.140***	0.027	5.221	0.000	0.087	0.192
Sport Participation						
Moderate participation	0.068*	0.029	2.389	0.017	0.012	0.124
High participation	0.069*	0.029	2.404	0.016	0.013	0.125
Religious Youth Activity						
Less than once per month	0.011	0.027	0.391	0.696	−0.043	0.064
Less than once per week	0.056*	0.027	2.049	0.040	0.002	0.110
More than once per week	0.057*	0.028	2.088	0.037	0.004	0.111
Emotional Stab./Reg.	−0.048	0.044	−1.101	0.271	−0.134	0.038
Impulsivity	0.023	0.030	0.778	0.436	−0.035	0.082
Self-Concept	0.122**	0.039	3.122	0.002	0.045	0.199
Demographics						
Age	0.030	0.029	1.007	0.314	−0.028	0.087
Female	−0.036	0.027	−1.324	0.185	−0.090	0.017
Wave I Parent SES	0.172***	0.027	6.281	0.000	0.118	0.225
Hispanic	0.001	0.028	0.018	0.985	−0.054	0.055
Black	−0.022	0.024	−0.938	0.348	−0.069	0.024
Other Race	−0.014	0.026	−0.548	0.584	−0.066	0.037
Living Situation						
Parent's home	0.012	0.028	0.435	0.663	−0.043	0.068
Another person's home	−0.013	0.028	−0.475	0.634	−0.068	0.041
Other living situation	0.150***	0.027	5.495	0.000	0.097	0.204
Education / Employment						
Currently enrolled	0.214***	0.027	7.783	0.000	0.160	0.268
Currently employed	0.046 [†]	0.027	1.696	0.090	−0.007	0.099

Table Q2.3

Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.499	0.029	17.104	0.442	0.556	0.501
W3SR2	0.359	0.032	11.215	0.296	0.422	0.641
W3SR3	0.409	0.026	15.932	0.359	0.460	0.591
W3SR4	0.703	0.030	23.541	0.644	0.761	0.297
W3SR5	0.640	0.021	30.052	0.598	0.681	0.360
W3SR6	0.534	0.025	21.630	0.486	0.583	0.466
W3SR7	0.269	0.030	9.017	0.211	0.328	0.731
W3SR8	0.768	0.020	38.622	0.729	0.807	0.232
W3SR9	0.503	0.020	25.169	0.464	0.542	0.497
W3SR10	0.258	0.017	14.874	0.224	0.292	0.742
W3SR11	0.364	0.019	18.718	0.326	0.402	0.636
W3SR12	0.667	0.021	31.072	0.625	0.709	0.333
Past Year Volunteering	0.787	0.019	40.480	0.749	0.825	0.213

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q2.4

Wave III Civic Engagement and Institutional Trust Model 2 (Past Year Volunteering) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.930	0.193	0.301
ESR	SC	0.558	0.022	25.574	0.515	0.600
IMP	SC	0.094	0.026	3.606	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 3: Have you donated blood, plasma, or platelets during the last 12 months?

Table Q3.1

Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.705	0.021	34.260	0.665	0.745
W3SR2	ESR	0.801	0.020	39.981	0.761	0.840
W3SR3	ESR	0.769	0.017	45.992	0.736	0.801
W3SR4	ESR	0.547	0.027	19.979	0.493	0.600
W3SR5	IMP	0.601	0.018	33.946	0.566	0.636
W3SR6	IMP	0.682	0.018	37.746	0.647	0.718
W3SR7	IMP	0.854	0.017	48.931	0.820	0.888
W3SR8	IMP	0.482	0.021	23.303	0.441	0.522
W3SR9	SC	0.705	0.014	49.724	0.677	0.732
W3SR10	SC	0.862	0.010	85.643	0.843	0.882
W3SR11	SC	0.796	0.012	65.046	0.772	0.820
W3SR12	SC	0.576	0.019	30.955	0.540	0.613

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q3.2

Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.080*	0.034	2.336	0.020	0.013	0.148
High participation	0.103***	0.031	3.318	0.001	0.042	0.164
Sport Participation						
Moderate participation	−0.001	0.034	−0.031	0.975	−0.068	0.066
High participation	−0.023	0.034	−0.674	0.500	−0.089	0.043
Religious Youth Activity						
Less than once per month	0.038	0.030	1.261	0.207	−0.021	0.098
Less than once per week	0.050	0.033	1.499	0.134	−0.015	0.114
More than once per week	0.005	0.033	0.166	0.868	−0.059	0.070
Emotional Stab./Reg.	−0.037	0.050	−0.743	0.458	−0.135	0.061
Impulsivity	0.034	0.035	0.972	0.331	−0.034	0.102
Self-Concept	0.032	0.044	0.726	0.468	−0.055	0.119
Demographics						
Age	−0.011	0.034	−0.325	0.745	−0.079	0.056
Female	−0.057 [†]	0.032	−1.769	0.077	−0.119	0.006
Wave I Parent SES	0.037	0.033	1.135	0.256	−0.027	0.102
Hispanic	−0.040	0.033	−1.223	0.222	−0.104	0.024
Black	−0.008	0.029	−0.288	0.773	−0.066	0.049
Other Race	−0.015	0.030	−0.496	0.620	−0.075	0.044
Living Situation						
Parent's home	0.011	0.034	0.318	0.750	−0.055	0.077
Another person's home	0.048 [†]	0.029	1.685	0.092	−0.008	0.104
Other living situation	0.031	0.034	0.890	0.373	−0.037	0.098
Education / Employment						
Currently enrolled	0.049	0.034	1.422	0.155	−0.019	0.116
Currently employed	0.013	0.032	0.412	0.680	−0.049	0.076

Table Q3.3

Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Residual $\mathcal{E}$ Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.503	0.029	17.335	0.446	0.560	0.497
W3SR2	0.359	0.032	11.195	0.296	0.422	0.641
W3SR3	0.409	0.026	15.923	0.359	0.459	0.591
W3SR4	0.701	0.030	23.450	0.643	0.760	0.299
W3SR5	0.639	0.021	30.024	0.597	0.681	0.361
W3SR6	0.534	0.025	21.662	0.486	0.583	0.466
W3SR7	0.270	0.030	9.060	0.212	0.329	0.730
W3SR8	0.768	0.020	38.509	0.729	0.807	0.232
W3SR9	0.503	0.020	25.211	0.464	0.543	0.497
W3SR10	0.256	0.017	14.749	0.222	0.290	0.744
W3SR11	0.366	0.019	18.761	0.328	0.404	0.634
W3SR12	0.668	0.021	31.125	0.626	0.710	0.332
Blood Donation	0.969	0.010	92.579	0.948	0.990	0.031

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q3.4

Wave III Civic Engagement and Institutional Trust Model 3 (Blood Donation) – Covariances

		Correlation	SE	z	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.969	0.194	0.303
ESR	SC	0.559	0.022	25.693	0.516	0.601
IMP	SC	0.093	0.026	3.581	0.042	0.144

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 4: Are you a registered organ donor?

Table Q4.1

Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
W3SR1	ESR	0.701	0.021	33.924	0.661	0.742
W3SR2	ESR	0.805	0.020	40.456	0.766	0.844
W3SR3	ESR	0.766	0.017	45.650	0.733	0.799
W3SR4	ESR	0.546	0.028	19.841	0.492	0.600
W3SR5	IMP	0.602	0.018	33.847	0.568	0.637
W3SR6	IMP	0.687	0.018	38.069	0.651	0.722
W3SR7	IMP	0.853	0.017	48.954	0.819	0.887
W3SR8	IMP	0.478	0.021	22.970	0.437	0.519
W3SR9	SC	0.703	0.014	49.247	0.675	0.731
W3SR10	SC	0.862	0.010	84.857	0.842	0.882
W3SR11	SC	0.797	0.012	64.872	0.773	0.822
W3SR12	SC	0.575	0.019	30.610	0.538	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q4.2

Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.113***	0.029	3.894	0.000	0.056	0.169
High participation	0.091***	0.027	3.363	0.001	0.038	0.144
Sport Participation						
Moderate participation	0.043	0.028	1.521	0.128	-0.012	0.099
High participation	0.002	0.030	0.053	0.958	-0.056	0.059
Religious Youth Activity						
Less than once per month	-0.018	0.027	-0.682	0.495	-0.071	0.035
Less than once per week	-0.023	0.027	-0.851	0.395	-0.076	0.030
More than once per week	0.006	0.028	0.217	0.828	-0.048	0.060
Emotional Stab./Reg.						
	0.040	0.044	0.902	0.367	-0.046	0.126
Impulsivity						
	-0.006	0.031	-0.185	0.853	-0.066	0.055
Self-Concept						
	-0.022	0.040	-0.554	0.579	-0.100	0.056
Demographics						
Age	0.035	0.029	1.196	0.232	-0.022	0.092
Female	0.145***	0.027	5.337	0.000	0.092	0.198
Wave I Parent SES	0.164***	0.028	5.940	0.000	0.110	0.219
Hispanic	-0.094***	0.028	-3.391	0.001	-0.148	-0.040
Black	-0.162***	0.023	-6.993	0.000	-0.207	-0.117
Other Race	-0.076**	0.025	-3.027	0.002	-0.126	-0.027
Living Situation						
Parent's home	-0.035	0.028	-1.234	0.217	-0.091	0.021
Another person's home	0.010	0.026	0.397	0.691	-0.040	0.060
Other living situation	0.035	0.028	1.240	0.215	-0.020	0.090
Education / Employment						
Currently enrolled	0.023	0.029	0.783	0.434	-0.034	0.080
Currently employed	-0.019	0.027	-0.724	0.469	-0.071	0.033

Table Q4.3

Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.508	0.029	17.512	0.451	0.565	0.492
W3SR2	0.353	0.032	11.020	0.290	0.415	0.647
W3SR3	0.413	0.026	16.042	0.362	0.463	0.587
W3SR4	0.702	0.030	23.387	0.643	0.761	0.298
W3SR5	0.637	0.021	29.704	0.595	0.679	0.363
W3SR6	0.529	0.025	21.339	0.480	0.577	0.471
W3SR7	0.273	0.030	9.186	0.215	0.331	0.727
W3SR8	0.772	0.020	38.821	0.733	0.811	0.228
W3SR9	0.506	0.020	25.199	0.466	0.545	0.494
W3SR10	0.256	0.018	14.618	0.222	0.291	0.744
W3SR11	0.364	0.020	18.566	0.326	0.402	0.636
W3SR12	0.669	0.022	30.957	0.627	0.712	0.331
Organ Donor	0.861	0.017	51.887	0.828	0.893	0.139

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q4.4

Wave III Civic Engagement and Institutional Trust Model 4 (Organ Donor) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.245	0.028	8.822	0.191	0.300
ESR	SC	0.556	0.022	25.447	0.513	0.599
IMP	SC	0.095	0.026	3.625	0.043	0.146

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 5: Are you registered to vote?

Table Q5.1

Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.707	0.021	34.459	0.666	0.747
W3SR2	ESR	0.800	0.020	40.070	0.761	0.840
W3SR3	ESR	0.769	0.017	46.090	0.736	0.802
W3SR4	ESR	0.548	0.027	20.029	0.495	0.602
W3SR5	IMP	0.601	0.018	33.866	0.566	0.635
W3SR6	IMP	0.685	0.018	37.899	0.649	0.720
W3SR7	IMP	0.854	0.017	48.948	0.819	0.888
W3SR8	IMP	0.481	0.021	23.245	0.441	0.522
W3SR9	SC	0.704	0.014	49.553	0.676	0.732
W3SR10	SC	0.862	0.010	85.286	0.842	0.882
W3SR11	SC	0.796	0.012	64.890	0.772	0.820
W3SR12	SC	0.576	0.019	30.862	0.539	0.612

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q5.2

Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.122***	0.031	3.995	0.000	0.062	0.182
High participation	0.122***	0.033	3.713	0.000	0.058	0.186
Sport Participation						
Moderate participation	−0.006	0.030	−0.206	0.837	−0.066	0.053
High participation	0.016	0.032	0.486	0.627	−0.048	0.079
Religious Youth Activity						
Less than once per month	0.044	0.029	1.521	0.128	−0.013	0.100
Less than once per week	0.058 [†]	0.031	1.911	0.056	−0.001	0.118
More than once per week	0.052 [†]	0.031	1.700	0.089	−0.008	0.112
Emotional Stab./Reg. Impulsivity						
Self-Concept	−0.006	0.047	−0.125	0.900	−0.098	0.086
	0.034	0.032	1.067	0.286	−0.028	0.097
	0.035	0.043	0.805	0.421	−0.049	0.119
Demographics						
Age	0.160***	0.030	5.376	0.000	0.102	0.218
Female	−0.061*	0.030	−2.062	0.039	−0.119	−0.003
Wave I Parent SES	0.203***	0.029	6.995	0.000	0.146	0.260
Hispanic	−0.038	0.027	−1.397	0.162	−0.091	0.015
Black	0.074**	0.026	2.782	0.005	0.022	0.125
Other Race	−0.073**	0.025	−2.878	0.004	−0.123	−0.023
Living Situation						
Parent's home	0.006	0.031	0.180	0.857	−0.055	0.066
Another person's home	−0.031	0.026	−1.207	0.227	−0.082	0.019
Other living situation	−0.022	0.033	−0.686	0.493	−0.086	0.042
Education / Employment						
Currently enrolled	0.115***	0.030	3.806	0.000	0.056	0.174
Currently employed	−0.012	0.029	−0.417	0.676	−0.069	0.044

Table Q5.3

Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.501	0.029	17.288	0.444	0.558	0.499
W3SR2	0.359	0.032	11.240	0.297	0.422	0.641
W3SR3	0.409	0.026	15.944	0.359	0.459	0.591
W3SR4	0.700	0.030	23.313	0.641	0.758	0.300
W3SR5	0.639	0.021	30.014	0.598	0.681	0.361
W3SR6	0.531	0.025	21.453	0.482	0.580	0.469
W3SR7	0.271	0.030	9.119	0.213	0.330	0.729
W3SR8	0.768	0.020	38.578	0.729	0.808	0.232
W3SR9	0.504	0.020	25.165	0.465	0.543	0.496
W3SR10	0.257	0.017	14.783	0.223	0.292	0.743
W3SR11	0.366	0.020	18.743	0.328	0.404	0.634
W3SR12	0.669	0.021	31.155	0.627	0.711	0.331
Registered to Vote	0.852	0.020	43.499	0.813	0.890	0.148

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q5.4

Wave III Civic Engagement and Institutional Trust Model 5 (Registered to Vote) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.248	0.028	8.938	0.193	0.302
ESR	SC	0.559	0.022	25.666	0.516	0.602
IMP	SC	0.096	0.026	3.677	0.045	0.147

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 6: How much do you agree or disagree with the following statement? I trust the federal government.

Table Q6.1

Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.706	0.021	34.268	0.666	0.746
W3SR2	ESR	0.800	0.020	39.857	0.761	0.840
W3SR3	ESR	0.768	0.017	46.108	0.735	0.801
W3SR4	ESR	0.553	0.027	20.233	0.499	0.606
W3SR5	IMP	0.602	0.018	33.932	0.567	0.637
W3SR6	IMP	0.688	0.018	38.254	0.653	0.723
W3SR7	IMP	0.851	0.017	48.795	0.817	0.886
W3SR8	IMP	0.476	0.021	22.979	0.436	0.517
W3SR9	SC	0.708	0.014	50.263	0.680	0.736
W3SR10	SC	0.860	0.010	85.352	0.840	0.879
W3SR11	SC	0.799	0.012	65.402	0.775	0.823
W3SR12	SC	0.577	0.019	30.885	0.540	0.613

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q6.2

Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.022	0.024	−0.909	0.363	−0.070	0.026
High participation	−0.021	0.025	−0.840	0.401	−0.070	0.028
Sport Participation						
Moderate participation	0.066**	0.024	2.783	0.005	0.020	0.113
High participation	0.056*	0.025	2.190	0.029	0.006	0.106
Religious Youth Activity						
Less than once per month	0.031	0.023	1.323	0.186	−0.015	0.077
Less than once per week	0.101***	0.024	4.289	0.000	0.055	0.148
More than once per week	0.087***	0.025	3.547	0.000	0.039	0.136
Emotional Stab./Reg.						
	0.074*	0.036	2.058	0.040	0.004	0.145
Impulsivity						
	0.090***	0.024	3.814	0.000	0.044	0.137
Self-Concept						
	0.139***	0.032	4.299	0.000	0.075	0.202
Demographics						
Age	0.049*	0.024	1.996	0.046	0.001	0.097
Female	0.066**	0.024	2.783	0.005	0.019	0.112
Wave I Parent SES	0.021	0.023	0.928	0.354	−0.024	0.067
Hispanic	−0.001	0.022	−0.025	0.980	−0.044	0.043
Black	−0.123***	0.020	−6.195	0.000	−0.162	−0.084
Other Race	−0.032	0.021	−1.560	0.119	−0.073	0.008
Living Situation						
Parent's home	0.007	0.024	0.272	0.785	−0.041	0.054
Another person's home	−0.046*	0.021	−2.147	0.032	−0.088	−0.004
Other living situation	0.053*	0.024	2.239	0.025	0.007	0.100
Education / Employment						
Currently enrolled	0.058*	0.025	2.362	0.018	0.010	0.107
Currently employed	−0.034	0.022	−1.521	0.128	−0.078	0.010

Table Q6.3

Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.502	0.029	17.245	0.445	0.559	0.498
W3SR2	0.360	0.032	11.197	0.297	0.423	0.640
W3SR3	0.410	0.026	16.032	0.360	0.460	0.590
W3SR4	0.694	0.030	22.981	0.635	0.754	0.306
W3SR5	0.638	0.021	29.882	0.596	0.680	0.362
W3SR6	0.527	0.025	21.289	0.478	0.575	0.473
W3SR7	0.275	0.030	9.257	0.217	0.333	0.725
W3SR8	0.773	0.020	39.116	0.734	0.812	0.227
W3SR9	0.499	0.020	24.999	0.460	0.538	0.501
W3SR10	0.261	0.017	15.058	0.227	0.295	0.739
W3SR11	0.361	0.020	18.505	0.323	0.400	0.639
W3SR12	0.668	0.022	31.008	0.625	0.710	0.332
Trust in Federal Government	0.902	0.013	71.283	0.877	0.927	0.098

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q6.4

Wave III Civic Engagement and Institutional Trust Model 6 (Trust in Federal Government) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.249	0.028	8.971	0.194	0.303
ESR	SC	0.557	0.022	25.647	0.515	0.600
IMP	SC	0.094	0.026	3.601	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 7: How much do you agree or disagree with the following statement? I trust my state government.

Table Q7.1

Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.707	0.021	34.330	0.667	0.748
W3SR2	ESR	0.799	0.020	39.640	0.759	0.838
W3SR3	ESR	0.768	0.017	46.073	0.735	0.800
W3SR4	ESR	0.552	0.027	20.212	0.498	0.605
W3SR5	IMP	0.602	0.018	33.889	0.567	0.636
W3SR6	IMP	0.686	0.018	38.009	0.650	0.721
W3SR7	IMP	0.853	0.018	48.671	0.818	0.887
W3SR8	IMP	0.476	0.021	22.706	0.435	0.517
W3SR9	SC	0.708	0.014	50.289	0.680	0.735
W3SR10	SC	0.860	0.010	85.195	0.840	0.880
W3SR11	SC	0.799	0.012	65.463	0.775	0.822
W3SR12	SC	0.577	0.019	30.926	0.541	0.614

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q7.2

Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.008	0.025	−0.319	0.750	−0.056	0.041
High participation	0.010	0.025	0.388	0.698	−0.040	0.059
Sport Participation						
Moderate participation	0.057*	0.024	2.367	0.018	0.010	0.104
High participation	0.047†	0.025	1.846	0.065	−0.003	0.097
Religious Youth Activity						
Less than once per month	0.018	0.023	0.784	0.433	−0.027	0.064
Less than once per week	0.095***	0.024	3.893	0.000	0.047	0.143
More than once per week	0.080**	0.025	3.222	0.001	0.031	0.128
Emotional Stab./Reg.						
	0.046	0.036	1.274	0.203	−0.025	0.118
Impulsivity						
	0.091***	0.024	3.776	0.000	0.044	0.138
Self-Concept						
	0.145***	0.031	4.635	0.000	0.084	0.207
Demographics						
Age	0.016	0.025	0.625	0.532	−0.033	0.065
Female	0.031	0.023	1.321	0.186	−0.015	0.077
Wave I Parent SES	0.040†	0.023	1.750	0.080	−0.005	0.086
Hispanic	0.022	0.022	1.000	0.317	−0.022	0.066
Black	−0.128***	0.020	−6.294	0.000	−0.168	−0.088
Other Race	−0.022	0.022	−1.005	0.315	−0.064	0.021
Living Situation						
Parent's home	−0.003	0.025	−0.136	0.892	−0.051	0.045
Another person's home	−0.030	0.021	−1.408	0.159	−0.072	0.012
Other living situation	0.069*	0.027	2.501	0.012	0.015	0.122
Education / Employment						
Currently enrolled	0.046†	0.025	1.838	0.066	−0.003	0.095
Currently employed	−0.024	0.023	−1.069	0.285	−0.069	0.020

Table Q7.3

Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.500	0.029	17.137	0.442	0.557	0.500
W3SR2	0.362	0.032	11.249	0.299	0.425	0.638
W3SR3	0.411	0.026	16.061	0.361	0.461	0.589
W3SR4	0.696	0.030	23.094	0.637	0.755	0.304
W3SR5	0.638	0.021	29.863	0.596	0.680	0.362
W3SR6	0.530	0.025	21.415	0.481	0.578	0.470
W3SR7	0.273	0.030	9.125	0.214	0.331	0.727
W3SR8	0.774	0.020	38.785	0.734	0.813	0.226
W3SR9	0.499	0.020	25.049	0.460	0.538	0.501
W3SR10	0.260	0.017	15.000	0.226	0.294	0.740
W3SR11	0.362	0.019	18.598	0.324	0.401	0.638
W3SR12	0.667	0.022	30.912	0.624	0.709	0.333
Trust in State Government	0.908	0.013	71.314	0.883	0.933	0.092

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q7.4

Wave III Civic Engagement and Institutional Trust Model 7 (Trust in State Government) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.897	0.192	0.301
ESR	SC	0.558	0.022	25.688	0.515	0.601
IMP	SC	0.094	0.026	3.614	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Model 8: How much do you agree or disagree with the following statement? I trust my local government.

Table Q8.1

Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Std. Factor Loadings

Indicator	Factor	Loading	SE	z	CI Lower	CI Upper
W3SR1	ESR	0.707	0.021	34.278	0.666	0.747
W3SR2	ESR	0.798	0.020	39.514	0.758	0.837
W3SR3	ESR	0.769	0.017	46.140	0.736	0.802
W3SR4	ESR	0.551	0.027	20.258	0.498	0.605
W3SR5	IMP	0.601	0.018	33.841	0.566	0.635
W3SR6	IMP	0.685	0.018	37.908	0.650	0.721
W3SR7	IMP	0.853	0.018	48.602	0.819	0.888
W3SR8	IMP	0.476	0.021	22.771	0.435	0.517
W3SR9	SC	0.709	0.014	50.334	0.681	0.736
W3SR10	SC	0.858	0.010	84.752	0.838	0.878
W3SR11	SC	0.800	0.012	65.700	0.776	0.824
W3SR12	SC	0.577	0.019	30.845	0.540	0.613

Note: All loadings are significant at $p < .001$.

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q8.2

Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.002	0.025	0.084	0.933	−0.047	0.051
High participation	0.010	0.025	0.409	0.682	−0.039	0.059
Sport Participation						
Moderate participation	0.050*	0.024	2.061	0.039	0.002	0.097
High participation	0.047†	0.025	1.864	0.062	−0.002	0.097
Religious Youth Activity						
Less than once per month	−0.001	0.023	−0.036	0.971	−0.047	0.045
Less than once per week	0.080***	0.023	3.413	0.001	0.034	0.126
More than once per week	0.078**	0.025	3.113	0.002	0.029	0.128
Emotional Stab./Reg. Impulsivity						
Self-Concept	0.053	0.037	1.413	0.158	−0.020	0.126
	0.072**	0.024	2.936	0.003	0.024	0.119
	0.143***	0.033	4.364	0.000	0.079	0.208
Demographics						
Age	0.011	0.026	0.440	0.660	−0.039	0.062
Female	0.039	0.024	1.624	0.104	−0.008	0.086
Wave I Parent SES	0.034	0.024	1.441	0.150	−0.012	0.080
Hispanic	0.011	0.023	0.501	0.616	−0.033	0.056
Black	−0.124***	0.020	−6.138	0.000	−0.164	−0.084
Other Race	−0.030	0.023	−1.310	0.190	−0.074	0.015
Living Situation						
Parent's home	0.008	0.025	0.337	0.736	−0.040	0.057
Another person's home	−0.020	0.021	−0.937	0.349	−0.062	0.022
Other living situation	0.045†	0.027	1.682	0.093	−0.008	0.098
Education / Employment						
Currently enrolled	0.076**	0.025	3.055	0.002	0.027	0.125
Currently employed	−0.016	0.023	−0.708	0.479	−0.061	0.028

Table Q8.3

Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Structural Regressions

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
Latent Variances						
ESR	1.000	0.000	NA	1.000	1.000	NA
IMP	1.000	0.000	NA	1.000	1.000	NA
SC	1.000	0.000	NA	1.000	1.000	NA
Residual Variances						
W3SR1	0.501	0.029	17.177	0.443	0.558	0.499
W3SR2	0.364	0.032	11.287	0.300	0.427	0.636
W3SR3	0.409	0.026	15.954	0.359	0.459	0.591
W3SR4	0.696	0.030	23.180	0.637	0.755	0.304
W3SR5	0.639	0.021	29.972	0.597	0.681	0.361
W3SR6	0.530	0.025	21.387	0.482	0.579	0.470
W3SR7	0.272	0.030	9.059	0.213	0.330	0.728
W3SR8	0.773	0.020	38.772	0.734	0.812	0.227
W3SR9	0.498	0.020	24.967	0.459	0.537	0.502
W3SR10	0.263	0.017	15.147	0.229	0.297	0.737
W3SR11	0.360	0.019	18.476	0.322	0.398	0.640
W3SR12	0.667	0.022	30.937	0.625	0.710	0.333
w3trustlocal	0.913	0.012	73.378	0.888	0.937	0.087

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Table Q8.4

Wave III Civic Engagement and Institutional Trust Model 8 (Trust in Local Government) – Covariances

		Correlation	SE	<i>z</i>	CI Lower	CI Upper
Residual Covariances						
ESR	IMP	0.247	0.028	8.925	0.193	0.302
ESR	SC	0.559	0.022	25.716	0.516	0.601
IMP	SC	0.094	0.026	3.597	0.043	0.145

ESR (Emotional Stability/Regulation)

IMP (Impulsivity)

SC (Self-Concept)

Appendix R

Exploratory and Confirmatory Factor Analysis - Self-Regulation - Wave IV

Table R1.1

Wave IV Candidate Indicators for Young Adult Self-Regulation

Orig. Item	Indicator Wording	Retained
Suspected Domain: Emotional Stability		
	<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
H4PE4	I have frequent mood swings.	No
H4PE6	I worry about things.	No
H4PE8	I get angry easily.	Yes
H4PE20	I get upset easily.	Yes
H4PE22	I get stressed out easily.	No
H4PE24	I lose my temper.	Yes
H4PE12	I am relaxed most of the time.	No
H4PE14	I am not easily bothered by things.	No
H4PE16	I rarely get irritated.	No
H4PE28	I seldom feel blue.	No
H4PE32	I keep my cool.	Yes
Suspected Domain: Impulsivity		
	<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
H4PE33	I go out of my way to avoid having to deal with problems in my life.	No
H4PE34	When making a decision, I go with my “gut feeling” and don’t think much about the consequences of each alternative.	No
H4PE35	I like to take risks	No
H4PE36	I live my life without much thought for the future.	No

Continued on next page

Orig. Item	Indicator Wording	Retained
Suspected Domain: Control Beliefs		
	<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
H4PE37	There is little I can do to change the important things in my life.	Yes
H4PE38	Other people determine most of what I can and cannot do.	Yes
H4PE39	There are many things that interfere with what I want to do.	No
H4PE40	I have little control over the things that happen to me.	Yes
H4PE41	There is really no way I can solve the problems I have.	Yes
Suspected Domain: Future Orientation		
	<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
H4PE7	I'm always optimistic about my future.	No
H4PE15	I hardly ever expect things to go my way.	Yes
H4PE23	Overall, I expect more good things to happen to me than bad.	Yes
H4PE31	I rarely count on good things happening to me.	Yes
Suspected Domain: Behavioral Regulation		
	<i>How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?</i>	
H4PE3	I get chores done right away.	No
H4PE11	I often forget to put things back in their proper place.	No
H4PE19	I like order.	No
H4PE27	I make a mess of things.	No
Suspected Domain: Agency Beliefs		
	<i>In the last 30 days, how often have you felt</i>	
H4MH3	that you were unable to control the important things in your life?	Yes
H4MH4	confident in your ability to handle your personal problems?	Yes
H4MH5	that things were going your way?	Yes
H4MH6	that difficulties were piling up so high that you could not overcome them?	Yes

Table R1.2

Wave IV CFA Factor Loadings

Factor	Indicator	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>	β
Wave IV Self-Regulation	Emotional Stability	1.000	0.000	—	—	0.559
Wave IV Self-Regulation	Control Beliefs	1.002	0.045	22.498	<0.001	0.686
Wave IV Self-Regulation	Agency Beliefs	0.931	0.048	19.361	<0.001	0.686
Wave IV Self-Regulation	Future Orientation	1.409	0.063	22.405	<0.001	0.934
Emotional Stability	W4SR1	1.000	0.000	—	—	0.857
Emotional Stability	W4SR2	0.979	0.014	71.928	<0.001	0.839
Emotional Stability	W4SR3	0.934	0.012	79.081	<0.001	0.801
Emotional Stability	W4SR4	0.852	0.015	58.589	<0.001	0.730
Control Beliefs	W4SR5	1.000	0.000	—	—	0.700
Control Beliefs	W4SR6	1.041	0.027	39.237	<0.001	0.729
Control Beliefs	W4SR7	1.136	0.027	42.877	<0.001	0.796
Control Beliefs	W4SR8	1.178	0.026	46.033	<0.001	0.825
Agency Beliefs	W4SR9	1.000	0.000	—	—	0.650
Agency Beliefs	W4SR10	1.011	0.038	26.725	<0.001	0.657
Agency Beliefs	W4SR11	1.125	0.035	31.728	<0.001	0.732
Agency Beliefs	W4SR12	1.061	0.033	31.786	<0.001	0.690
Future Orientation	W4SR13	1.000	0.000	—	—	0.723
Future Orientation	W4SR14	0.938	0.026	35.570	<0.001	0.679
Future Orientation	W4SR15	1.044	0.027	39.270	<0.001	0.755

Table R1.3
Wave IV CFA Residual Variances

Item	Residual Var	<i>SE</i>	<i>z</i>	<i>p</i>	Residual Var (Std.)
W4SR1	0.265	0.000	—	—	0.265
W4SR2	0.296	0.000	—	—	0.296
W4SR3	0.359	0.000	—	—	0.359
W4SR4	0.467	0.000	—	—	0.467
W4SR5	0.510	0.000	—	—	0.510
W4SR6	0.469	0.000	—	—	0.469
W4SR7	0.367	0.000	—	—	0.367
W4SR8	0.319	0.000	—	—	0.319
W4SR9	0.577	0.000	—	—	0.577
W4SR10	0.568	0.000	—	—	0.568
W4SR11	0.465	0.000	—	—	0.465
W4SR12	0.523	0.000	—	—	0.523
W4SR13	0.477	0.000	—	—	0.477
W4SR14	0.539	0.000	—	—	0.539
W4SR15	0.430	0.000	—	—	0.430
Wave IV Self-Regulation	0.230	0.016	14.519	<0.001	1.000
Emotional Stability	0.505	0.016	31.439	<0.001	0.687
Control Beliefs	0.260	0.014	18.247	<0.001	0.530
Agency Beliefs	0.224	0.014	15.731	<0.001	0.529
Future Orientation	0.066	0.016	4.056	<0.001	0.127

Table R1.4
Wave IV CFA Threshold Estimates

Item	Threshold	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>
W4SR1	t1	−1.819	0.048	−37.920	<0.001
W4SR1	t2	−0.801	0.029	−27.544	<0.001
W4SR1	t3	−0.150	0.026	−5.799	<0.001
W4SR1	t4	1.205	0.033	36.992	<0.001
W4SR2	t1	−1.904	0.049	−38.651	<0.001
W4SR2	t2	−0.826	0.029	−28.355	<0.001
W4SR2	t3	−0.201	0.026	−7.796	<0.001
W4SR2	t4	1.465	0.037	39.905	<0.001
W4SR3	t1	−2.043	0.058	−34.960	<0.001
W4SR3	t2	−0.877	0.029	−30.094	<0.001
W4SR3	t3	−0.295	0.026	−11.342	<0.001
W4SR3	t4	1.144	0.032	35.755	<0.001
W4SR4	t1	−2.470	0.086	−28.819	<0.001
W4SR4	t2	−1.537	0.040	−38.767	<0.001
W4SR4	t3	−0.728	0.029	−25.336	<0.001
W4SR4	t4	1.157	0.033	34.679	<0.001
W4SR5	t1	−2.360	0.077	−30.846	<0.001
W4SR5	t2	−1.593	0.044	−36.104	<0.001
W4SR5	t3	−1.023	0.033	−31.461	<0.001
W4SR5	t4	0.858	0.029	29.928	<0.001
W4SR6	t1	−2.356	0.080	−29.533	<0.001
W4SR6	t2	−1.744	0.046	−37.929	<0.001
W4SR6	t3	−1.195	0.035	−34.307	<0.001
W4SR6	t4	0.556	0.027	20.925	<0.001
W4SR7	t1	−2.411	0.086	−28.014	<0.001
W4SR7	t2	−1.526	0.043	−35.825	<0.001
W4SR7	t3	−0.897	0.031	−29.030	<0.001
W4SR7	t4	0.951	0.029	32.242	<0.001
W4SR8	t1	−2.400	0.089	−26.970	<0.001
W4SR8	t2	−1.914	0.059	−32.413	<0.001
W4SR8	t3	−1.304	0.037	−34.811	<0.001
W4SR8	t4	0.687	0.028	24.949	<0.001
W4SR9	t1	−1.793	0.050	−35.822	<0.001
W4SR9	t2	−1.217	0.035	−35.050	<0.001
W4SR9	t3	−0.281	0.026	−10.879	<0.001
W4SR9	t4	0.484	0.027	18.154	<0.001

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Item	Threshold	Estimate	<i>SE</i>	<i>z</i>	<i>p</i>
W4SR10	t1	−1.942	0.054	−36.192	<0.001
W4SR10	t2	−1.553	0.043	−36.084	<0.001
W4SR10	t3	−0.795	0.029	−27.480	<0.001
W4SR10	t4	0.264	0.026	10.222	<0.001
W4SR11	t1	−1.908	0.051	−37.190	<0.001
W4SR11	t2	−1.300	0.035	−36.791	<0.001
W4SR11	t3	−0.162	0.026	−6.292	<0.001
W4SR11	t4	1.073	0.031	34.091	<0.001
W4SR12	t1	−1.971	0.056	−35.500	<0.001
W4SR12	t2	−1.322	0.037	−35.975	<0.001
W4SR12	t3	−0.376	0.026	−14.203	<0.001
W4SR12	t4	0.452	0.027	16.998	<0.001
W4SR13	t1	−1.981	0.056	−35.356	<0.001
W4SR13	t2	−0.987	0.031	−31.336	<0.001
W4SR13	t3	−0.253	0.026	−9.676	<0.001
W4SR13	t4	1.435	0.036	40.079	<0.001
W4SR14	t1	−2.279	0.072	−31.539	<0.001
W4SR14	t2	−1.510	0.042	−36.053	<0.001
W4SR14	t3	−0.886	0.031	−28.752	<0.001
W4SR14	t4	0.796	0.028	28.286	<0.001
W4SR15	t1	−2.005	0.055	−36.183	<0.001
W4SR15	t2	−1.051	0.032	−32.671	<0.001
W4SR15	t3	−0.547	0.028	−19.794	<0.001
W4SR15	t4	1.191	0.032	37.271	<0.001

Appendix S

Wave IV General Outcomes

Model 1: Think of this ladder as representing where people stand in the United States. At the top of the ladder (step 10) are the people who have the most money and education, and the most respected jobs. At the bottom of the ladder (step 1) are the people who have the least money and education, and the least respected jobs or no job. Where would you place yourself on this ladder? Pick the number for the step that shows where you think you stand at this time in your life, relative to other people in the United States.

Table S1.1

Wave IV General Outcomes Model 1 (Social Standing) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.522	0.019	28.068	0.485	0.558
Control Beliefs	Wave IV Self-Regulation	0.660	0.018	36.264	0.624	0.695
Agency Beliefs	Wave IV Self-Regulation	0.676	0.019	35.803	0.639	0.713
Future Orientation	Wave IV Self-Regulation	0.919	0.018	50.646	0.884	0.955
W3SR1	Emotional Stability	0.859	0.008	114.311	0.844	0.874
W4SR2	Emotional Stability	0.837	0.008	100.079	0.821	0.853
W4SR3	Emotional Stability	0.787	0.009	90.727	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.168	0.708	0.752
W4SR5	Control Beliefs	0.687	0.014	49.307	0.660	0.714
W4SR6	Control Beliefs	0.716	0.012	57.274	0.691	0.740
W4SR7	Control Beliefs	0.792	0.012	66.441	0.768	0.815
W4SR8	Control Beliefs	0.816	0.010	80.633	0.796	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.900	0.627	0.688
W4SR10	Agency Beliefs	0.631	0.017	36.888	0.597	0.664
W4SR11	Agency Beliefs	0.711	0.015	46.686	0.681	0.741
W4SR12	Agency Beliefs	0.672	0.016	43.093	0.642	0.703
W4SR13	Future Orientation	0.686	0.014	47.980	0.658	0.714
W4SR14	Future Orientation	0.661	0.015	43.986	0.631	0.690
W4SR15	Future Orientation	0.738	0.014	52.039	0.711	0.766

Note: All loadings are significant at $p < .001$.

Table S1.2

Wave IV General Outcomes Model 1 (Social Standing) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.008	0.021	0.359	0.720	−0.034	0.049
High participation	0.043*	0.020	2.123	0.034	0.003	0.083
Sport Participation						
Moderate participation	0.048*	0.020	2.396	0.017	0.009	0.087
High participation	0.043*	0.022	1.977	0.048	0.000	0.085
Religious Youth Activity						
Less than once per month	−0.013	0.019	−0.668	0.504	−0.051	0.025
Less than once per week	0.023	0.019	1.179	0.238	−0.015	0.061
More than once per week	0.007	0.020	0.364	0.716	−0.032	0.047
Wave IV Self-Regulation	0.230***	0.018	12.469	0.000	0.194	0.267
Demographics						
Age	−0.011	0.020	−0.570	0.569	−0.050	0.028
Female	−0.012	0.022	−0.562	0.574	−0.055	0.030
Wave I Parent SES	0.235***	0.020	11.798	0.000	0.196	0.274
Hispanic	0.012	0.019	0.619	0.536	−0.026	0.050
Black	0.006	0.016	0.358	0.721	−0.026	0.038
Other Race	−0.017	0.018	−0.953	0.341	−0.051	0.018
Living Situation						
Ever married	0.053*	0.022	2.444	0.015	0.010	0.095
Child(ren) living in home	0.000	0.029	−0.013	0.989	−0.056	0.056
Parent's home	−0.035 [†]	0.019	−1.855	0.064	−0.072	0.002
Other Structural Controls						
Another person's home	−0.032 [†]	0.019	−1.719	0.086	−0.068	0.004
Other living situation	−0.056***	0.017	−3.378	0.001	−0.089	−0.024
Educational attainment	0.312***	0.019	16.567	0.000	0.275	0.349
Currently employed	−0.070***	0.019	−3.762	0.000	−0.106	−0.033

Table S1.3

Wave IV General Outcomes Model 1 (Social Standing) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
W4SR1	0.262	0.013	20.307	0.237	0.287	0.738
W4SR2	0.300	0.014	21.401	0.272	0.327	0.700
W4SR3	0.380	0.014	27.798	0.353	0.407	0.620
W4SR4	0.467	0.017	28.147	0.435	0.500	0.533
W4SR5	0.528	0.019	27.558	0.490	0.565	0.472
W4SR6	0.488	0.018	27.264	0.453	0.523	0.512
W4SR7	0.373	0.019	19.770	0.336	0.410	0.627
W4SR8	0.335	0.017	20.289	0.302	0.367	0.665
W4SR9	0.567	0.021	27.489	0.527	0.608	0.433
W4SR10	0.602	0.022	27.917	0.560	0.644	0.398
W4SR11	0.494	0.022	22.821	0.452	0.537	0.506
W4SR12	0.548	0.021	26.155	0.507	0.589	0.452
W4SR13	0.529	0.020	26.949	0.491	0.568	0.471
W4SR14	0.564	0.020	28.394	0.525	0.602	0.436
W4SR15	0.455	0.021	21.694	0.414	0.496	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.728	0.019	37.522	0.690	0.766	0.272
Control Beliefs	0.565	0.024	23.536	0.518	0.612	0.435
Agency Beliefs	0.543	0.026	21.247	0.493	0.593	0.457
Future Orientation	0.155	0.033	4.651	0.090	0.221	0.845
Social Standing	0.709	0.015	47.275	0.679	0.738	0.291

Model 2: In general, how is your health?

Table S2.1

Wave IV General Outcomes Model 2 (General Health) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.530	0.018	28.792	0.494	0.566
Control Beliefs	Wave IV Self-Regulation	0.658	0.018	36.215	0.623	0.694
Agency Beliefs	Wave IV Self-Regulation	0.673	0.019	35.603	0.636	0.710
Future Orientation	Wave IV Self-Regulation	0.915	0.018	50.362	0.880	0.951
W3SR1	Emotional Stability	0.859	0.008	113.801	0.844	0.873
W4SR2	Emotional Stability	0.837	0.008	99.790	0.821	0.854
W4SR3	Emotional Stability	0.787	0.009	90.569	0.770	0.804
W4SR4	Emotional Stability	0.731	0.011	64.296	0.709	0.753
W4SR5	Control Beliefs	0.687	0.014	49.728	0.660	0.714
W4SR6	Control Beliefs	0.715	0.013	57.175	0.691	0.740
W4SR7	Control Beliefs	0.791	0.012	66.565	0.768	0.815
W4SR8	Control Beliefs	0.817	0.010	80.826	0.798	0.837
W4SR9	Agency Beliefs	0.657	0.016	41.798	0.626	0.688
W4SR10	Agency Beliefs	0.636	0.017	36.801	0.602	0.670
W4SR11	Agency Beliefs	0.705	0.015	46.170	0.675	0.735
W4SR12	Agency Beliefs	0.672	0.016	42.758	0.641	0.703
W4SR13	Future Orientation	0.685	0.014	48.379	0.657	0.713
W4SR14	Future Orientation	0.662	0.015	43.894	0.632	0.691
W4SR15	Future Orientation	0.738	0.014	51.826	0.711	0.766

Note: All loadings are significant at $p < .001$.

Table S2.2

Wave IV General Outcomes Model 2 (General Health) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.007	0.023	0.311	0.755	−0.039	0.053
High participation	0.052*	0.023	2.235	0.025	0.006	0.097
Sport Participation						
Moderate participation	0.050*	0.023	2.148	0.032	0.004	0.095
High participation	0.054*	0.024	2.278	0.023	0.008	0.101
Religious Youth Activity						
Less than once per month	−0.002	0.022	−0.094	0.925	−0.045	0.041
Less than once per week	0.032	0.023	1.406	0.160	−0.013	0.078
More than once per week	0.013	0.022	0.593	0.553	−0.030	0.056
Wave IV Self-Regulation	0.312***	0.021	14.888	0.000	0.271	0.354
Demographics						
Age	−0.039†	0.023	−1.710	0.087	−0.083	0.006
Female	−0.073**	0.024	−3.072	0.002	−0.119	−0.026
Wave I Parent SES	0.110***	0.024	4.659	0.000	0.064	0.156
Hispanic	−0.017	0.020	−0.863	0.388	−0.055	0.021
Black	−0.050**	0.019	−2.614	0.009	−0.088	−0.013
Other Race	−0.054*	0.022	−2.518	0.012	−0.097	−0.012
Living Situation						
Ever married	0.025	0.024	1.014	0.310	−0.023	0.073
Child(ren) living in home	0.029	0.032	0.895	0.371	−0.035	0.093
Parent's home	0.004	0.021	0.211	0.833	−0.037	0.046
Other Structural Controls						
Another person's home	0.011	0.021	0.524	0.600	−0.031	0.053
Other living situation	−0.019	0.021	−0.937	0.349	−0.060	0.021
Educational attainment	0.217***	0.023	9.404	0.000	0.171	0.262
Currently employed	−0.039†	0.021	−1.831	0.067	−0.081	0.003

Table S2.3

Wave IV General Outcomes Model 2 (General Health) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.263	0.013	20.287	0.237	0.288	0.737
W4SR2	0.299	0.014	21.312	0.272	0.327	0.701
W4SR3	0.380	0.014	27.797	0.354	0.407	0.620
W4SR4	0.466	0.017	28.047	0.433	0.498	0.534
W4SR5	0.528	0.019	27.862	0.491	0.566	0.472
W4SR6	0.488	0.018	27.266	0.453	0.523	0.512
W4SR7	0.374	0.019	19.849	0.337	0.410	0.626
W4SR8	0.332	0.017	20.081	0.300	0.364	0.668
W4SR9	0.568	0.021	27.524	0.528	0.609	0.432
W4SR10	0.596	0.022	27.125	0.553	0.639	0.404
W4SR11	0.503	0.022	23.336	0.460	0.545	0.497
W4SR12	0.549	0.021	25.974	0.507	0.590	0.451
W4SR13	0.531	0.019	27.337	0.493	0.569	0.469
W4SR14	0.562	0.020	28.142	0.523	0.601	0.438
W4SR15	0.455	0.021	21.601	0.413	0.496	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.719	0.020	36.859	0.681	0.757	0.281
Control Beliefs	0.567	0.024	23.691	0.520	0.614	0.433
Agency Beliefs	0.547	0.025	21.505	0.497	0.597	0.453
Future Orientation	0.162	0.033	4.882	0.097	0.228	0.838
General Health	0.799	0.017	47.337	0.766	0.832	0.201

Model 3: [Regarding most current job:] How satisfied (are/were) you with this job, as a whole?

Table S3.1

Wave IV General Outcomes Model 3 (Job Satisfaction) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.529	0.019	28.437	0.493	0.566
Control Beliefs	Wave IV Self-Regulation	0.658	0.019	35.440	0.621	0.694
Agency Beliefs	Wave IV Self-Regulation	0.671	0.019	34.764	0.633	0.709
Future Orientation	Wave IV Self-Regulation	0.909	0.019	48.296	0.872	0.946
W3SR1	Emotional Stability	0.858	0.008	113.141	0.843	0.873
W4SR2	Emotional Stability	0.837	0.008	99.204	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	89.596	0.769	0.804
W4SR4	Emotional Stability	0.735	0.011	65.310	0.713	0.757
W4SR5	Control Beliefs	0.683	0.014	48.330	0.655	0.711
W4SR6	Control Beliefs	0.715	0.013	56.559	0.690	0.739
W4SR7	Control Beliefs	0.790	0.012	64.728	0.766	0.814
W4SR8	Control Beliefs	0.815	0.010	78.565	0.794	0.835
W4SR9	Agency Beliefs	0.662	0.016	42.078	0.631	0.693
W4SR10	Agency Beliefs	0.634	0.017	36.825	0.600	0.668
W4SR11	Agency Beliefs	0.703	0.015	45.925	0.673	0.733
W4SR12	Agency Beliefs	0.675	0.016	43.040	0.644	0.705
W4SR13	Future Orientation	0.693	0.014	49.031	0.665	0.720
W4SR14	Future Orientation	0.661	0.015	43.064	0.630	0.691
W4SR15	Future Orientation	0.738	0.014	51.170	0.710	0.767

Note: All loadings are significant at $p < .001$.

Table S3.2

Wave IV General Outcomes Model 3 (Job Satisfaction) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	-0.007	0.025	-0.283	0.777	-0.056	0.042
High participation	0.051*	0.024	2.101	0.036	0.003	0.099
Sport Participation						
Moderate participation	0.004	0.024	0.179	0.858	-0.042	0.051
High participation	0.017	0.026	0.679	0.497	-0.033	0.068
Religious Youth Activity						
Less than once per month	0.027	0.022	1.198	0.231	-0.017	0.070
Less than once per week	0.025	0.022	1.101	0.271	-0.019	0.069
More than once per week	0.032	0.024	1.351	0.177	-0.014	0.078
Wave IV Self-Regulation	0.235***	0.023	10.098	0.000	0.189	0.281
Demographics						
Age	-0.051*	0.023	-2.194	0.028	-0.096	-0.005
Female	0.004	0.025	0.180	0.857	-0.044	0.053
Wave I Parent SES	0.139***	0.025	5.546	0.000	0.090	0.188
Hispanic	0.037	0.023	1.611	0.107	-0.008	0.081
Black	-0.032	0.020	-1.596	0.110	-0.071	0.007
Other Race	-0.010	0.022	-0.453	0.651	-0.053	0.033
Living Situation						
Ever married	0.115***	0.025	4.649	0.000	0.066	0.163
Child(ren) living in home	0.064*	0.030	2.139	0.032	0.005	0.123
Parent's home	-0.015	0.024	-0.608	0.543	-0.062	0.032
Other Structural Controls						
Another person's home	-0.047*	0.023	-2.053	0.040	-0.092	-0.002
Other living situation	0.024	0.018	1.386	0.166	-0.010	0.059
Educational attainment	0.025	0.025	1.012	0.312	-0.023	0.074
Currently employed	0.056*	0.022	2.548	0.011	0.013	0.099

Table S3.3

Wave IV General Outcomes Model 3 (Job Satisfaction) – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
W4SR1	0.264	0.013	20.296	0.239	0.290	0.736
W4SR2	0.300	0.014	21.254	0.272	0.328	0.700
W4SR3	0.381	0.014	27.597	0.354	0.408	0.619
W4SR4	0.460	0.017	27.795	0.427	0.492	0.540
W4SR5	0.533	0.019	27.621	0.496	0.571	0.467
W4SR6	0.489	0.018	27.089	0.454	0.525	0.511
W4SR7	0.376	0.019	19.462	0.338	0.413	0.624
W4SR8	0.336	0.017	19.904	0.303	0.369	0.664
W4SR9	0.562	0.021	27.003	0.521	0.603	0.438
W4SR10	0.598	0.022	27.385	0.555	0.641	0.402
W4SR11	0.505	0.022	23.444	0.463	0.547	0.495
W4SR12	0.545	0.021	25.751	0.503	0.586	0.455
W4SR13	0.520	0.020	26.597	0.482	0.559	0.480
W4SR14	0.564	0.020	27.820	0.524	0.603	0.436
W4SR15	0.455	0.021	21.342	0.413	0.497	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.720	0.020	36.562	0.681	0.759	0.280
Control Beliefs	0.567	0.024	23.247	0.520	0.615	0.433
Agency Beliefs	0.549	0.026	21.201	0.499	0.600	0.451
Future Orientation	0.173	0.034	5.056	0.106	0.240	0.827
Job Satisfaction	0.880	0.015	60.267	0.852	0.909	0.120

Model 4: How many close friends do you have? (Close friends include people whom you feel at ease with, can talk to about private matters, and can call on for help.)

Table S4.1

Wave IV General Outcomes Model 4 (Close Friends) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.520	0.019	27.543	0.483	0.557
Control Beliefs	Wave IV Self-Regulation	0.670	0.018	36.227	0.633	0.706
Agency Beliefs	Wave IV Self-Regulation	0.654	0.020	33.520	0.616	0.693
Future Orientation	Wave IV Self-Regulation	0.916	0.019	48.048	0.878	0.953
W3SR1	Emotional Stability	0.861	0.007	115.519	0.846	0.875
W4SR2	Emotional Stability	0.838	0.008	100.752	0.822	0.854
W4SR3	Emotional Stability	0.785	0.009	90.043	0.768	0.803
W4SR4	Emotional Stability	0.728	0.011	63.850	0.706	0.751
W4SR5	Control Beliefs	0.684	0.014	48.871	0.656	0.711
W4SR6	Control Beliefs	0.720	0.012	57.796	0.695	0.744
W4SR7	Control Beliefs	0.788	0.012	65.749	0.764	0.811
W4SR8	Control Beliefs	0.821	0.010	82.428	0.801	0.840
W4SR9	Agency Beliefs	0.656	0.016	41.426	0.625	0.687
W4SR10	Agency Beliefs	0.632	0.017	36.301	0.598	0.667
W4SR11	Agency Beliefs	0.706	0.016	45.528	0.676	0.737
W4SR12	Agency Beliefs	0.675	0.016	43.016	0.644	0.705
W4SR13	Future Orientation	0.683	0.015	47.096	0.655	0.711
W4SR14	Future Orientation	0.657	0.015	42.995	0.627	0.687
W4SR15	Future Orientation	0.740	0.014	51.180	0.712	0.769

Note: All loadings are significant at $p < .001$.

Table S4.2

Wave IV General Outcomes Model 4 (Close Friends) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.003	0.024	0.123	0.902	−0.044	0.050
High participation	0.077**	0.025	3.111	0.002	0.028	0.125
Sport Participation						
Moderate participation	0.038	0.023	1.610	0.107	−0.008	0.083
High participation	0.026	0.025	1.072	0.284	−0.022	0.075
Religious Youth Activity						
Less than once per month	0.020	0.022	0.912	0.362	−0.023	0.063
Less than once per week	0.024	0.023	1.024	0.306	−0.022	0.070
More than once per week	0.022	0.022	0.992	0.321	−0.021	0.065
Wave IV Self-Regulation	0.185***	0.023	8.128	0.000	0.140	0.229
Demographics						
Age	0.010	0.023	0.431	0.666	−0.034	0.054
Female	−0.066**	0.024	−2.724	0.006	−0.114	−0.019
Wave I Parent SES	0.079**	0.024	3.221	0.001	0.031	0.126
Hispanic	−0.018	0.021	−0.854	0.393	−0.060	0.024
Black	−0.124***	0.020	−6.109	0.000	−0.164	−0.084
Other Race	0.002	0.022	0.084	0.933	−0.041	0.045
Living Situation						
Ever married	−0.064**	0.024	−2.634	0.008	−0.112	−0.016
Child(ren) living in home	−0.090**	0.029	−3.084	0.002	−0.148	−0.033
Parent's home	−0.046*	0.022	−2.144	0.032	−0.089	−0.004
Other Structural Controls						
Another person's home	−0.039†	0.021	−1.843	0.065	−0.080	0.002
Other living situation	−0.049*	0.021	−2.358	0.018	−0.090	−0.008
Educational attainment	0.153***	0.024	6.356	0.000	0.106	0.200
Currently employed	−0.024	0.021	−1.121	0.262	−0.066	0.018

Table S4.3

Wave IV General Outcomes Model 4 - Close Friends – Residual & Latent Variances

	Std. Var	SE	<i>z</i>	CI Lower	CI Upper	<i>R</i> ²
W4SR1	0.259	0.013	20.202	0.234	0.284	0.741
W4SR2	0.298	0.014	21.390	0.271	0.325	0.702
W4SR3	0.383	0.014	27.959	0.356	0.410	0.617
W4SR4	0.470	0.017	28.278	0.437	0.502	0.530
W4SR5	0.533	0.019	27.837	0.495	0.570	0.467
W4SR6	0.482	0.018	26.884	0.447	0.517	0.518
W4SR7	0.380	0.019	20.134	0.343	0.417	0.620
W4SR8	0.327	0.016	19.990	0.295	0.359	0.673
W4SR9	0.569	0.021	27.378	0.529	0.610	0.431
W4SR10	0.600	0.022	27.222	0.557	0.643	0.400
W4SR11	0.501	0.022	22.866	0.458	0.544	0.499
W4SR12	0.545	0.021	25.734	0.503	0.586	0.455
W4SR13	0.534	0.020	26.937	0.495	0.572	0.466
W4SR14	0.568	0.020	28.243	0.528	0.607	0.432
W4SR15	0.452	0.021	21.084	0.410	0.494	0.548
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.730	0.020	37.171	0.691	0.768	0.270
Control Beliefs	0.552	0.025	22.281	0.503	0.600	0.448
Agency Beliefs	0.572	0.026	22.371	0.522	0.622	0.428
Future Orientation	0.162	0.035	4.633	0.093	0.230	0.838
Close Friends	0.858	0.015	56.953	0.829	0.888	0.142

Appendix T

Wave IV Criminal Justice Interaction

Model 1: How many times have you been arrested since your 18th birthday?

Table T1.1

Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.530	0.019	28.555	0.493	0.566
Control Beliefs	Wave IV Self-Regulation	0.656	0.018	35.711	0.620	0.692
Agency Beliefs	Wave IV Self-Regulation	0.662	0.019	34.537	0.624	0.699
Future Orientation	Wave IV Self-Regulation	0.923	0.019	49.244	0.886	0.959
W3SR1	Emotional Stability	0.860	0.007	114.689	0.845	0.874
W4SR2	Emotional Stability	0.836	0.008	99.783	0.819	0.852
W4SR3	Emotional Stability	0.789	0.009	90.927	0.772	0.806
W4SR4	Emotional Stability	0.730	0.011	64.416	0.707	0.752
W4SR5	Control Beliefs	0.688	0.014	49.702	0.661	0.715
W4SR6	Control Beliefs	0.720	0.012	58.428	0.696	0.744
W4SR7	Control Beliefs	0.790	0.012	66.428	0.767	0.813
W4SR8	Control Beliefs	0.815	0.010	80.782	0.796	0.835
W4SR9	Agency Beliefs	0.662	0.016	42.277	0.631	0.693
W4SR10	Agency Beliefs	0.632	0.017	36.868	0.598	0.665
W4SR11	Agency Beliefs	0.706	0.015	45.872	0.676	0.737
W4SR12	Agency Beliefs	0.673	0.016	43.122	0.643	0.704
W4SR13	Future Orientation	0.687	0.014	48.001	0.659	0.715
W4SR14	Future Orientation	0.662	0.015	43.885	0.632	0.691
W4SR15	Future Orientation	0.737	0.014	51.464	0.708	0.765

Note: All loadings are significant at $p < .001$.

Table T1.2

Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.050 [†]	0.027	−1.881	0.060	−0.102	0.002
High participation	−0.016	0.035	−0.458	0.647	−0.085	0.052
Sport Participation						
Moderate participation	0.018	0.026	0.686	0.492	−0.034	0.070
High participation	0.031	0.028	1.108	0.268	−0.024	0.087
Religious Youth Activity						
Less than once per month	0.016	0.023	0.710	0.478	−0.028	0.061
Less than once per week	−0.035	0.033	−1.042	0.298	−0.100	0.030
More than once per week	−0.048	0.030	−1.598	0.110	−0.108	0.011
Wave IV Self-Regulation	−0.116***	0.014	−8.523	0.000	−0.142	−0.089
Demographics						
Age	−0.005	0.028	−0.166	0.868	−0.060	0.050
Female	−0.168***	0.034	−4.977	0.000	−0.234	−0.102
Wave I Parent SES	−0.084**	0.028	−3.055	0.002	−0.139	−0.030
Hispanic	−0.006	0.025	−0.243	0.808	−0.056	0.044
Black	0.044*	0.022	2.017	0.044	0.001	0.088
Other Race	0.021	0.019	1.132	0.257	−0.016	0.058
Living Situation						
Ever married	−0.053 [†]	0.029	−1.811	0.070	−0.110	0.004
Child(ren) living in home	−0.019	0.037	−0.495	0.621	−0.092	0.055
Parent's home	−0.020	0.022	−0.915	0.360	−0.062	0.023
Other Structural Controls						
Another person's home	0.028	0.023	1.223	0.221	−0.017	0.073
Other living situation	0.096***	0.010	9.152	0.000	0.075	0.116
Educational attainment	−0.127***	0.026	−4.942	0.000	−0.178	−0.077
Currently employed	0.028	0.026	1.080	0.280	−0.023	0.080

Table T1.3

Wave IV Criminal Justice Interaction Model 1 (Adult Arrest) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.261	0.013	20.267	0.236	0.286	0.739
W4SR2	0.302	0.014	21.558	0.274	0.329	0.698
W4SR3	0.378	0.014	27.576	0.351	0.404	0.622
W4SR4	0.468	0.017	28.283	0.435	0.500	0.532
W4SR5	0.526	0.019	27.617	0.489	0.564	0.474
W4SR6	0.481	0.018	27.125	0.447	0.516	0.519
W4SR7	0.376	0.019	20.014	0.339	0.413	0.624
W4SR8	0.335	0.016	20.347	0.303	0.367	0.665
W4SR9	0.562	0.021	27.093	0.521	0.602	0.438
W4SR10	0.601	0.022	27.749	0.558	0.643	0.399
W4SR11	0.501	0.022	23.029	0.458	0.544	0.499
W4SR12	0.547	0.021	26.012	0.506	0.588	0.453
W4SR13	0.529	0.020	26.911	0.490	0.567	0.471
W4SR14	0.562	0.020	28.177	0.523	0.601	0.438
W4SR15	0.458	0.021	21.705	0.416	0.499	0.542
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.720	0.020	36.627	0.681	0.758	0.280
Control Beliefs	0.569	0.024	23.589	0.522	0.616	0.431
Agency Beliefs	0.562	0.025	22.154	0.512	0.612	0.438
Future Orientation	0.149	0.035	4.306	0.081	0.217	0.851
Adult Arrest	0.890	0.016	57.400	0.859	0.920	0.110

Model 2: Have you ever been convicted of or pled guilty to any charges other than a minor traffic violation?

Table T2.1

Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.526	0.019	28.258	0.489	0.562
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.086	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.660	0.019	34.216	0.622	0.698
Future Orientation	Wave IV Self-Regulation	0.920	0.019	48.759	0.883	0.957
W3SR1	Emotional Stability	0.859	0.008	114.398	0.845	0.874
W4SR2	Emotional Stability	0.837	0.008	100.125	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.617	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.373	0.708	0.752
W4SR5	Control Beliefs	0.686	0.014	49.559	0.659	0.713
W4SR6	Control Beliefs	0.718	0.012	57.655	0.693	0.742
W4SR7	Control Beliefs	0.791	0.012	66.512	0.767	0.814
W4SR8	Control Beliefs	0.816	0.010	80.795	0.796	0.836
W4SR9	Agency Beliefs	0.657	0.016	41.669	0.626	0.687
W4SR10	Agency Beliefs	0.635	0.017	36.855	0.601	0.669
W4SR11	Agency Beliefs	0.710	0.015	46.319	0.680	0.740
W4SR12	Agency Beliefs	0.670	0.016	42.525	0.639	0.701
W4SR13	Future Orientation	0.685	0.014	47.991	0.657	0.713
W4SR14	Future Orientation	0.662	0.015	43.958	0.632	0.691
W4SR15	Future Orientation	0.739	0.014	51.773	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table T2.2

Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.035	0.036	−0.987	0.324	−0.105	0.035
High participation	−0.028	0.036	−0.787	0.431	−0.098	0.042
Sport Participation						
Moderate participation	0.066 [†]	0.035	1.904	0.057	−0.002	0.134
High participation	0.072 [*]	0.034	2.106	0.035	0.005	0.138
Religious Youth Activity						
Less than once per month	0.022	0.031	0.731	0.465	−0.038	0.082
Less than once per week	−0.022	0.035	−0.624	0.533	−0.090	0.046
More than once per week	−0.061 [†]	0.036	−1.690	0.091	−0.133	0.010
Wave IV Self-Regulation	−0.054 [†]	0.032	−1.660	0.097	−0.117	0.010
Demographics						
Age	−0.036	0.035	−1.033	0.301	−0.105	0.033
Female	−0.330 ^{***}	0.035	−9.459	0.000	−0.398	−0.261
Wave I Parent SES	−0.126 ^{***}	0.035	−3.545	0.000	−0.195	−0.056
Hispanic	0.010	0.029	0.348	0.728	−0.047	0.068
Black	0.012	0.030	0.403	0.687	−0.046	0.070
Other Race	−0.017	0.032	−0.534	0.593	−0.079	0.045
Living Situation						
Ever married	−0.053	0.037	−1.428	0.153	−0.126	0.020
Child(ren) living in home	0.020	0.041	0.488	0.626	−0.061	0.101
Parent's home	−0.017	0.031	−0.560	0.576	−0.077	0.043
Other Structural Controls						
Another person's home	0.035	0.028	1.259	0.208	−0.019	0.089
Other living situation	0.045 [†]	0.024	1.852	0.064	−0.003	0.092
Educational attainment	−0.232 ^{***}	0.034	−6.795	0.000	−0.299	−0.165
Currently employed	0.010	0.032	0.305	0.761	−0.052	0.072

Table T2.3

Wave IV Criminal Justice Interaction Model 2 (Pled Guilty or Convicted) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.261	0.013	20.249	0.236	0.287	0.739
W4SR2	0.300	0.014	21.465	0.273	0.327	0.700
W4SR3	0.381	0.014	27.879	0.354	0.408	0.619
W4SR4	0.467	0.017	28.237	0.435	0.500	0.533
W4SR5	0.529	0.019	27.859	0.492	0.566	0.471
W4SR6	0.485	0.018	27.140	0.450	0.520	0.515
W4SR7	0.375	0.019	19.957	0.338	0.412	0.625
W4SR8	0.334	0.016	20.239	0.301	0.366	0.666
W4SR9	0.569	0.021	27.504	0.528	0.610	0.431
W4SR10	0.597	0.022	27.280	0.554	0.640	0.403
W4SR11	0.496	0.022	22.787	0.453	0.539	0.504
W4SR12	0.551	0.021	26.089	0.510	0.592	0.449
W4SR13	0.531	0.020	27.154	0.493	0.569	0.469
W4SR14	0.562	0.020	28.203	0.523	0.601	0.438
W4SR15	0.454	0.021	21.492	0.412	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.723	0.020	36.969	0.685	0.762	0.277
Control Beliefs	0.559	0.024	22.912	0.512	0.607	0.441
Agency Beliefs	0.564	0.025	22.135	0.514	0.614	0.436
Future Orientation	0.153	0.035	4.410	0.085	0.221	0.847
Pled Guilty or Convicted	0.758	0.027	28.517	0.706	0.810	0.242

Model 3: Have you ever been on probation for an offense?

Table T3.1

Wave IV Criminal Justice Interaction Model 3 (Probation) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.527	0.019	28.402	0.491	0.563
Control Beliefs	Wave IV Self-Regulation	0.665	0.018	36.247	0.629	0.701
Agency Beliefs	Wave IV Self-Regulation	0.661	0.019	34.269	0.623	0.698
Future Orientation	Wave IV Self-Regulation	0.921	0.019	49.018	0.885	0.958
W3SR1	Emotional Stability	0.859	0.008	114.496	0.845	0.874
W4SR2	Emotional Stability	0.837	0.008	100.173	0.821	0.854
W4SR3	Emotional Stability	0.787	0.009	90.819	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.365	0.707	0.752
W4SR5	Control Beliefs	0.688	0.014	49.738	0.661	0.715
W4SR6	Control Beliefs	0.719	0.012	57.978	0.695	0.743
W4SR7	Control Beliefs	0.791	0.012	66.810	0.768	0.814
W4SR8	Control Beliefs	0.817	0.010	81.081	0.797	0.837
W4SR9	Agency Beliefs	0.658	0.016	41.701	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.759	0.601	0.668
W4SR11	Agency Beliefs	0.706	0.015	45.800	0.676	0.736
W4SR12	Agency Beliefs	0.671	0.016	42.556	0.640	0.702
W4SR13	Future Orientation	0.686	0.014	48.203	0.658	0.714
W4SR14	Future Orientation	0.661	0.015	43.996	0.632	0.691
W4SR15	Future Orientation	0.739	0.014	51.857	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table T3.2

Wave IV Criminal Justice Interaction Model 3 (Probation) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.013	0.034	−0.370	0.711	−0.080	0.055
High participation	−0.031	0.035	−0.864	0.388	−0.100	0.039
Sport Participation						
Moderate participation	0.052	0.034	1.550	0.121	−0.014	0.119
High participation	0.062 [†]	0.033	1.862	0.063	−0.003	0.127
Religious Youth Activity						
Less than once per month	0.043	0.029	1.493	0.135	−0.013	0.100
Less than once per week	−0.076 [*]	0.035	−2.191	0.028	−0.144	−0.008
More than once per week	−0.100 ^{**}	0.034	−2.909	0.004	−0.167	−0.033
Wave IV Self-Regulation	−0.056 [†]	0.031	−1.784	0.074	−0.117	0.006
Demographics						
Age	−0.044	0.035	−1.267	0.205	−0.112	0.024
Female	−0.341 ^{***}	0.033	−10.443	0.000	−0.405	−0.277
Wave I Parent SES	−0.098 ^{**}	0.035	−2.810	0.005	−0.166	−0.029
Hispanic	−0.018	0.030	−0.612	0.540	−0.078	0.041
Black	0.021	0.030	0.683	0.494	−0.039	0.080
Other Race	−0.036	0.034	−1.066	0.286	−0.101	0.030
Living Situation						
Ever married	−0.036	0.038	−0.937	0.349	−0.111	0.039
Child(ren) living in home	−0.028	0.048	−0.587	0.557	−0.123	0.066
Parent's home	−0.012	0.031	−0.396	0.692	−0.073	0.048
Other Structural Controls						
Another person's home	0.060 [*]	0.028	2.152	0.031	0.005	0.114
Other living situation	0.035	0.023	1.517	0.129	−0.010	0.080
Educational attainment	−0.232 ^{***}	0.034	−6.797	0.000	−0.299	−0.165
Currently employed	0.004	0.031	0.138	0.890	−0.056	0.064

Table T3.3

Wave IV Criminal Justice Interaction Model 3 (Probation) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.292	0.236	0.287	0.738
W4SR2	0.299	0.014	21.383	0.272	0.327	0.701
W4SR3	0.380	0.014	27.857	0.353	0.407	0.620
W4SR4	0.468	0.017	28.264	0.435	0.500	0.532
W4SR5	0.527	0.019	27.697	0.490	0.564	0.473
W4SR6	0.483	0.018	27.071	0.448	0.518	0.517
W4SR7	0.374	0.019	19.979	0.338	0.411	0.626
W4SR8	0.332	0.016	20.193	0.300	0.365	0.668
W4SR9	0.567	0.021	27.288	0.526	0.608	0.433
W4SR10	0.598	0.022	27.289	0.555	0.640	0.402
W4SR11	0.502	0.022	23.076	0.459	0.545	0.498
W4SR12	0.549	0.021	25.931	0.508	0.591	0.451
W4SR13	0.529	0.020	27.066	0.491	0.567	0.471
W4SR14	0.563	0.020	28.300	0.524	0.602	0.437
W4SR15	0.454	0.021	21.544	0.413	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.722	0.020	36.920	0.684	0.761	0.278
Control Beliefs	0.558	0.024	22.840	0.510	0.605	0.442
Agency Beliefs	0.563	0.025	22.118	0.514	0.613	0.437
Future Orientation	0.151	0.035	4.363	0.083	0.219	0.849
Probation	0.742	0.027	27.517	0.689	0.795	0.258

Model 4: Have you ever spent time in a jail, prison, juvenile detention center or other correctional facility?

Table T4.1

Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.528	0.019	28.404	0.491	0.564
Control Beliefs	Wave IV Self-Regulation	0.665	0.018	36.242	0.629	0.701
Agency Beliefs	Wave IV Self-Regulation	0.661	0.019	34.290	0.623	0.699
Future Orientation	Wave IV Self-Regulation	0.921	0.019	48.974	0.884	0.958
W3SR1	Emotional Stability	0.859	0.007	114.601	0.845	0.874
W4SR2	Emotional Stability	0.837	0.008	100.100	0.821	0.853
W4SR3	Emotional Stability	0.787	0.009	90.841	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.368	0.707	0.752
W4SR5	Control Beliefs	0.687	0.014	49.657	0.660	0.715
W4SR6	Control Beliefs	0.719	0.012	57.937	0.695	0.743
W4SR7	Control Beliefs	0.790	0.012	66.616	0.767	0.813
W4SR8	Control Beliefs	0.816	0.010	80.881	0.796	0.836
W4SR9	Agency Beliefs	0.658	0.016	41.695	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.758	0.601	0.668
W4SR11	Agency Beliefs	0.706	0.015	45.801	0.676	0.736
W4SR12	Agency Beliefs	0.671	0.016	42.565	0.641	0.702
W4SR13	Future Orientation	0.686	0.014	48.199	0.658	0.714
W4SR14	Future Orientation	0.661	0.015	43.986	0.632	0.691
W4SR15	Future Orientation	0.739	0.014	51.839	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table T4.2

Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.013	0.033	0.384	0.701	−0.052	0.078
High participation	−0.066 [†]	0.037	−1.788	0.074	−0.139	0.006
Sport Participation						
Moderate participation	0.080 [*]	0.034	2.365	0.018	0.014	0.146
High participation	0.129 ^{***}	0.033	3.889	0.000	0.064	0.193
Religious Youth Activity						
Less than once per month	0.065 [*]	0.029	2.265	0.024	0.009	0.121
Less than once per week	0.002	0.032	0.069	0.945	−0.060	0.065
More than once per week	−0.070 [*]	0.034	−2.041	0.041	−0.136	−0.003
Wave IV Self-Regulation	−0.089 ^{**}	0.032	−2.786	0.005	−0.152	−0.026
Demographics						
Age	0.029	0.033	0.873	0.383	−0.036	0.094
Female	−0.305 ^{***}	0.033	−9.237	0.000	−0.369	−0.240
Wave I Parent SES	−0.173 ^{***}	0.034	−5.092	0.000	−0.239	−0.106
Hispanic	0.042	0.029	1.460	0.144	−0.014	0.098
Black	0.047 [†]	0.027	1.698	0.090	−0.007	0.100
Other Race	0.011	0.029	0.391	0.695	−0.046	0.068
Living Situation						
Ever married	−0.075 [*]	0.035	−2.126	0.034	−0.145	−0.006
Child(ren) living in home	−0.023	0.040	−0.582	0.560	−0.102	0.055
Parent's home	−0.033	0.030	−1.100	0.271	−0.091	0.026
Other Structural Controls						
Another person's home	0.045	0.030	1.516	0.129	−0.013	0.103
Other living situation	−0.072 ^{***}	0.021	−3.394	0.001	−0.113	−0.030
Educational attainment	−0.320 ^{***}	0.033	−9.581	0.000	−0.385	−0.255
Currently employed	0.039	0.030	1.279	0.201	−0.021	0.098

Table T4.3

Wave IV Criminal Justice Interaction Model 4 (Ever Incarcerated) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.294	0.236	0.287	0.738
W4SR2	0.299	0.014	21.382	0.272	0.327	0.701
W4SR3	0.380	0.014	27.838	0.353	0.407	0.620
W4SR4	0.468	0.017	28.271	0.435	0.500	0.532
W4SR5	0.527	0.019	27.706	0.490	0.565	0.473
W4SR6	0.483	0.018	27.090	0.448	0.518	0.517
W4SR7	0.376	0.019	20.031	0.339	0.412	0.624
W4SR8	0.334	0.016	20.258	0.301	0.366	0.666
W4SR9	0.567	0.021	27.264	0.526	0.607	0.433
W4SR10	0.598	0.022	27.291	0.555	0.640	0.402
W4SR11	0.502	0.022	23.067	0.459	0.544	0.498
W4SR12	0.549	0.021	25.922	0.508	0.591	0.451
W4SR13	0.529	0.020	27.070	0.491	0.567	0.471
W4SR14	0.563	0.020	28.299	0.524	0.602	0.437
W4SR15	0.454	0.021	21.547	0.413	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.722	0.020	36.796	0.683	0.760	0.278
Control Beliefs	0.558	0.024	22.894	0.510	0.606	0.442
Agency Beliefs	0.563	0.025	22.107	0.513	0.613	0.437
Future Orientation	0.152	0.035	4.395	0.084	0.220	0.848
Ever Incarcerated	0.680	0.029	23.258	0.623	0.738	0.320

Appendix U

Wave IV Tobacco, Alcohol, and Drug Use

Model 1: Have you ever smoked cigarettes regularly—that is, at least one cigarette every day for 30 days?

Table U1.1

Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.528	0.019	28.460	0.491	0.564
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.135	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.661	0.019	34.399	0.624	0.699
Future Orientation	Wave IV Self-Regulation	0.921	0.019	49.080	0.884	0.958
W3SR1	Emotional Stability	0.859	0.008	114.407	0.844	0.874
W4SR2	Emotional Stability	0.837	0.008	100.140	0.821	0.853
W4SR3	Emotional Stability	0.787	0.009	90.776	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.374	0.707	0.752
W4SR5	Control Beliefs	0.687	0.014	49.568	0.660	0.715
W4SR6	Control Beliefs	0.717	0.012	57.576	0.693	0.742
W4SR7	Control Beliefs	0.791	0.012	66.561	0.768	0.814
W4SR8	Control Beliefs	0.815	0.010	80.521	0.795	0.835
W4SR9	Agency Beliefs	0.659	0.016	41.913	0.628	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.805	0.600	0.667
W4SR11	Agency Beliefs	0.709	0.015	46.204	0.679	0.739
W4SR12	Agency Beliefs	0.671	0.016	42.640	0.640	0.702
W4SR13	Future Orientation	0.686	0.014	48.183	0.658	0.714
W4SR14	Future Orientation	0.661	0.015	43.865	0.631	0.690
W4SR15	Future Orientation	0.739	0.014	51.703	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table U1.2

Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.019	0.028	0.665	0.506	−0.036	0.073
High participation	−0.002	0.027	−0.077	0.938	−0.055	0.051
Sport Participation						
Moderate participation	0.014	0.027	0.522	0.601	−0.039	0.067
High participation	0.007	0.028	0.258	0.796	−0.047	0.061
Religious Youth Activity						
Less than once per month	0.018	0.025	0.728	0.467	−0.031	0.068
Less than once per week	−0.036	0.026	−1.398	0.162	−0.087	0.015
More than once per week	−0.062*	0.026	−2.368	0.018	−0.114	−0.011
Wave IV Self-Regulation	−0.099***	0.029	−3.464	0.001	−0.155	−0.043
Demographics						
Age	−0.014	0.026	−0.534	0.593	−0.065	0.037
Female	−0.044	0.028	−1.600	0.110	−0.099	0.010
Wave I Parent SES	−0.102***	0.028	−3.664	0.000	−0.157	−0.048
Hispanic	−0.103***	0.024	−4.289	0.000	−0.151	−0.056
Black	−0.178***	0.024	−7.479	0.000	−0.225	−0.131
Other Race	0.011	0.023	0.480	0.631	−0.034	0.056
Living Situation						
Ever married	−0.050 [†]	0.028	−1.749	0.080	−0.105	0.006
Child(ren) living in home	0.033	0.030	1.079	0.281	−0.027	0.092
Parent's home	0.003	0.026	0.112	0.911	−0.048	0.054
Other Structural Controls						
Another person's home	0.055*	0.025	2.157	0.031	0.005	0.104
Other living situation	−0.002	0.024	−0.064	0.949	−0.049	0.046
Educational attainment	−0.321***	0.027	−11.889	0.000	−0.374	−0.268
Currently employed	0.046 [†]	0.025	1.859	0.063	−0.002	0.094

Table U1.3

Wave IV Tobacco, Alcohol, and Drugs Model 1 (Regular Smoking) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.306	0.237	0.287	0.738
W4SR2	0.299	0.014	21.387	0.272	0.327	0.701
W4SR3	0.380	0.014	27.847	0.353	0.407	0.620
W4SR4	0.468	0.017	28.277	0.435	0.500	0.532
W4SR5	0.527	0.019	27.660	0.490	0.565	0.473
W4SR6	0.486	0.018	27.186	0.451	0.521	0.514
W4SR7	0.374	0.019	19.922	0.338	0.411	0.626
W4SR8	0.335	0.017	20.321	0.303	0.368	0.665
W4SR9	0.566	0.021	27.371	0.526	0.607	0.434
W4SR10	0.599	0.022	27.449	0.556	0.641	0.401
W4SR11	0.498	0.022	22.877	0.455	0.540	0.502
W4SR12	0.550	0.021	26.044	0.508	0.591	0.450
W4SR13	0.529	0.020	27.049	0.491	0.567	0.471
W4SR14	0.564	0.020	28.316	0.525	0.603	0.436
W4SR15	0.454	0.021	21.536	0.413	0.496	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.721	0.020	36.860	0.683	0.760	0.279
Control Beliefs	0.560	0.024	22.962	0.512	0.607	0.440
Agency Beliefs	0.563	0.025	22.123	0.513	0.612	0.437
Future Orientation	0.152	0.035	4.394	0.084	0.220	0.848
Regular Smoking	0.808	0.019	42.051	0.770	0.846	0.192

Model 2: During the past 12 months, on how many days did you drink 5 or more/4 or more drinks in a row?

Table U2.1

Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.530	0.019	28.428	0.493	0.566
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.087	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.664	0.019	34.460	0.626	0.702
Future Orientation	Wave IV Self-Regulation	0.918	0.019	48.852	0.882	0.955
W3SR1	Emotional Stability	0.860	0.008	114.589	0.845	0.874
W4SR2	Emotional Stability	0.836	0.008	99.895	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.806	0.770	0.804
W4SR4	Emotional Stability	0.729	0.011	64.213	0.707	0.752
W4SR5	Control Beliefs	0.686	0.014	49.250	0.659	0.713
W4SR6	Control Beliefs	0.715	0.013	57.145	0.691	0.740
W4SR7	Control Beliefs	0.793	0.012	66.755	0.769	0.816
W4SR8	Control Beliefs	0.815	0.010	79.993	0.795	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.523	0.627	0.689
W4SR10	Agency Beliefs	0.632	0.017	36.511	0.598	0.666
W4SR11	Agency Beliefs	0.708	0.015	45.729	0.678	0.739
W4SR12	Agency Beliefs	0.671	0.016	42.395	0.640	0.702
W4SR13	Future Orientation	0.684	0.014	47.621	0.656	0.712
W4SR14	Future Orientation	0.658	0.015	43.495	0.629	0.688
W4SR15	Future Orientation	0.738	0.014	51.173	0.709	0.766

Note: All loadings are significant at $p < .001$.

Table U2.2

Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Std. Factor Loadings

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.013	0.025	−0.513	0.608	−0.061	0.036
High participation	0.018	0.024	0.737	0.461	−0.029	0.065
Sport Participation						
Moderate participation	0.070**	0.023	3.004	0.003	0.024	0.115
High participation	0.057*	0.025	2.318	0.020	0.009	0.105
Religious Youth Activity						
Less than once per month	0.004	0.022	0.167	0.868	−0.039	0.047
Less than once per week	−0.073**	0.023	−3.115	0.002	−0.119	−0.027
More than once per week	−0.098***	0.023	−4.294	0.000	−0.142	−0.053
Wave IV Self-Regulation	−0.054*	0.025	−2.199	0.028	−0.103	−0.006
Demographics						
Age	−0.064**	0.023	−2.803	0.005	−0.108	−0.019
Female	−0.133***	0.024	−5.568	0.000	−0.179	−0.086
Wave I Parent SES	0.090***	0.024	3.747	0.000	0.043	0.138
Hispanic	−0.044*	0.021	−2.086	0.037	−0.085	−0.003
Black	−0.195***	0.020	−9.880	0.000	−0.234	−0.157
Other Race	−0.040*	0.019	−2.049	0.040	−0.078	−0.002
Living Situation						
Ever married	−0.166***	0.024	−6.924	0.000	−0.213	−0.119
Child(ren) living in home	−0.101***	0.020	−4.944	0.000	−0.141	−0.061
Parent's home	−0.045*	0.021	−2.099	0.036	−0.086	−0.003
Other Structural Controls						
Another person's home	−0.007	0.021	−0.317	0.751	−0.047	0.034
Other living situation	−0.028	0.018	−1.571	0.116	−0.063	0.007
Educational attainment	−0.020	0.025	−0.805	0.421	−0.069	0.029
Currently employed	0.008	0.022	0.359	0.720	−0.035	0.051

Table U2.3

Wave IV Tobacco, Alcohol, and Drugs Model 2 (Binge Drinking) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.261	0.013	20.226	0.236	0.286	0.739
W4SR2	0.301	0.014	21.467	0.273	0.328	0.699
W4SR3	0.380	0.014	27.844	0.353	0.407	0.620
W4SR4	0.468	0.017	28.243	0.436	0.500	0.532
W4SR5	0.529	0.019	27.676	0.492	0.567	0.471
W4SR6	0.489	0.018	27.299	0.454	0.524	0.511
W4SR7	0.372	0.019	19.753	0.335	0.409	0.628
W4SR8	0.335	0.017	20.156	0.302	0.368	0.665
W4SR9	0.568	0.021	27.249	0.527	0.608	0.432
W4SR10	0.601	0.022	27.482	0.558	0.644	0.399
W4SR11	0.498	0.022	22.696	0.455	0.541	0.502
W4SR12	0.550	0.021	25.926	0.509	0.592	0.450
W4SR13	0.532	0.020	27.071	0.494	0.571	0.468
W4SR14	0.567	0.020	28.447	0.528	0.606	0.433
W4SR15	0.456	0.021	21.446	0.414	0.498	0.544
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.720	0.020	36.483	0.681	0.758	0.280
Control Beliefs	0.560	0.024	22.927	0.512	0.607	0.440
Agency Beliefs	0.559	0.026	21.842	0.509	0.609	0.441
Future Orientation	0.157	0.035	4.535	0.089	0.224	0.843
Binge Drinking	0.839	0.015	57.343	0.811	0.868	0.161

Model 3: Have you ever used any of the following drugs: marijuana

Table U3.1

Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.531	0.019	28.612	0.494	0.567
Control Beliefs	Wave IV Self-Regulation	0.663	0.018	36.196	0.627	0.699
Agency Beliefs	Wave IV Self-Regulation	0.668	0.019	35.065	0.631	0.705
Future Orientation	Wave IV Self-Regulation	0.922	0.019	49.329	0.886	0.959
W3SR1	Emotional Stability	0.859	0.008	114.440	0.844	0.873
W4SR2	Emotional Stability	0.839	0.008	100.625	0.823	0.856
W4SR3	Emotional Stability	0.788	0.009	91.180	0.771	0.805
W4SR4	Emotional Stability	0.730	0.011	64.182	0.708	0.753
W4SR5	Control Beliefs	0.691	0.014	49.539	0.664	0.718
W4SR6	Control Beliefs	0.719	0.012	58.094	0.694	0.743
W4SR7	Control Beliefs	0.792	0.012	67.030	0.769	0.815
W4SR8	Control Beliefs	0.821	0.010	81.964	0.802	0.841
W4SR9	Agency Beliefs	0.656	0.016	41.442	0.625	0.687
W4SR10	Agency Beliefs	0.635	0.017	36.718	0.601	0.668
W4SR11	Agency Beliefs	0.706	0.015	46.185	0.676	0.736
W4SR12	Agency Beliefs	0.670	0.016	42.441	0.639	0.701
W4SR13	Future Orientation	0.686	0.014	48.013	0.658	0.714
W4SR14	Future Orientation	0.660	0.015	43.627	0.630	0.689
W4SR15	Future Orientation	0.737	0.014	51.632	0.709	0.765

Note: All loadings are significant at $p < .001$.

Table U3.2

Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.013	0.029	−0.451	0.652	−0.070	0.044
High participation	−0.003	0.028	−0.120	0.904	−0.058	0.052
Sport Participation						
Moderate participation	0.073**	0.027	2.649	0.008	0.019	0.127
High participation	0.054 [†]	0.029	1.844	0.065	−0.003	0.111
Religious Youth Activity						
Less than once per month	0.033	0.026	1.298	0.194	−0.017	0.084
Less than once per week	−0.085**	0.027	−3.216	0.001	−0.137	−0.033
More than once per week	−0.122***	0.027	−4.566	0.000	−0.175	−0.070
Wave IV Self-Regulation	−0.067*	0.030	−2.221	0.026	−0.126	−0.008
Demographics						
Age	−0.063*	0.027	−2.371	0.018	−0.115	−0.011
Female	−0.086**	0.029	−2.985	0.003	−0.142	−0.029
Wave I Parent SES	−0.008	0.029	−0.282	0.778	−0.064	0.048
Hispanic	−0.059*	0.026	−2.309	0.021	−0.109	−0.009
Black	−0.146***	0.023	−6.263	0.000	−0.191	−0.100
Other Race	−0.009	0.024	−0.353	0.724	−0.056	0.039
Living Situation						
Ever married	−0.149***	0.029	−5.159	0.000	−0.206	−0.093
Child(ren) living in home	−0.049 [†]	0.028	−1.756	0.079	−0.104	0.006
Parent's home	−0.080**	0.027	−3.024	0.002	−0.132	−0.028
Other Structural Controls						
Another person's home	−0.011	0.026	−0.419	0.676	−0.062	0.040
Other living situation	−0.023	0.024	−0.965	0.334	−0.070	0.024
Educational attainment	−0.068*	0.029	−2.345	0.019	−0.125	−0.011
Currently employed	0.055*	0.025	2.167	0.030	0.005	0.105

Table U3.3

Wave IV Tobacco, Alcohol, and Drugs Model 3 (Marijuana Use) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.263	0.013	20.392	0.237	0.288	0.737
W4SR2	0.296	0.014	21.114	0.268	0.323	0.704
W4SR3	0.379	0.014	27.802	0.352	0.406	0.621
W4SR4	0.467	0.017	28.089	0.434	0.499	0.533
W4SR5	0.523	0.019	27.128	0.485	0.560	0.477
W4SR6	0.484	0.018	27.204	0.449	0.518	0.516
W4SR7	0.373	0.019	19.918	0.336	0.409	0.627
W4SR8	0.326	0.016	19.780	0.293	0.358	0.674
W4SR9	0.570	0.021	27.472	0.529	0.611	0.430
W4SR10	0.597	0.022	27.230	0.554	0.640	0.403
W4SR11	0.501	0.022	23.196	0.459	0.543	0.499
W4SR12	0.551	0.021	26.085	0.510	0.593	0.449
W4SR13	0.529	0.020	26.970	0.491	0.568	0.471
W4SR14	0.565	0.020	28.328	0.526	0.604	0.435
W4SR15	0.457	0.021	21.704	0.415	0.498	0.543
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.719	0.020	36.515	0.680	0.757	0.281
Control Beliefs	0.560	0.024	23.078	0.513	0.608	0.440
Agency Beliefs	0.554	0.025	21.768	0.504	0.604	0.446
Future Orientation	0.149	0.034	4.330	0.082	0.217	0.851
Marijuana Use	0.888	0.016	54.869	0.856	0.919	0.112

**Model 4: Constructed item: Have you ever used any of the following drugs:
steroids, cocaine, methamphetamine, other drugs, or injected drugs**

Table U4.1

Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.528	0.019	28.443	0.491	0.564
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.148	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.661	0.019	34.315	0.623	0.699
Future Orientation	Wave IV Self-Regulation	0.922	0.019	49.253	0.885	0.958
W3SR1	Emotional Stability	0.859	0.008	114.493	0.845	0.874
W4SR2	Emotional Stability	0.837	0.008	100.244	0.821	0.853
W4SR3	Emotional Stability	0.787	0.009	90.852	0.770	0.804
W4SR4	Emotional Stability	0.729	0.011	64.329	0.707	0.752
W4SR5	Control Beliefs	0.687	0.014	49.647	0.660	0.715
W4SR6	Control Beliefs	0.717	0.012	57.650	0.693	0.742
W4SR7	Control Beliefs	0.791	0.012	66.681	0.768	0.815
W4SR8	Control Beliefs	0.815	0.010	80.747	0.796	0.835
W4SR9	Agency Beliefs	0.659	0.016	41.842	0.628	0.690
W4SR10	Agency Beliefs	0.634	0.017	36.741	0.600	0.667
W4SR11	Agency Beliefs	0.706	0.015	45.914	0.676	0.736
W4SR12	Agency Beliefs	0.672	0.016	42.628	0.641	0.702
W4SR13	Future Orientation	0.687	0.014	48.279	0.659	0.715
W4SR14	Future Orientation	0.660	0.015	43.830	0.630	0.689
W4SR15	Future Orientation	0.739	0.014	51.799	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table U4.2

Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.020	0.029	−0.697	0.486	−0.078	0.037
High participation	0.042	0.028	1.493	0.135	−0.013	0.096
Sport Participation						
Moderate participation	0.002	0.028	0.068	0.946	−0.053	0.057
High participation	−0.019	0.028	−0.656	0.512	−0.074	0.037
Religious Youth Activity						
Less than once per month	0.023	0.025	0.907	0.364	−0.027	0.073
Less than once per week	−0.063*	0.028	−2.241	0.025	−0.118	−0.008
More than once per week	−0.094***	0.028	−3.333	0.001	−0.149	−0.039
Wave IV Self-Regulation	−0.098**	0.030	−3.222	0.001	−0.157	−0.038
Demographics						
Age	−0.048†	0.028	−1.718	0.086	−0.102	0.007
Female	−0.108***	0.029	−3.764	0.000	−0.164	−0.052
Wave I Parent SES	−0.019	0.029	−0.675	0.500	−0.076	0.037
Hispanic	−0.068**	0.025	−2.730	0.006	−0.117	−0.019
Black	−0.351***	0.027	−13.134	0.000	−0.403	−0.299
Other Race	0.004	0.023	0.188	0.851	−0.041	0.050
Living Situation						
Ever married	−0.143***	0.029	−4.941	0.000	−0.200	−0.086
Child(ren) living in home	−0.073**	0.027	−2.713	0.007	−0.126	−0.020
Parent's home	0.000	0.026	0.017	0.986	−0.051	0.052
Other Structural Controls						
Another person's home	−0.005	0.024	−0.214	0.831	−0.053	0.042
Other living situation	−0.003	0.022	−0.149	0.881	−0.047	0.040
Educational attainment	−0.138***	0.029	−4.716	0.000	−0.196	−0.081
Currently employed	0.066*	0.026	2.567	0.010	0.016	0.117

Table U4.3

Wave IV Tobacco, Alcohol, and Drugs Model 4 (Illicit Drug Use) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.276	0.236	0.287	0.738
W4SR2	0.299	0.014	21.407	0.272	0.327	0.701
W4SR3	0.380	0.014	27.858	0.353	0.407	0.620
W4SR4	0.468	0.017	28.308	0.436	0.501	0.532
W4SR5	0.527	0.019	27.710	0.490	0.565	0.473
W4SR6	0.486	0.018	27.221	0.451	0.521	0.514
W4SR7	0.374	0.019	19.908	0.337	0.411	0.626
W4SR8	0.335	0.016	20.342	0.303	0.367	0.665
W4SR9	0.566	0.021	27.275	0.525	0.607	0.434
W4SR10	0.598	0.022	27.378	0.556	0.641	0.402
W4SR11	0.502	0.022	23.135	0.459	0.544	0.498
W4SR12	0.549	0.021	25.948	0.508	0.590	0.451
W4SR13	0.528	0.020	27.037	0.490	0.567	0.472
W4SR14	0.565	0.020	28.416	0.526	0.604	0.435
W4SR15	0.454	0.021	21.551	0.413	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.722	0.020	36.877	0.683	0.760	0.278
Control Beliefs	0.560	0.024	22.964	0.512	0.607	0.440
Agency Beliefs	0.563	0.025	22.106	0.513	0.613	0.437
Future Orientation	0.151	0.034	4.373	0.083	0.218	0.849
Illicit Drug Use	0.783	0.021	36.866	0.741	0.824	0.217

Model 5: How often has your drinking interfered with your responsibilities at work or school?

Table U5.1

Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.525	0.019	28.206	0.488	0.561
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.072	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.660	0.019	34.204	0.622	0.697
Future Orientation	Wave IV Self-Regulation	0.920	0.019	48.589	0.883	0.957
W3SR1	Emotional Stability	0.861	0.007	115.893	0.846	0.875
W4SR2	Emotional Stability	0.836	0.008	100.174	0.820	0.853
W4SR3	Emotional Stability	0.786	0.009	90.712	0.769	0.803
W4SR4	Emotional Stability	0.728	0.011	64.153	0.706	0.750
W4SR5	Control Beliefs	0.687	0.014	49.494	0.660	0.714
W4SR6	Control Beliefs	0.717	0.012	57.515	0.692	0.741
W4SR7	Control Beliefs	0.791	0.012	66.493	0.767	0.814
W4SR8	Control Beliefs	0.815	0.010	80.473	0.795	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.616	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.657	0.600	0.668
W4SR11	Agency Beliefs	0.705	0.015	45.692	0.675	0.735
W4SR12	Agency Beliefs	0.671	0.016	42.390	0.640	0.702
W4SR13	Future Orientation	0.685	0.014	47.924	0.657	0.713
W4SR14	Future Orientation	0.659	0.015	43.591	0.629	0.689
W4SR15	Future Orientation	0.738	0.014	51.482	0.710	0.766

Note: All loadings are significant at $p < .001$.

Table U5.2

Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.027	0.033	−0.823	0.411	−0.093	0.038
High participation	−0.013	0.032	−0.412	0.680	−0.075	0.049
Sport Participation						
Moderate participation	0.097**	0.032	3.003	0.003	0.034	0.161
High participation	0.104**	0.032	3.278	0.001	0.042	0.167
Religious Youth Activity						
Less than once per month	0.035	0.029	1.196	0.232	−0.022	0.092
Less than once per week	−0.078*	0.032	−2.488	0.013	−0.140	−0.017
More than once per week	−0.057†	0.032	−1.797	0.072	−0.120	0.005
Wave IV Self-Regulation	−0.055	0.035	−1.588	0.112	−0.123	0.013
Demographics						
Age	−0.021	0.032	−0.644	0.519	−0.084	0.043
Female	−0.056†	0.033	−1.713	0.087	−0.120	0.008
Wave I Parent SES	0.002	0.033	0.075	0.940	−0.062	0.067
Hispanic	−0.041	0.032	−1.298	0.194	−0.104	0.021
Black	−0.218***	0.032	−6.858	0.000	−0.281	−0.156
Other Race	0.016	0.026	0.637	0.524	−0.034	0.067
Living Situation						
Ever married	−0.076*	0.034	−2.276	0.023	−0.142	−0.011
Child(ren) living in home	−0.145**	0.045	−3.192	0.001	−0.233	−0.056
Parent's home	−0.037	0.032	−1.164	0.245	−0.099	0.025
Other Structural Controls						
Another person's home	−0.079*	0.031	−2.534	0.011	−0.140	−0.018
Other living situation	−0.043	0.031	−1.379	0.168	−0.103	0.018
Educational attainment	−0.015	0.035	−0.429	0.668	−0.084	0.054
Currently employed	0.038	0.030	1.284	0.199	−0.020	0.097

Table U5.3

Wave IV Tobacco, Alcohol, and Drugs Model 5 (School/Work Problems) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.259	0.013	20.245	0.234	0.284	0.741
W4SR2	0.301	0.014	21.531	0.273	0.328	0.699
W4SR3	0.382	0.014	27.986	0.355	0.408	0.618
W4SR4	0.470	0.017	28.410	0.437	0.502	0.530
W4SR5	0.528	0.019	27.732	0.491	0.566	0.472
W4SR6	0.486	0.018	27.201	0.451	0.521	0.514
W4SR7	0.375	0.019	19.941	0.338	0.412	0.625
W4SR8	0.335	0.017	20.300	0.303	0.368	0.665
W4SR9	0.567	0.021	27.280	0.527	0.608	0.433
W4SR10	0.598	0.022	27.247	0.555	0.641	0.402
W4SR11	0.503	0.022	23.115	0.460	0.546	0.497
W4SR12	0.550	0.021	25.935	0.509	0.592	0.450
W4SR13	0.531	0.020	27.092	0.492	0.569	0.469
W4SR14	0.566	0.020	28.403	0.527	0.605	0.434
W4SR15	0.455	0.021	21.491	0.414	0.497	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.724	0.020	37.077	0.686	0.763	0.276
Control Beliefs	0.559	0.024	22.867	0.511	0.607	0.441
Agency Beliefs	0.565	0.025	22.197	0.515	0.615	0.435
Future Orientation	0.154	0.035	4.427	0.086	0.222	0.846
School/Work Problems	0.869	0.021	41.142	0.828	0.911	0.131

Model 6: How often have you been under the influence of alcohol when you could have gotten yourself or others hurt, or put yourself or others at risk, including unprotected sex?

Table U6.1

Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.525	0.019	28.222	0.489	0.562
Control Beliefs	Wave IV Self-Regulation	0.663	0.018	35.951	0.627	0.700
Agency Beliefs	Wave IV Self-Regulation	0.660	0.019	34.286	0.622	0.698
Future Orientation	Wave IV Self-Regulation	0.920	0.019	48.597	0.883	0.957
W3SR1	Emotional Stability	0.861	0.007	116.012	0.846	0.875
W4SR2	Emotional Stability	0.836	0.008	100.221	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.762	0.770	0.804
W4SR4	Emotional Stability	0.728	0.011	64.142	0.706	0.750
W4SR5	Control Beliefs	0.687	0.014	49.532	0.659	0.714
W4SR6	Control Beliefs	0.717	0.012	57.532	0.693	0.741
W4SR7	Control Beliefs	0.790	0.012	66.474	0.767	0.814
W4SR8	Control Beliefs	0.815	0.010	80.506	0.795	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.662	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.661	0.600	0.668
W4SR11	Agency Beliefs	0.705	0.015	45.666	0.674	0.735
W4SR12	Agency Beliefs	0.671	0.016	42.412	0.640	0.702
W4SR13	Future Orientation	0.685	0.014	47.859	0.657	0.713
W4SR14	Future Orientation	0.660	0.015	43.653	0.630	0.689
W4SR15	Future Orientation	0.738	0.014	51.501	0.710	0.767

Note: All loadings are significant at $p < .001$.

Table U6.2

Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.019	0.030	−0.642	0.521	−0.079	0.040
High participation	−0.014	0.028	−0.501	0.617	−0.070	0.041
Sport Participation						
Moderate participation	0.106***	0.029	3.680	0.000	0.050	0.163
High participation	0.098***	0.029	3.361	0.001	0.041	0.155
Religious Youth Activity						
Less than once per month	0.043 [†]	0.026	1.676	0.094	−0.007	0.094
Less than once per week	−0.069*	0.028	−2.484	0.013	−0.124	−0.015
More than once per week	−0.102***	0.029	−3.533	0.000	−0.159	−0.046
Wave IV Self-Regulation	−0.069*	0.031	−2.223	0.026	−0.130	−0.008
Demographics						
Age	−0.058*	0.028	−2.029	0.042	−0.114	−0.002
Female	−0.120***	0.029	−4.053	0.000	−0.177	−0.062
Wave I Parent SES	0.042	0.030	1.421	0.155	−0.016	0.101
Hispanic	−0.087**	0.027	−3.184	0.001	−0.140	−0.033
Black	−0.203***	0.026	−7.666	0.000	−0.255	−0.151
Other Race	−0.021	0.025	−0.829	0.407	−0.070	0.028
Living Situation						
Ever married	−0.048	0.029	−1.638	0.101	−0.106	0.009
Child(ren) living in home	−0.068*	0.031	−2.163	0.031	−0.129	−0.006
Parent's home	−0.075**	0.028	−2.691	0.007	−0.130	−0.020
Other Structural Controls						
Another person's home	−0.033	0.026	−1.250	0.211	−0.084	0.019
Other living situation	−0.044 [†]	0.024	−1.791	0.073	−0.092	0.004
Educational attainment	0.033	0.031	1.071	0.284	−0.027	0.093
Currently employed	0.058*	0.027	2.174	0.030	0.006	0.111

Table U6.3

Wave IV Tobacco, Alcohol, and Drugs Model 6 (Risk to Self/Others) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.259	0.013	20.254	0.234	0.284	0.741
W4SR2	0.301	0.014	21.538	0.273	0.328	0.699
W4SR3	0.381	0.014	27.978	0.355	0.408	0.619
W4SR4	0.470	0.017	28.421	0.437	0.502	0.530
W4SR5	0.529	0.019	27.761	0.491	0.566	0.471
W4SR6	0.486	0.018	27.184	0.451	0.521	0.514
W4SR7	0.375	0.019	19.953	0.338	0.412	0.625
W4SR8	0.335	0.017	20.299	0.303	0.368	0.665
W4SR9	0.567	0.021	27.252	0.526	0.608	0.433
W4SR10	0.598	0.022	27.288	0.555	0.641	0.402
W4SR11	0.504	0.022	23.166	0.461	0.546	0.496
W4SR12	0.550	0.021	25.903	0.508	0.591	0.450
W4SR13	0.531	0.020	27.098	0.493	0.569	0.469
W4SR14	0.565	0.020	28.351	0.526	0.604	0.435
W4SR15	0.455	0.021	21.476	0.413	0.496	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.724	0.020	37.028	0.686	0.762	0.276
Control Beliefs	0.560	0.024	22.857	0.512	0.608	0.440
Agency Beliefs	0.564	0.025	22.194	0.514	0.614	0.436
Future Orientation	0.154	0.035	4.429	0.086	0.222	0.846
Risk to Self/Others	0.854	0.019	45.859	0.818	0.891	0.146

Model 7: How often have you had legal problems because of your drinking, like being arrested for disturbing the peace or driving under the influence of alcohol, or anything else?

Table U7.1

Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.526	0.019	28.254	0.489	0.562
Control Beliefs	Wave IV Self-Regulation	0.665	0.018	36.113	0.629	0.701
Agency Beliefs	Wave IV Self-Regulation	0.659	0.019	34.149	0.622	0.697
Future Orientation	Wave IV Self-Regulation	0.919	0.019	48.712	0.882	0.956
W3SR1	Emotional Stability	0.861	0.007	115.833	0.846	0.875
W4SR2	Emotional Stability	0.836	0.008	100.113	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.670	0.770	0.804
W4SR4	Emotional Stability	0.728	0.011	64.136	0.706	0.750
W4SR5	Control Beliefs	0.687	0.014	49.571	0.660	0.714
W4SR6	Control Beliefs	0.717	0.012	57.454	0.692	0.741
W4SR7	Control Beliefs	0.790	0.012	66.356	0.767	0.813
W4SR8	Control Beliefs	0.815	0.010	80.353	0.795	0.835
W4SR9	Agency Beliefs	0.657	0.016	41.591	0.626	0.688
W4SR10	Agency Beliefs	0.634	0.017	36.669	0.600	0.668
W4SR11	Agency Beliefs	0.707	0.015	46.190	0.677	0.737
W4SR12	Agency Beliefs	0.670	0.016	42.420	0.639	0.701
W4SR13	Future Orientation	0.685	0.014	47.891	0.657	0.713
W4SR14	Future Orientation	0.659	0.015	43.664	0.630	0.689
W4SR15	Future Orientation	0.739	0.014	51.527	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table U7.2

Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.043	0.038	−1.122	0.262	−0.118	0.032
High participation	−0.064	0.042	−1.544	0.123	−0.146	0.017
Sport Participation						
Moderate participation	0.073 [†]	0.039	1.864	0.062	−0.004	0.149
High participation	0.075 [†]	0.039	1.931	0.053	−0.001	0.152
Religious Youth Activity						
Less than once per month	0.031	0.033	0.917	0.359	−0.035	0.096
Less than once per week	−0.058	0.038	−1.520	0.128	−0.134	0.017
More than once per week	−0.118 ^{**}	0.041	−2.878	0.004	−0.199	−0.038
Wave IV Self-Regulation	−0.054	0.039	−1.383	0.167	−0.132	0.023
Demographics						
Age	0.001	0.040	0.034	0.973	−0.076	0.079
Female	−0.271 ^{***}	0.038	−7.135	0.000	−0.346	−0.197
Wave I Parent SES	−0.044	0.039	−1.109	0.267	−0.121	0.034
Hispanic	−0.067 [†]	0.038	−1.780	0.075	−0.142	0.007
Black	−0.231 ^{***}	0.037	−6.218	0.000	−0.304	−0.158
Other Race	−0.047	0.032	−1.456	0.145	−0.110	0.016
Living Situation						
Ever married	−0.075 [†]	0.042	−1.799	0.072	−0.157	0.007
Child(ren) living in home	−0.082	0.056	−1.447	0.148	−0.192	0.029
Parent's home	−0.085 [*]	0.037	−2.310	0.021	−0.157	−0.013
Other Structural Controls						
Another person's home	−0.002	0.031	−0.061	0.952	−0.063	0.059
Other living situation	−0.053 [†]	0.027	−1.940	0.052	−0.106	0.001
Educational attainment	−0.022	0.040	−0.567	0.571	−0.100	0.055
Currently employed	0.003	0.034	0.092	0.927	−0.063	0.070

Table U7.3

Wave IV Tobacco, Alcohol, and Drugs Model 7 (Legal Problems) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.259	0.013	20.257	0.234	0.284	0.741
W4SR2	0.300	0.014	21.495	0.273	0.328	0.700
W4SR3	0.381	0.014	27.949	0.355	0.408	0.619
W4SR4	0.470	0.017	28.424	0.437	0.502	0.530
W4SR5	0.528	0.019	27.691	0.490	0.565	0.472
W4SR6	0.487	0.018	27.227	0.452	0.522	0.513
W4SR7	0.376	0.019	19.965	0.339	0.413	0.624
W4SR8	0.336	0.017	20.304	0.303	0.368	0.664
W4SR9	0.568	0.021	27.378	0.528	0.609	0.432
W4SR10	0.598	0.022	27.257	0.555	0.641	0.402
W4SR11	0.500	0.022	23.068	0.457	0.542	0.500
W4SR12	0.551	0.021	25.987	0.509	0.592	0.449
W4SR13	0.531	0.020	27.101	0.493	0.569	0.469
W4SR14	0.565	0.020	28.375	0.526	0.604	0.435
W4SR15	0.454	0.021	21.457	0.413	0.496	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.724	0.020	37.014	0.685	0.762	0.276
Control Beliefs	0.558	0.024	22.823	0.510	0.606	0.442
Agency Beliefs	0.565	0.025	22.186	0.515	0.615	0.435
Future Orientation	0.155	0.035	4.454	0.087	0.223	0.845
Legal Problems	0.796	0.029	27.633	0.740	0.853	0.204

Model 8: How often have you had problems with your family, friends, or people at work or school because of your drinking?

Table U8.1

Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.526	0.019	28.312	0.490	0.562
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.124	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.661	0.019	34.389	0.623	0.699
Future Orientation	Wave IV Self-Regulation	0.918	0.019	48.727	0.881	0.955
W3SR1	Emotional Stability	0.861	0.007	115.998	0.846	0.875
W4SR2	Emotional Stability	0.836	0.008	100.169	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.776	0.770	0.804
W4SR4	Emotional Stability	0.728	0.011	64.166	0.706	0.750
W4SR5	Control Beliefs	0.687	0.014	49.578	0.660	0.714
W4SR6	Control Beliefs	0.717	0.012	57.520	0.693	0.741
W4SR7	Control Beliefs	0.791	0.012	66.483	0.767	0.814
W4SR8	Control Beliefs	0.815	0.010	80.431	0.795	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.704	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.686	0.600	0.668
W4SR11	Agency Beliefs	0.704	0.015	45.637	0.674	0.735
W4SR12	Agency Beliefs	0.671	0.016	42.449	0.640	0.702
W4SR13	Future Orientation	0.685	0.014	47.822	0.657	0.713
W4SR14	Future Orientation	0.660	0.015	43.646	0.630	0.689
W4SR15	Future Orientation	0.739	0.014	51.521	0.710	0.767

Note: All loadings are significant at $p < .001$.

Table U8.2

Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	−0.083*	0.037	−2.246	0.025	−0.156	−0.011
High participation	−0.053	0.036	−1.456	0.146	−0.124	0.018
Sport Participation						
Moderate participation	0.024	0.036	0.654	0.513	−0.048	0.095
High participation	0.081*	0.036	2.262	0.024	0.011	0.151
Religious Youth Activity						
Less than once per month	0.050	0.031	1.611	0.107	−0.011	0.111
Less than once per week	−0.036	0.037	−0.985	0.325	−0.109	0.036
More than once per week	−0.045	0.038	−1.166	0.244	−0.120	0.030
Wave IV Self-Regulation	−0.136***	0.037	−3.714	0.000	−0.208	−0.064
Demographics						
Age	−0.018	0.037	−0.484	0.628	−0.091	0.055
Female	−0.083*	0.036	−2.329	0.020	−0.153	−0.013
Wave I Parent SES	0.010	0.036	0.288	0.773	−0.060	0.080
Hispanic	−0.079*	0.033	−2.419	0.016	−0.144	−0.015
Black	−0.245***	0.037	−6.602	0.000	−0.317	−0.172
Other Race	0.013	0.029	0.458	0.647	−0.044	0.070
Living Situation						
Ever married	−0.063 [†]	0.036	−1.775	0.076	−0.133	0.007
Child(ren) living in home	−0.063*	0.029	−2.150	0.032	−0.120	−0.006
Parent's home	−0.018	0.033	−0.556	0.578	−0.082	0.046
Other Structural Controls						
Another person's home	−0.052	0.032	−1.644	0.100	−0.115	0.010
Other living situation	−0.043	0.029	−1.494	0.135	−0.100	0.013
Educational attainment	−0.061	0.037	−1.641	0.101	−0.135	0.012
Currently employed	0.004	0.033	0.119	0.906	−0.061	0.069

Table U8.3

Wave IV Tobacco, Alcohol, and Drugs Model 8 (Family/Friends Problems) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.259	0.013	20.261	0.234	0.284	0.741
W4SR2	0.301	0.014	21.553	0.274	0.328	0.699
W4SR3	0.381	0.014	27.947	0.354	0.408	0.619
W4SR4	0.470	0.017	28.417	0.437	0.502	0.530
W4SR5	0.528	0.019	27.762	0.491	0.566	0.472
W4SR6	0.486	0.018	27.178	0.451	0.521	0.514
W4SR7	0.375	0.019	19.941	0.338	0.412	0.625
W4SR8	0.336	0.017	20.316	0.303	0.368	0.664
W4SR9	0.567	0.021	27.282	0.526	0.608	0.433
W4SR10	0.598	0.022	27.319	0.555	0.641	0.402
W4SR11	0.504	0.022	23.178	0.461	0.547	0.496
W4SR12	0.549	0.021	25.880	0.508	0.591	0.451
W4SR13	0.531	0.020	27.109	0.493	0.570	0.469
W4SR14	0.565	0.020	28.329	0.526	0.604	0.435
W4SR15	0.455	0.021	21.471	0.413	0.496	0.545
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.723	0.020	37.011	0.685	0.762	0.277
Control Beliefs	0.560	0.024	22.960	0.512	0.607	0.440
Agency Beliefs	0.563	0.025	22.162	0.513	0.613	0.437
Future Orientation	0.157	0.035	4.537	0.089	0.225	0.843
Family/Friends Problems	0.868	0.024	36.554	0.821	0.914	0.132

Appendix V

Wave IV Civic and Religious Participation

Model 1: In the past 12 months, how many hours did you spend on volunteer or community service work?

Table V1.1

Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.526	0.019	28.293	0.490	0.562
Control Beliefs	Wave IV Self-Regulation	0.670	0.018	36.785	0.635	0.706
Agency Beliefs	Wave IV Self-Regulation	0.657	0.019	34.072	0.620	0.695
Future Orientation	Wave IV Self-Regulation	0.925	0.019	49.661	0.888	0.961
W3SR1	Emotional Stability	0.859	0.008	113.645	0.844	0.874
W4SR2	Emotional Stability	0.836	0.008	99.762	0.820	0.853
W4SR3	Emotional Stability	0.787	0.009	90.498	0.770	0.804
W4SR4	Emotional Stability	0.731	0.011	64.399	0.708	0.753
W4SR5	Control Beliefs	0.687	0.014	49.256	0.659	0.714
W4SR6	Control Beliefs	0.715	0.013	56.783	0.690	0.740
W4SR7	Control Beliefs	0.791	0.012	66.321	0.767	0.814
W4SR8	Control Beliefs	0.816	0.010	80.185	0.796	0.836
W4SR9	Agency Beliefs	0.658	0.016	41.667	0.627	0.689
W4SR10	Agency Beliefs	0.635	0.017	36.748	0.601	0.669
W4SR11	Agency Beliefs	0.707	0.015	45.816	0.677	0.738
W4SR12	Agency Beliefs	0.671	0.016	42.521	0.640	0.702
W4SR13	Future Orientation	0.685	0.014	48.007	0.657	0.713
W4SR14	Future Orientation	0.666	0.015	44.376	0.637	0.695
W4SR15	Future Orientation	0.740	0.014	51.902	0.712	0.768

Note: All loadings are significant at $p < .001$.

Table V1.2

Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.042	0.027	1.582	0.114	−0.010	0.094
High participation	0.089***	0.025	3.620	0.000	0.041	0.138
Sport Participation						
Moderate participation	0.023	0.025	0.935	0.350	−0.026	0.072
High participation	0.041	0.026	1.576	0.115	−0.010	0.093
Religious Youth Activity						
Less than once per month	0.031	0.024	1.310	0.190	−0.016	0.079
Less than once per week	0.052*	0.024	2.131	0.033	0.004	0.100
More than once per week	0.107***	0.024	4.432	0.000	0.059	0.154
Wave IV Self-Regulation	0.039	0.027	1.463	0.143	−0.013	0.092
Demographics						
Age	−0.005	0.024	−0.201	0.841	−0.052	0.042
Female	0.033	0.026	1.254	0.210	−0.018	0.084
Wave I Parent SES	0.040	0.026	1.575	0.115	−0.010	0.090
Hispanic	−0.078***	0.024	−3.306	0.001	−0.125	−0.032
Black	−0.064**	0.022	−2.936	0.003	−0.107	−0.021
Other Race	0.018	0.021	0.838	0.402	−0.024	0.060
Living Situation						
Ever married	0.045 [†]	0.027	1.692	0.091	−0.007	0.097
Child(ren) living in home	0.032	0.036	0.895	0.371	−0.038	0.103
Parent's home	0.029	0.024	1.204	0.228	−0.018	0.076
Other Structural Controls						
Another person's home	−0.045 [†]	0.024	−1.888	0.059	−0.093	0.002
Other living situation	0.039*	0.019	2.099	0.036	0.003	0.076
Educational attainment	0.245***	0.026	9.620	0.000	0.195	0.295
Currently employed	−0.034	0.023	−1.481	0.139	−0.079	0.011

Table V1.3

Wave IV Civic and Religious Participation Model 1 (Volunteer Work) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.263	0.013	20.235	0.237	0.288	0.737
W4SR2	0.301	0.014	21.465	0.273	0.328	0.699
W4SR3	0.381	0.014	27.884	0.354	0.408	0.619
W4SR4	0.466	0.017	28.133	0.434	0.499	0.534
W4SR5	0.529	0.019	27.613	0.491	0.566	0.471
W4SR6	0.489	0.018	27.134	0.453	0.524	0.511
W4SR7	0.375	0.019	19.874	0.338	0.412	0.625
W4SR8	0.334	0.017	20.096	0.301	0.366	0.666
W4SR9	0.567	0.021	27.323	0.527	0.608	0.433
W4SR10	0.597	0.022	27.167	0.553	0.640	0.403
W4SR11	0.500	0.022	22.883	0.457	0.543	0.500
W4SR12	0.549	0.021	25.914	0.508	0.591	0.451
W4SR13	0.530	0.020	27.100	0.492	0.569	0.470
W4SR14	0.556	0.020	27.832	0.517	0.596	0.444
W4SR15	0.452	0.021	21.412	0.411	0.493	0.548
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.723	0.020	36.979	0.685	0.762	0.277
Control Beliefs	0.551	0.024	22.531	0.503	0.598	0.449
Agency Beliefs	0.568	0.025	22.376	0.518	0.617	0.432
Future Orientation	0.145	0.034	4.204	0.077	0.212	0.855
Volunteer Work	0.862	0.015	56.331	0.832	0.892	0.138

Model 2: How often do you usually vote in local or statewide elections?

Table V2.1

Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.527	0.019	28.297	0.491	0.564
Control Beliefs	Wave IV Self-Regulation	0.673	0.018	37.151	0.637	0.708
Agency Beliefs	Wave IV Self-Regulation	0.658	0.019	34.038	0.620	0.696
Future Orientation	Wave IV Self-Regulation	0.920	0.019	49.180	0.883	0.957
W3SR1	Emotional Stability	0.859	0.008	113.954	0.844	0.874
W4SR2	Emotional Stability	0.836	0.008	99.917	0.820	0.853
W4SR3	Emotional Stability	0.786	0.009	90.309	0.769	0.803
W4SR4	Emotional Stability	0.730	0.011	64.264	0.708	0.753
W4SR5	Control Beliefs	0.687	0.014	49.321	0.660	0.715
W4SR6	Control Beliefs	0.716	0.013	56.947	0.692	0.741
W4SR7	Control Beliefs	0.790	0.012	66.287	0.767	0.814
W4SR8	Control Beliefs	0.815	0.010	80.148	0.795	0.835
W4SR9	Agency Beliefs	0.657	0.016	41.590	0.626	0.688
W4SR10	Agency Beliefs	0.636	0.017	36.776	0.602	0.670
W4SR11	Agency Beliefs	0.707	0.015	45.846	0.677	0.738
W4SR12	Agency Beliefs	0.671	0.016	42.475	0.640	0.702
W4SR13	Future Orientation	0.685	0.014	47.924	0.657	0.713
W4SR14	Future Orientation	0.662	0.015	44.047	0.633	0.692
W4SR15	Future Orientation	0.739	0.014	51.713	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table V2.2

Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.070**	0.023	2.998	0.003	0.024	0.116
High participation	0.073**	0.022	3.277	0.001	0.030	0.117
Sport Participation						
Moderate participation	0.029	0.023	1.296	0.195	−0.015	0.074
High participation	0.007	0.024	0.303	0.762	−0.040	0.055
Religious Youth Activity						
Less than once per month	0.046*	0.021	2.162	0.031	0.004	0.088
Less than once per week	0.054*	0.022	2.422	0.015	0.010	0.098
More than once per week	0.076***	0.022	3.425	0.001	0.033	0.120
Wave IV Self-Regulation	0.100***	0.023	4.277	0.000	0.054	0.146
Demographics						
Age	0.085***	0.022	3.861	0.000	0.042	0.128
Female	0.049*	0.024	2.058	0.040	0.002	0.095
Wave I Parent SES	0.022	0.023	0.918	0.358	−0.024	0.068
Hispanic	−0.047*	0.020	−2.315	0.021	−0.087	−0.007
Black	0.118***	0.019	6.069	0.000	0.080	0.156
Other Race	−0.003	0.020	−0.166	0.868	−0.043	0.036
Living Situation						
Ever married	0.060*	0.024	2.499	0.012	0.013	0.108
Child(ren) living in home	−0.045†	0.026	−1.726	0.084	−0.096	0.006
Parent's home	0.022	0.021	1.061	0.289	−0.019	0.063
Other Structural Controls						
Another person's home	−0.080***	0.021	−3.773	0.000	−0.122	−0.039
Other living situation	−0.028	0.022	−1.237	0.216	−0.072	0.016
Educational attainment	0.233***	0.023	9.983	0.000	0.187	0.278
Currently employed	0.025	0.021	1.172	0.241	−0.017	0.066

Table V2.3

Wave IV Civic and Religious Participation Model 2 (Voting Frequency) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.263	0.013	20.287	0.237	0.288	0.737
W4SR2	0.300	0.014	21.441	0.273	0.328	0.700
W4SR3	0.382	0.014	27.896	0.355	0.409	0.618
W4SR4	0.467	0.017	28.104	0.434	0.499	0.533
W4SR5	0.527	0.019	27.529	0.490	0.565	0.473
W4SR6	0.487	0.018	27.034	0.452	0.522	0.513
W4SR7	0.375	0.019	19.900	0.338	0.412	0.625
W4SR8	0.335	0.017	20.213	0.303	0.368	0.665
W4SR9	0.568	0.021	27.330	0.527	0.609	0.432
W4SR10	0.596	0.022	27.111	0.553	0.639	0.404
W4SR11	0.500	0.022	22.896	0.457	0.542	0.500
W4SR12	0.550	0.021	25.941	0.508	0.591	0.450
W4SR13	0.531	0.020	27.141	0.493	0.569	0.469
W4SR14	0.561	0.020	28.191	0.522	0.600	0.439
W4SR15	0.454	0.021	21.472	0.412	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.722	0.020	36.794	0.684	0.761	0.278
Control Beliefs	0.547	0.024	22.440	0.499	0.595	0.453
Agency Beliefs	0.567	0.025	22.302	0.517	0.617	0.433
Future Orientation	0.153	0.034	4.457	0.086	0.221	0.847
Voting Frequency	0.845	0.015	57.102	0.816	0.874	0.155

Model 3: How often have you attended church, synagogue, temple, mosque, or religious services in the past 12 months?

Table V3.1

Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.528	0.019	28.506	0.492	0.564
Control Beliefs	Wave IV Self-Regulation	0.664	0.018	36.329	0.628	0.700
Agency Beliefs	Wave IV Self-Regulation	0.660	0.019	34.175	0.622	0.698
Future Orientation	Wave IV Self-Regulation	0.921	0.019	48.990	0.884	0.958
W3SR1	Emotional Stability	0.859	0.007	114.701	0.845	0.874
W4SR2	Emotional Stability	0.837	0.008	100.270	0.821	0.854
W4SR3	Emotional Stability	0.787	0.009	90.821	0.770	0.804
W4SR4	Emotional Stability	0.729	0.011	64.372	0.707	0.752
W4SR5	Control Beliefs	0.688	0.014	49.670	0.661	0.715
W4SR6	Control Beliefs	0.718	0.012	57.767	0.693	0.742
W4SR7	Control Beliefs	0.791	0.012	66.671	0.767	0.814
W4SR8	Control Beliefs	0.815	0.010	80.666	0.796	0.835
W4SR9	Agency Beliefs	0.658	0.016	41.747	0.627	0.689
W4SR10	Agency Beliefs	0.634	0.017	36.699	0.600	0.668
W4SR11	Agency Beliefs	0.707	0.015	45.915	0.676	0.737
W4SR12	Agency Beliefs	0.671	0.016	42.629	0.641	0.702
W4SR13	Future Orientation	0.686	0.014	48.216	0.658	0.714
W4SR14	Future Orientation	0.660	0.015	43.878	0.630	0.689
W4SR15	Future Orientation	0.739	0.014	51.894	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table V3.2

Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.038 [†]	0.022	1.729	0.084	−0.005	0.081
High participation	0.049*	0.022	2.282	0.022	0.007	0.091
Sport Participation						
Moderate participation	0.023	0.021	1.085	0.278	−0.019	0.065
High participation	−0.001	0.022	−0.044	0.965	−0.044	0.042
Religious Youth Activity						
Less than once per month	0.081***	0.021	3.902	0.000	0.040	0.121
Less than once per week	0.197***	0.020	9.854	0.000	0.158	0.236
More than once per week	0.281***	0.019	14.537	0.000	0.243	0.319
Wave IV Self-Regulation	0.069**	0.022	3.063	0.002	0.025	0.113
Demographics						
Age	0.040*	0.020	1.985	0.047	0.001	0.080
Female	0.044*	0.022	1.994	0.046	0.001	0.088
Wave I Parent SES	0.002	0.022	0.087	0.931	−0.042	0.046
Hispanic	0.080***	0.021	3.877	0.000	0.039	0.120
Black	0.188***	0.018	10.674	0.000	0.153	0.222
Other Race	0.037*	0.018	2.015	0.044	0.001	0.073
Living Situation						
Ever married	0.240***	0.021	11.174	0.000	0.198	0.282
Child(ren) living in home	0.007	0.025	0.289	0.773	−0.041	0.055
Parent's home	0.030	0.020	1.481	0.138	−0.010	0.070
Other Structural Controls						
Another person's home	−0.012	0.022	−0.567	0.570	−0.055	0.030
Other living situation	0.044**	0.017	2.641	0.008	0.011	0.077
Educational attainment	0.144***	0.022	6.494	0.000	0.101	0.188
Currently employed	−0.004	0.020	−0.223	0.824	−0.044	0.035

Table V3.3

Wave IV Civic and Religious Participation Model 3 (Religious Attendance) – Residual & Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.309	0.236	0.287	0.738
W4SR2	0.299	0.014	21.390	0.272	0.326	0.701
W4SR3	0.381	0.014	27.905	0.354	0.407	0.619
W4SR4	0.468	0.017	28.303	0.435	0.500	0.532
W4SR5	0.527	0.019	27.679	0.490	0.564	0.473
W4SR6	0.485	0.018	27.199	0.450	0.520	0.515
W4SR7	0.375	0.019	19.978	0.338	0.411	0.625
W4SR8	0.335	0.016	20.342	0.303	0.368	0.665
W4SR9	0.567	0.021	27.333	0.526	0.608	0.433
W4SR10	0.598	0.022	27.343	0.556	0.641	0.402
W4SR11	0.501	0.022	23.021	0.458	0.543	0.499
W4SR12	0.549	0.021	25.966	0.508	0.591	0.451
W4SR13	0.529	0.020	27.079	0.491	0.567	0.471
W4SR14	0.565	0.020	28.446	0.526	0.603	0.435
W4SR15	0.453	0.021	21.526	0.412	0.495	0.547
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.721	0.020	36.884	0.683	0.760	0.279
Control Beliefs	0.559	0.024	23.011	0.511	0.606	0.441
Agency Beliefs	0.564	0.025	22.137	0.514	0.614	0.436
Future Orientation	0.151	0.035	4.366	0.083	0.219	0.849
Religious Attendance	0.763	0.016	49.122	0.733	0.794	0.237

Model 4: Many churches, synagogues, and other places of worship have special activities outside of regular worship services-such as classes, retreats, small groups, or choir. In the past 12 months, how often have you taken part in such activities?

Table V4.1

Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Std. Factor Loadings

Indicator	Factor	Loading	SE	<i>z</i>	CI Lower	CI Upper
Emotional Stability	Wave IV Self-Regulation	0.527	0.019	28.448	0.491	0.564
Control Beliefs	Wave IV Self-Regulation	0.665	0.018	36.310	0.629	0.700
Agency Beliefs	Wave IV Self-Regulation	0.659	0.019	34.139	0.621	0.697
Future Orientation	Wave IV Self-Regulation	0.921	0.019	49.029	0.884	0.958
W3SR1	Emotional Stability	0.859	0.007	114.559	0.844	0.874
W4SR2	Emotional Stability	0.837	0.008	100.168	0.821	0.853
W4SR3	Emotional Stability	0.787	0.009	90.692	0.770	0.804
W4SR4	Emotional Stability	0.730	0.011	64.420	0.708	0.752
W4SR5	Control Beliefs	0.688	0.014	49.706	0.661	0.715
W4SR6	Control Beliefs	0.717	0.012	57.699	0.693	0.741
W4SR7	Control Beliefs	0.791	0.012	66.576	0.767	0.814
W4SR8	Control Beliefs	0.816	0.010	80.729	0.796	0.836
W4SR9	Agency Beliefs	0.657	0.016	41.645	0.627	0.688
W4SR10	Agency Beliefs	0.634	0.017	36.718	0.600	0.668
W4SR11	Agency Beliefs	0.707	0.015	45.915	0.677	0.737
W4SR12	Agency Beliefs	0.672	0.016	42.641	0.641	0.703
W4SR13	Future Orientation	0.688	0.014	48.597	0.660	0.716
W4SR14	Future Orientation	0.660	0.015	43.840	0.630	0.689
W4SR15	Future Orientation	0.739	0.014	51.925	0.711	0.767

Note: All loadings are significant at $p < .001$.

Table V4.2

Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Structural Regressions

	β	SE	z	p	CI Lower	CI Upper
Non-Sport Participation						
Moderate participation	0.033	0.027	1.215	0.224	−0.020	0.086
High participation	0.048 [†]	0.026	1.861	0.063	−0.003	0.099
Sport Participation						
Moderate participation	−0.028	0.026	−1.079	0.281	−0.080	0.023
High participation	−0.020	0.026	−0.744	0.457	−0.071	0.032
Religious Youth Activity						
Less than once per month	0.085**	0.026	3.279	0.001	0.034	0.135
Less than once per week	0.193***	0.024	8.089	0.000	0.146	0.240
More than once per week	0.265***	0.023	11.410	0.000	0.220	0.311
Wave IV Self-Regulation	0.079**	0.027	2.969	0.003	0.027	0.131
Demographics						
Age	0.033	0.025	1.343	0.179	−0.015	0.082
Female	0.017	0.028	0.599	0.549	−0.038	0.071
Wave I Parent SES	−0.035	0.027	−1.298	0.194	−0.087	0.018
Hispanic	0.008	0.027	0.301	0.764	−0.044	0.060
Black	0.140***	0.021	6.605	0.000	0.098	0.181
Other Race	0.063**	0.022	2.859	0.004	0.020	0.106
Living Situation						
Ever married	0.182***	0.027	6.636	0.000	0.128	0.236
Child(ren) living in home	−0.002	0.035	−0.063	0.950	−0.070	0.066
Parent's home	0.040	0.026	1.577	0.115	−0.010	0.090
Other Structural Controls						
Another person's home	−0.008	0.026	−0.319	0.750	−0.059	0.043
Other living situation	0.069***	0.020	3.449	0.001	0.030	0.108
Educational attainment	0.116***	0.029	4.045	0.000	0.060	0.172
Currently employed	0.017	0.024	0.708	0.479	−0.031	0.065

Table V4.3

Wave IV Civic and Religious Participation Model 4 (Religious Activities) – Residual $\mathcal{E}$
Latent Variances

	Std. Var	SE	z	CI Lower	CI Upper	R^2
W4SR1	0.262	0.013	20.331	0.237	0.287	0.738
W4SR2	0.299	0.014	21.397	0.272	0.327	0.701
W4SR3	0.381	0.014	27.875	0.354	0.407	0.619
W4SR4	0.467	0.017	28.259	0.435	0.500	0.533
W4SR5	0.527	0.019	27.688	0.490	0.564	0.473
W4SR6	0.486	0.018	27.256	0.451	0.521	0.514
W4SR7	0.375	0.019	19.973	0.338	0.412	0.625
W4SR8	0.334	0.016	20.270	0.302	0.367	0.666
W4SR9	0.568	0.021	27.349	0.527	0.608	0.432
W4SR10	0.598	0.022	27.340	0.555	0.641	0.402
W4SR11	0.501	0.022	23.006	0.458	0.543	0.499
W4SR12	0.549	0.021	25.923	0.507	0.590	0.451
W4SR13	0.526	0.019	27.012	0.488	0.565	0.474
W4SR14	0.564	0.020	28.407	0.526	0.603	0.436
W4SR15	0.454	0.021	21.557	0.412	0.495	0.546
Wave IV Self-Regulation	1.000	0.000	NA	1.000	1.000	0.000
Emotional Stability	0.722	0.020	36.909	0.683	0.760	0.278
Control Beliefs	0.558	0.024	22.951	0.511	0.606	0.442
Agency Beliefs	0.565	0.025	22.204	0.515	0.615	0.435
Future Orientation	0.152	0.035	4.381	0.084	0.219	0.848
Religious Activities	0.825	0.017	49.224	0.792	0.858	0.175

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