

Running head: THE EFFECTS OF A SCHOOL-BASED PROGRAM

THE EFFECTS OF A SCHOOL-BASED  
INTERVENTION PROGRAM ON ACADEMIC  
OUTCOMES

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THE EFFECTS OF A SCHOOL-BASED INTERVENTION PROGRAM ON ACADEMIC  
OUTCOMES

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## CHAPTER I

### INTRODUCTION

#### *Introduction to the Problem*

High school dropout and the negative consequences associated with dropout continue to be a problem for adolescents and society alike (Dynarski & Gleason, 2002; U.S. Department of Education, 2006). High school dropout rates have remained relatively stable over the past three decades, hovering around 20% as an estimated 5 percent of 16-24 year olds drop out annually. Furthermore, dropout rates differ significantly by ethnicity, with Hispanics historically recording the highest dropout rates (27%) followed by African Americans (11%) and non-Hispanic Caucasians (8%). Such discrepancies support the argument that societal problems impact groups differently and thus should be intervened upon distinctly (Lopez, Edwards, Teramoto-Pedrotti, Ito, & Rasmussen, 2002).

Many times, poor academic achievement and school dropout are the end results of students' long-term struggles with multiple stressors (Dynarski & Gleason, 2002; U.S. Department of Education, 2006). Decades of research have shed light on the multifaceted and interrelated nature of risk factors. Adolescents today face an increasingly hostile environment. It is estimated that 50% of adolescents will experience at least one traumatic event by the time they turn 18 (Dodge, 2008). To illustrate, youth from low-SES backgrounds are more likely to experience environmental stressors such as high levels of unemployment, low-level jobs, low occupational status, low maternal education, a larger family size, and a greater number of children living in the home, and they are more likely to grow up in single-parent households (Doll & Lyon, 1998; Gutman, Sameroff, & Cole, 2003; Luthar, 1991). The number of risk factors individuals face incrementally increases their likelihood for various negative outcomes,

and a greater number of risks proportionately impacts school grades, school absences, IQ, and mental health (Doll & Lyon, 1998; Gutman et al., 2003; Masten & Powell, 2006).

Findings regarding the harmful effects of exposure to multiple risk factors are particularly relevant at present, when substance abuse, school violence, sexual risk taking behaviors, and poverty are on the rise (Blum & Ellen, 2002). The constellation of risks that adolescents face is directly associated with the number of young people who have dropped out of school and lacking academic and job credentials, which makes them essentially unemployable (Condly, 2006; Lever et al., 2004). As such, these individuals represent a loss of human potential and a drain on public resources (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Thompson, Horn, Herting, & Eggert, 1997).

In recent years, the risk and resilience research has undergone a paradigm shift, as researchers have become increasingly aware of the importance of positive factors in adolescents lives (Doll & Lyon, 1998; Ostaszewski & Zimmerman, 2006). Like risk factors, resilience factors also have a cumulative impact, with greater levels of risk requiring more accumulated protective factors to outweigh them. Doll and Lyon (1998) argue that the school is replete with opportunities to foster resilience. In response to increased interest in adolescent development and the identification of risk and resiliency factors that can impact healthy outcomes, researchers have offered risk and resiliency frameworks as guides for prevention programs aimed at decreasing and eliminating negative outcomes for adolescents.

A growing body of school-based intervention research demonstrates that appropriate interventions can lead to improved education, social, and job skills (Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Many school-based prevention programs include components that directly address known risk and resilience factors, such as social network support (Eggert, Seyle, Nicholas, 1990; Masten, 2001). Prevention programs grounded



in these models counteract risk by providing resources and assets that enhance resiliency in attempts to offset negative consequences. A critical review of the literature shows that adolescents can acquire multiple skills through direct instruction techniques and multiple opportunities for meaningful practice and participation (Doll & Lyon, 1998; Eggert et al., 1990; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Therefore, effective school-based prevention program curricula strive to teach skills and provide resources that have been found to offset risk and improve outcomes. Skill building and training are based on techniques that have been found to enhance resilience (Masten, 2001).

#### *Statement of the Problem*

Although there is a plethora of school-based prevention programs, few programs have been empirically validated, and many program evaluation studies lack control groups and methodological rigor (Blum & Ellen, 2002; Brooks, 2006). As a result, there has been a call for additional rigorous program evaluation research, particularly with minority populations (Blum & Ellen, 2002; Lopez et al., 2002; Weist, Nabors, Myers, & Armbruster, 2000). Moreover, due to the heterogeneity of the Hispanic population, program evaluation with homogenous groups of Mexican Americans, Dominican Americans, and Puerto Ricans is needed to verify the effectiveness of specific school-based prevention programs with these sub-groups (Lopez et al., 2002).

#### *Purpose of the Study*

The primary purpose of this study was to evaluate the effectiveness of the Reconnecting Youth curriculum (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994) on improving academic achievement in a sample of high-risk Mexican American adolescents. Program effectiveness was determined through the use of a quasi-experimental non-equivalent groups comparison group design where analysis of covariance and independent sample t-tests were performed.

Reconnecting Youth is an 'indicated' (i.e., tertiary prevention) school-based prevention program intended for use with 9<sup>th</sup> through 12<sup>th</sup> grade students. Broadly, the program teaches students skills to enhance resiliency and reduce risk through group activities, cooperative learning activities, and extensive use of role-playing and modeling techniques. The program has three central goals: (1) to increase school performance as measured by decreased absenteeism, improved GPA, and increased credits earned toward graduation; (2) to decreased drug involvement measured by decreased frequency of alcohol and other drug use and decreased adverse consequences associated with drug use, and (3) to decrease emotional distress measured by decreased depression, aggression, and suicidal behaviors. Embedded within the curriculum are empirically-based components that include strengthening the students' social support system; teaching life skills training, goal setting, and self-monitoring; promoting school bonding and a positive school climate; facilitating community and family involvement; and utilizing efficacious instructional techniques (Brooks, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten, 2001).

This study follows up on previous research findings that have demonstrated the efficacy of the Reconnecting Youth program for improving academic performance, (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Eggert, Nicholas, & Owen, 1995) and validates the utility of the Reconnecting Youth curriculum for use with high-risk Mexican American students.

### *Research Questions*

The present investigation examines a sample of high-risk Mexican American youth attending an urban alternative charter high school in the American Southwest. This study addresses the following research questions:

*Research Question 1:* Is there a difference over time between students who participated in the Reconnecting Youth (RY) Program and students who did not participate in the RY program in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in

which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?

*Research Question 2:* Is there a difference over time between males and females in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?

*Research Question 3:* Is there a difference between students who participated in the RY Program and students who did not participate in the RY program in school attendance, as recorded in school records (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?

*Research Question 4:* Is there a difference between males and females in school attendance, as recorded in school records, (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?

### *Hypotheses*

*Hypothesis 1:* For this sample of high-risk Mexican American adolescents, it was predicted that there would be a difference over time from the Fall of 2004 to the Spring of 2005 between students who participated in the Reconnecting Youth (RY) Program and students who did not participate in the RY program in mean semester grades. It was predicted that the students in the RY treatment group would improve more than the students who did not receive RY.

*Hypothesis 2:* For this sample of high-risk Mexican American adolescents, it was predicted that there would be a difference over time from the Fall of 2004 to the Spring of 2005 between males and females in mean semester grades.

*Hypothesis 3:* For this sample of high-risk Mexican American adolescents, it was predicted that students who participated in the Reconnecting Youth Program (a) would record fewer absences during the 2004-2005 school year (the school year in which the RY program was implemented) and (b) would record fewer absences during the 2005-2006 school year (one school year after the RY program was implemented), compared with students who did not participate in the program.

*Hypothesis 4:* For this sample of high-risk Mexican American adolescents, it was predicted that females and males (a) would differ in number of absences during the 2004-2005 school year (the school year in which the RY program was implemented) and (b) would differ in number of absences during the 2005-2006 school year (one school year after the RY program was implemented).

## CHAPTER II

### LITERATURE REVIEW

#### Introduction

The number of adolescents in the United States will grow exponentially over the next decade, as the nation's 34.4 million 16-24 year-olds is projected to grow to nearly 39 million by 2010 (Blum & Ellen, 2002; U.S. Census Bureau, 2007). Moreover, the U.S. Census Bureau (2007) estimates that there are 74 million teenagers 18 and under up from 72 million in 2000. Today's adolescents are exposed to an increasingly dangerous and hostile environment with increases in poverty, drug use, violence, physical and psychological abuse, and declines in academic performance (Catterall, 1998; Condly, 2006; Lever et al., 2004). In fact, experts estimate that these increases will expose half of all adolescents to multiple social risk factors (Catterall, 1998; Condly, 2006; Lever et al., 2004). The American Psychological Association estimates that 50% of adolescents will experience at least one traumatic event by the time they turn 18 (APA, 2008).

Studies show that adolescents are engaging in behaviors that compromise their physical and mental well being at much earlier ages (Lever et al., 2004). Recent estimates indicate that one third of adolescents are exposed to or engage in behaviors that increase their risk of negative psychosocial outcomes. A disproportionate number of adolescents exposed to multiple risk factors drop out of high school, lack marketable skills, and are unemployable (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Such individuals represent a loss of human potential and a drain on public resources.

A body of inquiry known as risk and resilience research has emerged that attempts to better understand, predict, and explain the effects of various stressors on child and adolescent psychosocial outcomes. The research defines adolescents as 'at risk' when they experience

multiple risk factors. Conversely, adolescents who thrive in the face of adversity are described as 'resilient' (Catterall, 1998; Condly, 2006; Doll & Lyon, 1998). The relationship between exposure to risk and negative outcomes is cumulative (Doll & Lyon, 1998; Gutman et al., 2003). This research has demonstrated that no single risk factor adequately explains negative outcomes; rather negative outcomes result from the cumulative effects of multiple risk factors (Gutman et al., 2003; Wachs, 2000).

Most risk and resiliency research investigates family and personality characteristics and ignores the school environment and its potential for fostering resilience in youth. This is unfortunate, because second to the home, schools are where adolescents spend most of their time, making them an ideal place to attempt to counteract the multitude of risk factors that a majority of adolescents face (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Moreover, studies suggest that external support for the child and the family is instrumental in the development of adolescent resilience (Brooks, 2006; Condly, 2006; Doll & Lyon, 1998). For example, school characteristics such as the presence of a caring relationship with at least one adult, opportunities for meaningful contribution, school bonding, and effective instructional practices have been found to promote resilience in adolescents (Masten & Powell, 2006). Such findings have triggered the use of partnership models where community, family, and school involvement are central, as a foundation for intervention and prevention programs designed to offset risk and enhance resilience (Brooks, 2006; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006).

Research findings repeatedly reveal the robust relationship between risk and negative outcomes in adolescents. Moreover, results draw attention to the interrelated nature of risk as many findings underscore the reciprocal relationships among risk factors (Catterall, 1998; Doll & Lyon, 1998; Lever et al., 2004). For example, substance abuse has been found to be associated

with poor academic outcomes (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Similarly, conduct problems and violence have been frequently correlated with poor academic achievement (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Lastly, teenage pregnancy is related to poor academic outcomes, however, the highly replicated finding cannot shed light on which comes first, in fact the order differs for among individuals (Condly, 2006; Fergus & Zimmerman, 2005; Ostaszewski & Zimmerman, 2006).

Fortunately, substance abuse, aggressive behavior, and sexual risk taking behaviors appear to be particularly sensitive to school-based intervention efforts (Botvin, Griffin, Diaz, & Ifill-Williams, 2001; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Lever et al., 2004). In addition, protective factors such as academic success appear to counteract the negative effects of substance abuse, aggressive behaviors, and teenage pregnancy (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Fergus & Zimmerman, 2005). Based on these findings, school-based intervention efforts would do well to target specific protective factors and environmental resources to enhance psychosocial resilience in their students.

Children who experience multiple risk factors face a challenging academic path (Doll & Lyon, 1998; Gutman et al., 2003; Luthar, 1991). To illustrate, students from disadvantaged backgrounds fall farther and farther behind their peers as they progress through elementary school. Another example of the detrimental effects multiple risk factors have on students is the finding that youth from low-socio economic statuses and from families with low maternal education, with a larger family size, and with a greater number of children living in the home are more likely to experience high levels of unemployment, low-level jobs, and low occupational status when they grow up. Children who grow up in single-parent homes also are likely to be less successful in their educational and social attainments than those who grow up in two-parent households. (Doll & Lyon, 1998; Gutman, et al., 2003; Luthar, 1991).

The level of psychosocial risk to which students are exposed also is related to their intellectual ability and mental health (Gutman et al., 2003). Research on academic performance found that an increasing number of risk factors have a negative effect on both grades and absences, and that students exposed to multiple risks evidence a downward trend in GPA (Gutman et al., 2003). Similarly, compared to students with few or no risks, students exposed to multiple risk factors manifest a larger number of school absences (Gutman et al., 2003). Interestingly, although intelligence is generally considered a protective factor for at-risk adolescents, intelligence does not serve as a protective factor for individuals with multiple risks (Doll & Lyon, 1998; Gutman et al., 2003). Whereas preschool intelligence and mental health has been shown to have significant promotive effects on school grades for individuals with few risks, the protective effects of intelligence disappear when an individual is faced with multiple risks (Gutman et al., 2003).

#### *Risk Factors Associated with Poor Academic Outcomes and School Dropout*

*Substance abuse.* Substance abuse is a strong risk factor for adolescents (Ostaszewski & Zimmerman, 2006). A broad spectrum of negative outcomes is related to adolescent substance abuse, including interpersonal problems, poor performance at school and work, physical and psychological impairment, poor school bonding, and high school drop out (Campbell & Duffy, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). The National Institute on Drug Abuse (Botvin, 2006) revealed that compared with other adolescents, particularly high rates of drug use are found among Hispanic high school dropouts (Botvin, 2006). On the other hand, healthy self-esteem and positive affect have been found to protect adolescents from many of the negative outcomes associated with substance abuse. Moreover, an accumulation of promotive factors is associated with lower levels of substance abuse (Fergus & Zimmerman, 2005).



*School violence.* School violence has been a critical issue in American society, particularly since several youth-related homicides have shocked several U.S. towns (National Center for Education Statistics [NCES], 2004), such as the shootings at Columbine, Jonesboro, and Virginia Tech. During the 1999-2000 school year, 71% of elementary and secondary schools reported at least one violent incident.

The NCES (2004) identified several characteristics associated with an increased prevalence of school violence, including low academic emphasis, many behavior problems, and a large number of school wide behavior disruptions. Of note, individuals with conduct problems frequently also demonstrate poor academic performance (Morrison, Brown, D’Incau, O’Farrell, & Furlong, 2006) and are at increased risk for dropout (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Schools reporting higher prevalence rates for incidents of school violence also had a higher percentage of students scoring at the 15<sup>th</sup> percentile on standardized tests (NCES, 2004). Self-reports obtained from school dropouts revealed aggressive and violent behavior at school to be their main reason for leaving school (NCES, 2004). Moreover, aggressive and violent behaviors are inversely related to school bonding, school climate, and school connectedness (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006), and negative school climate and low levels of school connectedness have been found to increase risk for school dropout (Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994).

Youth violence has particular relevance in minority-populated areas. For example, New Mexico, Arizona, and Texas whose populations are 56%, 41%, and 58% minority respectively, have the highest numbers of youth assaults in the U.S. (NCES, 2004). Many schools with diverse populations nationwide have reacted to high rates of school violence by implementing zero-tolerance rules. However, many individuals view zero-tolerance rules as a form of racial

profiling, given that most schools with zero tolerance have high minority populations. Residents of one rural New Mexico community, for instance, argued that the zero-tolerance rules unfairly targeted dress, appearance, and behaviors associated with Mexican American students (NCES, 2004). Consistent with this stance is the finding by Hixton and Tinzman (1990) that students considered 'at risk' by school personnel often are those whose appearance, language, culture, values, and family structures do not match those of the dominant culture. Hixton and Tinzman (1990) termed this the 'student deficit model', in which school personnel identify problems and deficiencies within the students, rather than looking for problems associated within the students' environment. Hixton and Tinzman (1990) recommended that instead of seeking deficits within the students, school staff seek to improve schools' utilization of existing resources and build more effective community-based coordination of services to respond to, and prevent, school violence (Brooks, 2006; Condly, 2006; Doll & Lyon, 1998; Hixton & Tinzman, 1990).

*Teenage pregnancy.* Another risk factor for poor school performance among youth is teenage pregnancy (Berry, Shillington, Peak, & Hohman, 2000; Goodyear, Newcomb, & Locke, 2002; Medora, Goldstein, & Von Der Hellen, 1994). Students who become pregnant are at increased risk of dropping out (Kenney, Reinholtz, & Angelini, 1997; U.S. Department of Education, 2006). Public costs of teenage pregnancy are estimated at \$25.1 billion, which includes the costs of government assistance (Kenney et al., 1997). Furthermore, there are great educational and occupational disadvantages associated with teenage pregnancy (Kenney et al., 1997). According to the Centers of Disease Control and Prevention, teenage pregnancy is reflection of teens' health and well-being (Ventura, Mosher, Curtin, Abma, & Henshaw, 2008). In 2007, the number of births for teenagers aged 15 to 19 was 42.5 births per 1,000 (Hamilton, Martin, & Ventura, 2009).

Teen pregnancy rates vary substantially among the various ethnic groups. Hispanic pregnancy rates are higher compared to those of African Americans and Caucasians. In 2007, the reported pregnancy rate for Hispanic teens aged 15 to 19 was 83.0%, followed by African Americans (63.7%) and Caucasians (26.6%; Goodyear, et al., 2002; Hamilton et al., 2009; Ventura et al., 2008).

### *High School Dropout*

It is estimated that about 5 out of every 100 students enrolled in high school leave without graduating, which translates to approximately 3.8 million 16-24-year-olds each year (NCES, 2004). Dropouts are more likely to depend on public assistance, use drugs, be arrested, die young, and become incarcerated (Dynarski & Gleason, 1999). School dropout is often the end result of poor academic achievement. Poor academic performance and poor school attendance are the best predictors of school dropout (Dynarski & Gleason, 2002; U.S. Department of Education, 2006).

Education directly affects unemployment and income (Botvin, Griffin, Diaz, & Ifill-Williams, 2001). Our nation's occupational landscape has changed in recent decades (Howard & Solberg, 2006). Where as in the past youth who dropped out of high school could gain employment at factories that offered livable wages, this is no longer the case. In 2004, the median annual income of high school dropouts was \$12,184, compared to the median income of \$20,431 for those who received their high school diploma (NCES, 2004). Youth with no high school diploma were four times as likely to be unemployed than a college graduate. Manufacturing jobs are on the decline, and a high school education with at least two years of college is becoming necessary for someone to make a comfortable living. A disproportionate percentage of our nation's inmates are high school dropouts (Howard & Solberg, 2006).

*Ethnic minority status.* Hispanics now constitute the largest minority group in the United States. Hispanic adolescents constitute 12.5% of the population. A disproportionate number of the Hispanic population is under age 18 (Eamon & Mulder, 2005), and it is projected that over the next 10 years, nearly 60 percent of the growth in 16-24 year-olds will be among Hispanics and African Americans (NCES, 2004).

Ethnic minority status puts youth at high risk for low academic achievement (NCES, 2004; Luthar, 1991; Patterson, Kupersmidt, & Vaden, 1990). Hispanic children and adolescents are likely to face additional risks such as being born to teenage mothers, come from single-mother households, and attend low-quality and segregated schools (Eamon & Mulder, 2005). Other research has pointed to prominent factors related to low academic achievement in minority students including racism and discrimination (Children's Defense Fund, 2008). Information critical to minority adolescents is the finding that racism and discrimination have contributed to the far greater proportion of minority children growing up in low socioeconomic backgrounds, thereby exposing them to a greater number of risk factors, than their Caucasian peers (Wilson, Gottfredson, & Najaka, 2001; Wilson, Lipsey, & Derzon, 2003).

An estimated 28% of Hispanic adolescents live in poverty, and many face a variety of risk factors. The percentage of Hispanics who drop out of high school has remained higher than that of African Americans and Caucasians in every year for the past thirty years (NCES, 2004). In 2001, 27% of 14-24 year old Hispanics (1.4 million adolescents) dropped out of high school, compared with 7% of Caucasians and 12% of African Americans, and the drop out rates for Hispanics have not declined over the years like those of Blacks and Caucasians (NCES, 2004; 2006). There is a relative dearth of research investigating the outcomes associated with Hispanic children (Lopez et al., 2002). In light of the large number of Hispanic adolescents in the U.S., it is especially important to address Hispanic dropout.

*Gender, ethnicity, and school dropout.* According to the National Center for Education Statistics (2006), males and females drop out of school at different rates. The overall dropout rate is 10.3% for males and 8.3% for females. Hispanic males, however, are nearly three times more likely to drop out (25.7%) than Caucasian males (6.4%) and African Americans (9.7%) males. Similarly, Hispanic females are nearly three times more likely to drop out (18.1%) compared with Caucasian females (5.3%), and they are also more likely to drop out than African American (11.7%) females.

*Socioeconomic status.* Low-SES youth often demonstrate lower achievement test scores, more grade retentions, and fewer completed years of schooling than their economically advantaged peers (Doll & Lyon, 1998; Gutman et al., 2003; Luthar, 1991). Students from low-income families have a drop out rate of 10% (U.S. Department of Education, 2004), and in 2001, high school students from low income families were six times more likely to drop out of high school than their higher-income peers (Doll & Lyon, 1998; Gutman et al., 2003; Luthar, 1991; U.S. Department of Education, 2004). Not only are low-income youth faced with economic hardships, they are also more likely to attend low-quality schools, to live in dangerous neighborhoods, and to be surrounded by high rates of drug and alcohol addiction, and they are at increased risk for engaging in violent behavior (Eamon & Mulder, 2005; Fergus & Zimmerman, 2005). In fact, the proportion of a youth's life spent in poverty predicts antisocial behavior (Eamon & Mulder, 2005).

*Dropout rate by geographic region.* Just as dropout rates vary by ethnicity, they also differ by geographic region (NCES, 2004). School dropout rates vary according to ethnic composition, in that areas with high minority populations have higher dropout rates. The Southern and Western U.S. have higher drop out rates (41% and 23%, respectively), compared with the Midwest and Northeast (21% and 16%, respectively; NCES, 2004).

### *An Explanation for Ethnic Disparities in Academic Achievement*

A report conducted by the Children's Defense Fund (2008) indicates that an achievement gap continues to exist between minority and Caucasian youth. Evidence suggests that teachers have lower academic expectations for minority students which contribute to students' lowered confidence in their ability to succeed (Children's Defense Fund, 2008). Moreover, ongoing patterns of discrimination and prejudice within the school environment have been found to inhibit academic achievement (Children's Defense Fund, 2008). Other explanations for the achievement gap also have been offered.

Howard and Solberg's (2006) Ecological Developmental Cognitive Model explains how society's evaluation of low-income and diverse youth can become internalized (Howard & Solberg, 2006). This theory contends that youth develop self-definitions, roles, and expectations within their social context. Contextual influences such as a sociocultural history of racism, socioeconomic status, language, parent involvement, and peer relationship's shape youth's core definitions of self and world (Howard & Solberg, 2006). Unless these core beliefs are altered, low-income minority youth are likely to develop behavior patterns that are likely to hinder their academic successes.

Howard and Solberg (2006) argue that the educational oppression that minority students have faced for decades leads to internal cognitive states organized around distrust, betrayal, danger, hopelessness, anger, loss, inadequacy, and social injustice in young minority youth. Based on a long history of oppression, it can be argued that youth fail in school because negative life experiences create internalized core beliefs that maintain oppression (Howard & Solberg, 2006). Developing prevention programs that challenge these core beliefs is a critical aspect of teaching an 'empowered frame of reference' (Howard & Solberg, 2006). Without intervention efforts devoted to teaching an empowered frame of reference, students who have internalized

oppressive messages will continue to fail in school. According to Howard and Solberg (2006), teaching an empowered frame of reference requires that school personnel believe that change is possible regardless of students' past experiences and minority status. High expectations, school bonding activities, peer and adult mentoring, meaningful opportunities to contribute, and cooperative learning strategies are empirically supported examples of ways to teach an empowered frame of reference (Brooks, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006).

### *Theories of Risk and Resilience*

Traditional risk research has identified multiple factors that predict low academic achievement and school drop out (Brooks, 2005; Doll & Lyon, 1998; Eamon & Mulder, 2005). In the same vein, resilience factors have been identified that provide protection and enhance the likelihood for positive outcomes (Brooks, 2005; Doll & Lyon, 1998). Despite the traditional focus on risks, this area of research has undergone a paradigm shift as researchers have become increasingly aware of the importance of positive factors in adolescents' lives (Doll & Lyon, 1998; Ostaszewski & Zimmerman, 2006). According to Doll and Lyon (1998), risk factors are best defined as interrelated social hazards. As such, experiencing two or more of the identified risk factors increases the chances of negative outcomes. Resilience factors also have a cumulative impact with greater levels of risk requiring greater accumulated protective factors to outweigh them. Doll and Lyon (1998) argue that the school is replete with opportunities to foster resilience. As such, schools must work to eliminate sources of risk and enhance sources of support. In response to increased interest in adolescent development and the identification of risk and resiliency factors that can impact healthy outcomes, researchers have offered risk and resiliency frameworks as guides for prevention programs aimed at decreasing and eliminating negative outcomes for adolescents.

*Masten and Powell's theory of psychosocial competence.* Masten and Powell (2006) define resilience as positive adaptation (competence) in the face of adversity. According to Masten and Powell, resilience should be thought of as both a static personality trait, and also an ecological process (Fergus & Zimmerman, 2005; Masten & Powell, 2006). Masten and Powell (2006) incorporated two major approaches in resilience research into their framework. One approach examines the links between resilience and adversity by investigating the additive, moderating, and mediating effects of ecological variables. Examples of variable-focused approaches are additive or compensatory models that purport environmental resources and assets to counteract and/or compensate for risk. Results revealed that more resources such as better parenting, academic success, and social support can offset risk. Such findings are important as they inform interventions aiming to decrease risk and promote resilience. In addition they provide evidence indicating that resources and assets can improve outcomes. Masten and Powell's (2006) second approach is person-focused. Their person-focused approach explores the internal and personality characteristics of an individual that promote competence and offset risk. Results show that intellectual functioning and temperament have been consistently associated with resilience. Other findings have demonstrated a strong positive association between student conduct and academic performance (Masten & Powell, 2006).

*Fergus and Zimmerman's model.* Similar to the framework developed by Masten and Powell (2006), Fergus and Zimmerman (2005) focused on environmental assets and resources that enable adolescents to overcome risk. Their identification of resources and assets places their resilience theory into an ecological context, allowing for external resources to be a focus of change as opposed to attempting to change the individual (Fergus & Zimmerman, 2005).

Fergus and Zimmerman (2005) identified three models of resilience that explain how promotive factors operate to alter the trajectory from risk to negative outcome: Compensatory,



Protective, and Challenge models. Like Masten and Powell's (2006) moderating model, in Fergus and Zimmerman's Compensatory Model, promotive factors counteract the effects of risk. Both models posit that promotive factors can have both direct and indirect effects on an outcome. To illustrate, the authors argue that adult monitoring (promotive factor) may help compensate for the effects of living in poverty. Fergus and Zimmerman's Protective Model of resilience purports that assets and resources can moderate or reduce the effects of risk. More specifically, a protective factor in this case diminishes but does not completely remove the expected relationship between a risk and an outcome. According to this model, it is argued that the relationship between risk and a negative outcome may be weaker among adolescents who are exposed to a protective factor such as a comprehensive psychoeducational curriculum (Fergus & Zimmerman, 2005).

Fergus and Zimmerman's (2005) third framework is the Challenge Model. This model suggests that the relationship between risk and outcome is curvilinear in that low and high levels of risk are associated with negative outcomes, whereas moderate levels of risk are associated with more positive outcomes. The concept is likened to that of immunization, that is, adolescents exposed to moderate levels of risk are confronted with enough risk to learn how to overcome it and are not exposed so much that is impossible to overcome. For example, a moderate amount of conflict may provide youth with enough exposure to learn from the conflict. In sum the authors note that such resilience models incorporate social and environmental influences that are amenable to change (Fergus & Zimmerman, 2005).

Fergus and Zimmerman's (2005) research revealed several protective factors found to enhance resilience. First, psychological well-being and social competence compensates for the effects of multiple risks. Second, academic achievement is a protective factor against substance abuse. Third, effective decision-making skills and a positive orientation toward school protects

against the negative effects of substance abuse. Fourth, anger control skills training can compensate for the effects of delinquent and violent behavior. These findings have important implications for developing school-based prevention programs.

*Sandler's theory.* Like other resilience theorists (Masten & Powell, 2005; Fergus & Zimmerman, 2005), Sandler (2001) conceptualized resilience as a product of resources and assets. As such, he offers a multilevel conceptualization of resources that focuses on the linkages between individual and environmental characteristics that enhance resilience. Unlike other resilience theories, Sandler (2001) highlights the interplay between environmental variables and the development of internal characteristics that promote resilience. He argues that 'self-system processes', activated or enhanced through resources and assets, are critical to the development of resilience by mediating the effects of multiple risk factors on psychological adjustment. The 'self-system processes', which include the robust intra-individual resilience characteristics of competence, self-esteem, self-worth, and self-efficacy, can be positively affected by resources and assets in the environment (Sandler, 2001). Further, he argues that positive experiences that support positive self-evaluations lead to positive affect.

Sandler (2001) also identified environmental variables. Environmental variables have the potential to affect self-systems by operating either as powerful sources of protection against the effects of adversity, or as harmful influences that lead to negative self-evaluations. In Sandler's model, self-systems, which mediate between stress and psychological adjustment, are affected by both positive and negative experiences. For example, coping efficacy can account for the inverse relationship between adaptive coping strategies and psychological problems. Other findings also support the role of self-system processes as mediators between adversity and psychological adjustment (Prelow, Weaver, & Swenson, 2006; Sandler, 2001).

Several aspects of Sandler's (2001) research are especially pertinent for the development of school-based prevention programs. In his model, supportive microsystems, such as classrooms, have the potential to protect children and adolescents against the effects of adversity by supporting their acquisition of developmental competencies. Sandler asserts that positive experiences, such as rules, resources, and routines, can help children and adolescents effectively respond to adversity by promoting the development of their self-systems. Sandler (2001) found evidence supporting the importance of both internal and environmental variables. In one study, academic competence affected both externalizing problems and depression; however, whereas the impact of academic skills on its externalizing problems was direct, its effect on depression was mediated by the students' coping efficacy and self-worth (Sandler, 2001).

Sandler (2001) identified four characteristics of successful intervention programs. First, successful interventions promote and implement multiple resources to reduce the negative affects of adversity. Second, students are a heterogeneous group; as such, successful interventions must deliver the level of resources that match the needs of the population. Sandler suggests implementing social skills interventions so as to provide basic information and supports. Third, interventions should be implemented at various levels to promote development of resources. Last, interventions should not merely build skills; they should promote a sense of self-efficacy, support, and self-worth.

### *Building Resilience in Schools*

An ample research base shows that families, schools, and communities can foster resilience in students (Brooks, 2006; Masten, 2001; Morrison, Brown, D'Incau, O'Farrel, & Furlong, 2006). Empirical findings have demonstrated the importance of school bonding and engagement, in that students with caring and supportive interpersonal relationships in school

report more positive academic attitudes and are more academically engaged (Brooks, 2006; Doll & Lyon, 1998; Masten & Powell, 2006).

Brooks (2006) offered a school-focused approach to enhancing resilience in students. Consistent with the findings presented by Morrison and colleagues (2006), Brooks (2006) found resilience to be developed through positive and healthy interactions among families, schools, and communities. To illustrate, perceived school connectedness was found to reduce emotional distress, violent behavior, and decrease drug use (Brooks, 2006; Doll & Lyon, 1998). Further, high levels of sense of community within a school were associated with lower drug use and delinquent behavior (Campbell & Duffy, 1998; Catalano, Haggerty, Oesterle, Fleming, & Hawkins, 2004; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). School-based interventions that involve family members are more effective than those that are only directed toward students (Brooks, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). As a result of these and similar findings, schools are now being more seriously considered for their attractive potential to promote resilience in students.

Many experts now recommend that schools implement curricula to develop students' social competence (Brooks, 2006). Such curricula should include building problem-solving skills, developing decision-making skills, assertiveness training, managing emotions, conflict resolution, resisting peer pressure, and developing social relationships. Programs that strive to develop social competence should provide the support systems necessary to develop students' resilience, by supporting positive interactions between families, peers, schools, and communities (Brooks, 2006; Campbell & Duffy, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). In addition, caring and trusting adults are critical to students' healthy development (Brooks, 2006; Masten & Powell, 2006). The ideal caring relationship should be founded on trust, attention, empathy, availability, affirmation, and respect. Such relationships can be

cultivated within the school environment by providing attention, knowing students by name, expressing respect, and having high expectations for student success. Another important component of school curricula is that school personnel communicate high expectations as that contributes to improved academic achievement (Brooks, 2006; Masten & Powell, 2006). Finally, it is important to maximize students' opportunities for meaningful participation in school (Brooks, 2006). Schools have the potential to provide multiple opportunities for student participation in activities that have meaning and value (Brooks, 2006; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006). Research has also highlighted the relationship between students' 'sense of community' and behavioral and academic outcomes (Battistich & Hom, 1997).

In summary, effective school-based prevention programs should surround students with a network of supportive relationships. Student resilience is built through a broad network of nurture and support throughout the student's development (Brooks, 2006).

#### *The Role of the Educational System*

The reviewed findings indicate that many adolescent outcomes, both positive and negative are a function of the environment (Doll & Lyon, 1998; Zaff, Calkins, Bridges, & Margie, 2002). That is to say, positive experiences at school can potentially offset negative experiences in other arenas (Doll & Lyon, 1998; Masten & Powell, 2005; Zaff et al., 2002). Resilience research has spawned interest in what schools can do to counter the presence of risks. Moreover previous research, (Brooks, 2006; Masten & Powell, 2005) informs prevention programs and ultimately facilitates the development of theoretically grounded school-based prevention programs.

High risk and increasingly hostile environments underscores the need to provide options for at-risk adolescents. Options for high-risk students, such as charter schools, have gained

acceptance. This newfound acceptance has created a favorable climate for 'second-chance education' as a method for reconnecting high-risk youth. Schools that reconnect high-risk youth employ a set of distinctive components, such as support through involved teachers and small class sizes, explicit program goals, experiential learning methods, and culturally sensitive and empirically supported curriculum materials.

Although there are hundreds of school-based programs in existence, there is little empirical support that documents their effectiveness (Wilson, Gottfredson, & Najaka, 2001). To illustrate the need for program evaluation, a recent meta-analysis highlighted several inadequacies in school based prevention research. Results of the study found that many popular school-based prevention approaches have not been well studied (Wilson, Gottfredson, & Najaka, 2001). In fact, while investigating research needs, school counseling leaders found few studies that evidenced the impact of prevention programs on academic achievement (Poyton, Carlson, Hopper, & Carey, 2006). Furthermore, program developers and implementers are being pressured for increased accountability. This shift toward increased accountability is a result of the disproportionate ratio of school-based prevention programs to empirically supported school-based prevention programs (Poyton et al., 2006; Brigman & Campbell, 2003) One author argues the relative dearth of program evaluation research to be the result of implementation issues. According to LeCapitain (1999), a low level of program implementation is due to the fact that school-based programming requires a lot of investment and commitment by the entire community. The findings underscore the need to evaluate school-based prevention programs.

Additional shortcomings in school-based prevention program research have been identified. DuPaul and Weyandt (2006) urged researchers to conduct large-scale school-based intervention studies in "real world" settings. Most school-based intervention studies are conducted in primary schools. There is a need for studies to be conducted at the secondary level

where adolescent students face a myriad of difficulties and challenges (Depaul & Weyandt, 2006). Moreover, most research has included relatively small samples evaluated over short periods of time, and has often failed to include members of ethnic minority groups (Lopez et al., 2002).

As a consequence of increased risk and school violence, the demand for school-based prevention programs is ever increasing. A call for community and school-based responses to counter personal, social, mental, and educational problems facing adolescents was put forth in the 1990s (U.S. Department of Education, 2006). The United States Departments of Education, Justice, and Health and Human Services have issued reports acknowledging adolescent behavior problems. As such, researchers have suggested effective school-based prevention programs as a viable solution to this nationwide problem (Bilchik, 1998; Brooks, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). Most have suggested the need for collaborative-partnership strategies for reaching at-risk youth as research has found comprehensive community wide approaches to be effective (Bantam & Higbee, 1995; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006). Thus, the authors suggested that a coordinated team approach involving the university, public schools, criminal justice system, community mental and physical health facilities be taken (Masten & Powell, 2006).

In response to the need for program evaluation and the identification of characteristics associated with effective programs, researchers have developed school-based programs to prevent school dropout (Botvin et al., 2001; Campbell & Duffy, 1998; Fisher, Masia-Warner, & Klein, 2004). Campbell and Duffy (1998) investigated five risk factors associated with dropping out. They found that peer influence and personal educational expectations are strongly associated

with dropping out (Campbell & Duffy, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten & Powell, 2006).

Consistent with the findings presented by Campbell and Duffy (1998), Wells (1990) reported that low expectations are a risk factor associated with dropping out. His results also revealed other school related risk factors that increase students risk for dropping out, including conflict between home and school culture, ineffective discipline systems, lack of adequate counseling, negative school climate, lack of relevant curriculum, passive instructional strategies, retention and suspensions, and lack of language instruction (Campbell & Duffy, 1998; Doll & Lyon, 1998; Masten & Powell, 2006; Wells, 1990). It follows that high levels of the listed risk factors serve to enhance resilience (Campbell & Duffy, 1998; Doll & Lyon, 1998; Masten & Powell, 2006).

In response to the relative dearth of studies documenting program effectiveness, dropout prevention researchers have sought to disseminate the results of school-based programs found to be effective. Overall, findings indicate that there is no one quick fix to the dropout problem (Lopez et al., 2002). This is the case because dropouts are a heterogeneous group and therefore need different kinds of programs that respond to and are tailored to individual circumstances and needs.

### *Research with Minority Populations*

When conducting research with minority populations, it is essential to first examine the influence of culture on mental health and the cultural context of the problem to be remediated (Lopez et al., 2002). The needs and goals of the community should be included in the intervention planning by including community members in the development and planning process, and trusting and working relationships should be established between university researchers and the school. Also, relationships among students, parents, and teachers should be



addressed as part of the program. In summary, it is important to consider the cultural embeddedness of intervention work with minority populations (Lopez et al., 2002).

#### *School-Based Prevention Programs Targeting Academic Failure*

The literature delineates three types of school-based prevention programs. ‘Universal’ prevention programs serve every student in the school and the overall goal is to keep students from ever initiating drug use. ‘Selective’ prevention programs serve identified at-risk groups and the overall goal is to impede the onset of drug use in known at-risk groups. Last, ‘indicated’ prevention programs serve identified high-risk students who already show signs of drug involvement. The goal of indicated prevention programs is to curb the progression of and decrease the frequency of drug use among high-risk students (Eggert et al., 1995; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994).

LeCapitain (1999) outlined the characteristics of effective school-based prevention programs. LeCapitain (1999) stated that effective programs are those that enlist the help of the school board and other local agencies and thus operate from a partnership perspective (Brooks, 2006). More specifically, school board policies should address both prevention and intervention for troubled youth. Last, school personnel and parents should strive to provide a warm, inviting, safe, and responsive environment where students feel confident in sharing their concerns about themselves and other students (Brooks, 2006; Hamre & Pianta, 2001; LeCapitain, 1999; Masten & Powell, 2006).

*Achieving Success Identity Pathways.* Howard and Solberg (2006) documented the effectiveness of the Achieving Success Identity Pathways (ASIP) school-based prevention program designed to improve student academic performance. The ASIP curriculum is based on an ecological developmental cognitive framework. The curriculum encourages school counselors to actively and effectively promote academic success in adolescents and to challenge all students

to improve academically, an approach previously shown to be effective (Dynarski & Gleason, 2002). The authors also emphasize the importance of implementing culturally relevant interventions tailored to youth from low-income and diverse backgrounds, consistent with the recommendations of Lopez et al. (2002) regarding culturally-competent practices.

The ASIP program (Howard & Solberg, 2006) incorporates the four principle components of the American School Counselors Association (ASCA) national model for school-based prevention programs. The overarching goal of the ASIP curriculum is to foster the development of “success identities” by setting academic goals, building self-confidence, managing stress, and building effective relationships with peers and authority figures (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Howard & Solberg, 2006). The ASIP curriculum has been implemented with over 2,500 ninth and tenth grade students. Exposure to the ASIP curriculum has been found related to higher grades, more classes passed, more credits earned, and higher attendance rates, and it has had long-term effects (Solberg, 2001). Results revealed that students who attended three or more classes that taught the ASIP curriculum had higher end of the semester grades and continued to demonstrate higher grades two years later.

*Murray and Malmgren's program.* Murray and Malmgren (2005) examined the effects of a teacher-student relationship program designed to improve adolescents’ relationships with at least one teacher in an urban high school. Murray and Malmgren’s (2005) intervention included weekly meetings between teachers and groups of up to five students. Academic goal sheets were developed for teachers and students to use. Teachers used praise in the classroom and phoned students at home four times a month. Results revealed that students in the intervention group had higher GPAs following the intervention than did students in the control group (Murray & Malmgren, 2005). The findings suggest that supportive teacher-student relationships can improve grades.

*Student Success Skills.* Student Success Skills (SSS) focuses on cognitive, social, and self-management skills. The curriculum follows a structured format that stresses goal setting, progress monitoring, and active learning (Brigman & Campbell, 2003; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). The program incorporates the teaching of skills considered to be critical to academic success. Student goal setting, progress monitoring, and memory enhancing techniques are taught and encouraged to improve cognitive skills. Training in techniques such as interpersonal skills, social problem solving, listening, and teamwork was conducted to promote social skills. Last, training in managing attention, motivation, and anger was conducted to improve self-management skills in students. Teachers of this curriculum use positive feedback and reinforcement to reward academic successes. In addition, the teaching of this curriculum emphasizes an, ask, tell, show, do, feedback instructional method. The SSS curriculum has been shown effective for improving math and reading achievement scores (Brigman & Campbell, 2003; Murray & Malmgren, 2005).

*Conflict Resolution Unlimited.* The Conflict Resolution Unlimited middle-level peer mediation curriculum consists of 18 classroom guidance lessons (Poyton et al., 2006). The curriculum is implemented biweekly over the course of nine weeks and teaches conflict resolution. The curriculum has two major objectives. The first objective is to teach students techniques and strategies to deal with interpersonal conflict. This was accomplished by giving students a conflict and asking them to come to a resolution. The second objective is to help students make the connection between conflict resolution and the curricular processes and content in math, reading, and writing. This was done by co-teaching reading, math, and social studies lessons with academic teachers and then integrating the conflict resolution process into each lesson. Then, the students apply these skills to other content areas. Poyton et al. (2006) evaluated this standardized conflict resolution curriculum. Participants in the study included a

total of 115 seventh and eighth graders. Results revealed a positive impact on students' self-confidence and self-efficacy and improvement in their problem-solving abilities, but not higher scores on the state achievement test. However, improvements were seen in reading scores for eighth graders (Poyton et al., 2006).

*Integrated Initiative Program.* Another prevention program came up with a strategic plan to achieve aggressive system wide outcomes (Dynarski & Gleason, 2002). This program focused on grade levels 6-12 in District of Columbia public schools. Unique from other programs was their program focus, which took an integrated approach entitled, an Integrated Initiative. This unit utilized after school centers by offering a variety of activities. The main goal was to promote and convey student success with class work. Further, they (Dynarski & Gleason, 2002) worked to foster the development of positive attitudes about school. They accomplished these goals by implementing a specialized curriculum used by classroom teachers that emphasized the value of learning. In addition, they created attendance support and drop out prevention centers whose main responsibility was to do tracking and record keeping on students at risk of dropping out. Other strategies included a hotline for receiving information on youth, an awards program for attendance personnel and students who had perfect attendance and a reading/research center. Overall, this program focused on providing students with resources and services that promote and increase school involvement and climate (Dynarski & Gleason, 2002).

*Tomorrow Program.* Maryland's Tomorrow Program (Lever et al., 2004) for at-risk high school students includes many of the components associated with effective dropout prevention programs (Lever et al., 2004). Students in the Tomorrow Program attend smaller classes, received extra support from faculty, and receive positive reinforcement for academic achievement. One of the more important components of the program is the use of advocates. Advocates encourage student attendance and academic improvement, monitor attendance,

promote participation in school and extracurricular activities, and encourage family involvement. Overall, the program is designed to reduce drop out and increase successful transitions into postsecondary education or employment. This program was implemented in Baltimore City. In the 1998-1999 school year, the program obtained dropout rates lower than the average dropout rate. The program reported a dropout rate of 6.28% whereas the Baltimore City School System reported a dropout rate of 10.98%. Findings support the Tomorrow Program as a successful collaborative partnership involving the business community, employment training system, and mental health and public school systems (Lever et al., 2004).

#### *School Based Prevention Programs Targeting Student Social Behavior*

*Life Skills Training.* Botvin et al. (2001) implemented a school-based drug abuse preventive program in New York City Schools and sought to determine its effectiveness with inner city minority youth. The authors noted that most prevention research has been conducted with Caucasian middle class adolescents, thus they sought to extend the research to a minority population. A cognitive-behavioral approach to drug abuse prevention that taught drug resistance skills, anti-drug norms, and social skills was implemented. The program utilized cognitive behavioral skills that target increasing self-esteem, managing moods, and communicating more effectively. The skills were taught via direct instruction techniques that included cooperative learning, practice, and application of skills (Botvin et al., 2001, Brooks, 2006; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994).

Analyses indicated the intervention had significant effects at 3-month posttest. Participants in the intervention program reported less poly-drug use compared to those in the control group (Botvin et al., 2001). Moreover, at 1-year follow-up, participants in the intervention group reported drinking and smoking less frequently than those in the control group. Overall, the results of the study suggest that a cognitive-behavioral approach to drug abuse

prevention such as the Life Skills Training program reviewed is an effective approach to drug abuse prevention with disadvantaged minority youth.

The previous findings are important because research points to an association between drug abuse and academic performance. The link highlights the need to determine how decreased drug use can improve academic performance. Botvin and colleagues (2001) did not investigate the effects of their cognitive-behavioral intervention on academic achievement. The authors (Botvin et al., 2001) ended by stating that intervention and prevention programs be implemented in diverse inner city areas to target underserved and disadvantaged minority students.

*Second Step Program.* Other school-based prevention programs have been successful in decreasing negative outcomes. Schoiack-Edstrom, Frey, and Beland (2002) evaluated the Second Step, Middle/Junior High program to determine its impact on students' attitudes regarding aggression. In addition, the study looked at the programs long term effects on school drop out. They noted that programs targeting aggressive behavior usually focus on broad social competencies and social interaction skills. The main goals of the Second Step, Middle/Junior High program are to build student learning of pro-social skills and to reduce impulsive-aggressive behaviors. Their investigation resulted in positive findings, as an independent samples t-test showed that while controls significantly increased their endorsement of social exclusion, Year 1 program students' endorsement of social exclusion remained constant over time. In addition, results revealed a decrease in Second Step boys and girls endorsement of physical and verbal aggression. Most importantly, participants in the Second Step program were less likely to endorse the use of aggression compared to control participants (Schoiack-Edstrom et al., 2002). Results suggest that school-based programs that build social skills are effective at reducing aggressive behavior.

*Token Reinforcement.* DuPaul and Weyandt (2006) provided evidence for the efficacy of school based interventions for improving academic outcomes. Specifically, the authors explored the development of school-based interventions for students with Attention-Deficit/Hyperactivity Disorder (AD/HD). The authors compared the academic achievement and classroom behavior of participants in two unimodal, one multimodal, and a control group who received treatment from the community on AD/HD related behaviors and social performance. One unimodal group received psychostimulant medication for the treatment of AD/HD. The other unimodal group received behavioral therapy for the treatment of AD/HD and the multimodal group received both psychostimulant medication and behavioral therapy as treatment. Although all four groups demonstrated significant reductions in AD/HD symptomology during and following treatment, the greatest improvement was evidenced by the children who received the multimodal treatment protocol. The authors note that even though psychotropic medication is often effective in increasing attention it is not always shown to improve academic and social functioning. The findings highlight the need for multimodal treatment protocols when attempting to improve student outcomes. The study also highlighted several important factors that should guide the development of school-based interventions for students with AD/HD. Overall, the research reviewed by DuPaul and Weyandt (2006) supports the use of proactive classroom interventions to help improve the academic, behavioral, and social performance of children and adolescents.

Indeed, more and more schools are implementing programs aimed at decreasing social ills, teenage pregnancy, and drug abuse. The reason for the influx is that results have shown that these programs work. Combined findings suggest that, multi-component approaches to mental health that enlist community and family involvement are the most effective (Brooks, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Zaff et al., 2002). Despite

many programs to choose from, researchers still note a dearth of research evidencing program effectiveness. Thus, more research is needed in determining program effectiveness.

### *The Reconnecting Youth Program*

The Reconnecting Youth (RY) program is an indicated (i.e., tertiary) prevention program curriculum, rated effective by the National Institute on Drug Abuse (NIDA), Office of Juvenile Justice and Delinquency Prevention, and Substance Abuse and Mental Health Services Administration (Wyman, 1997). This program was piloted for five years with over 600 public high school students in Seattle, Washington (Wyman, 1997). The program was developed for use with ninth to twelfth graders who have a history of poor academic achievement and who are believed to be at high risk for dropping out of high school.

Reconnecting Youth (RY) is a school-based prevention program operationalized as an elective course within a regular high school curriculum. The course is a life skills training program intended to be delivered over 81 sessions in 55 minutes per day over one full semester. Broadly, RY is a school-based prevention program for high-risk youth who have histories of poor school achievement and a high potential for dropping out of high school. Moreover, the youth included in the program may exhibit multiple behavior problems such as drug abuse, sexual risk taking behaviors, and conduct problems. Unlike other school-based prevention programs, Reconnecting Youth targets several behavioral outcomes, rather than just one.

Reconnecting Youth is grounded in a partnership model involving peers, school personnel, and parents aimed at decreasing drug use, emotional distress, and improving academic achievement. By improving students' relationships with their parents and teachers, the RY model is consistent with the recommendations of Lopez et al. (2002) for interventions sensitive to cultural differences.



Overall program goals are to modify personal and environmental factors to reduce risk and enhance resilience (Eggert et al., 1995). By building on key assets that help develop positive, personal and social self-image students are able to accomplish the goals of the program. Reconnecting Youth was designed to meet student's needs for inclusion and engagement while developing their skills for how to be winners, staying in control, decision making, and to critically evaluate potential consequences for their actions and choices. The program teaches skills to build resiliency with respect to risk factors.

*Summary of Program components.* Reconnecting Youth addresses three central goals: Decreased drug use, increased school performance, and decreased emotional distress. The life training component focuses on the following four key areas: self-esteem enhancement, improved decision-making, increased personal control, and improved interpersonal communication. The Personal Growth Class component in the curriculum is established through social support and life skills training. Students set and work towards goals by participating in the semester-long high school class that involves general life skills training within the context of a positive support system. Further, RY students learn, practice, and apply self-esteem enhancement strategies, decision-making skills, personal control strategies, and interpersonal communication skills. Importantly, students in the program improve poor academics and attendance. Reinforcing social and school bonding activities are planned throughout the school year to establish positive and drug-free social relationships and trust with school personnel and RY staff. In addition, the activities are scheduled to establish positive social relationships and friends. The NIDA has named Reconnecting Youth one of the nation's most effective drug-reduction programs. In summary, RY is a resilience-based approach that delivers positive results (Eggert et al., 1990; Thompson, Horn, Herting, & Eggert, 1997).

### *The Reconnecting Youth Program Curriculum*

The program has three central goals: (1) to increase school performance as measured by decreased absenteeism, improved GPA, and increased credits earned toward graduation; (2) to decrease drug involvement measured by lower frequency of alcohol and other drug use and fewer adverse consequences associated with drug use; and (3) to decrease emotional distress, measured by decreased depression, aggression, and suicidal behaviors.

The Reconnecting Youth curriculum is made up of three components. The Personal Growth Class incorporates school bonding and parental involvement into the curriculum. Life Skills Training teaches students skills and encourages them to apply and practice the skills. Finally, the ‘First 10 Days’ includes the activities that go on during the first ten days of the semester.

*Personal Growth Class.* The Personal Growth Class (PGC) incorporates school bonding and parent involvement into the curriculum. School bonding activities focus on social, recreational, and school activities, and are designed to reconnect students to school-and health-promoting activities that address a student’s need for fun. In the PGC, adolescents learn life skills in the context of peer-group counseling. The PGC’s effectiveness is based on a positive group experience, characterized by group belonging and acceptance. Through a foundation of trust, students are able to express their emotions and thoughts about everyday struggles. The parent involvement component of PGC reminds parents, students, and faculty that just as parents are essential partners for providing support at home for day-to-day life skills learned in PGC, parents are also important partners in RY. Both school bonding and parental involvement foster the development of a school wide network of support as the RY curriculum develops partnerships among youth, parents, school personnel, and various agencies in the community. Table 1 below lists and describes the four key concepts incorporated into PCG.

Table 1.

*Reconnecting Youth Program Components*

Component	Description
Self-Esteem Enhancement (SE)	Positive self-talk, positive actions Support positive self-esteem in others
Decision Making (DM)	Set goals Celebrate accomplishments
Personal Control (PC)	Attend to stressors and stress response Use healthy coping strategies Apply PC skills to program goals
Interpersonal Communication (IC)	Express care and concern for others Listen carefully and provide feedback Share thoughts and feelings

*Life Skills Training Component.* In the Life Skills Training portion of RY, leaders motivate, coach, reward, and reinforce students to teach them new ways of feeling, thinking, and behaving. Life skills instruction follows a specific sequence: learn it, practice it, apply it, and then report to the group how it worked. A daily agenda helps to integrate group work and skills training.

*First Ten Days Component.* ‘The First 10 Days’ introduces students to the RY model, where students begin to establish a daily routine of monitoring attendance, drug use, and moods, to provide students with the opportunity to develop a baseline for future goal setting. In ‘The First 10 Days’, the RY teacher begins to establish a positive group environment built on trust,

support, confidentiality, and individual and group limit setting. After the RY introduction and course overview, lessons are based on four units: Self-esteem, Decision Making, Personal Control, and Interpersonal Communication. Each unit consists of skill development and positive individual and group development.

Each lesson within each of the four units follows a uniform structure. First, the session leader guides students in self-monitoring their attendance, moods, and drug use. Students chart their attendance in an attendance binder. The attendance binder allows students to view their attendance for the week, to compare it to previous weeks, and to set future attendance goals. Similar to attendance monitoring, students' monitor their mood and drug use in their own personal binder. Additionally, to 'check in', the teacher asks students to rate their mood with a thumbs up, down, or side ways. Then, the class briefly 'checks back' and briefly reviews the previous day's topic. Following 'check back' a student volunteers to share a story, problem, success, or issue with the group and then previews the training focus for the day. Next, the topic of the day is introduced by following a structured didactic format and then engages in a discussion of the new material. Didactic instruction is followed by skills instruction, in which the teacher teaches new skills, the students practice the skills in session, and the students are asked to apply the skills through homework. Finally, the day's topic is briefly summarized and the next day's topic is previewed. Table 2 lists the different activities that constitute a typical RY lesson and shows the approximate amount of time that should be spent on each component. .

Table 2.

*Anatomy of a RY Lesson*

Session Components	Time
Monitoring Tools: (Attendance, Mood, Drug Use)	4 min.
Check In (students rate their mood with thumbs up, down, or sideways)	5 min.
Check Back (Yesterday's Homework)	5 min.
Shared Agenda (a student or students volunteer to share an experience or issue)	10 min.
Today's Activities (Overview page, learning objectives)	5 min.
Today's BIG IDEA (key concept)	5 min.
Motivate (Teacher teaches)	5 min.
Teach (Teacher demonstrates and models newly learned information)	5 min.
Practice (Students practice newly acquired skills through role play)	5 min.
Apply (Contract & Practice-Homework)	5 min.
Summary/Preview (Tomorrow's Topic)	5 min.
Total	55 min.

*Empirical support.* Reconnecting Youth has been rated 'Effective' by the NIDA, Office of Juvenile Justice and Delinquency Prevention, and the Substance Abuse and Mental Health Services Administration. Program effectiveness is grounded in theoretical orientation and the inclusion of multiple treatment components proven to be effective in enhancing resiliency. Research supported factors incorporated within the RY curriculum included: parental involvement, peer support, mood, drug, and academic self-monitoring, positive teacher-student relationship, instructional technique, life skills training, school bonding, positive school climate,

and goal setting (Brooks, 2006; Condly, 2006; Doll & Lyon, 1998; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Masten, 2001; Masten & Powell, 2006).

Research with students in grades 9 through 12 has found the RY program associated with improved school performance; reduced drug involvement; decreased deviant peer bonding; and higher levels of self-esteem, personal control, school bonding, and social support. One quasi-experimental investigation, carried out by Eggert, Seyle, and Nicholas (1990), examined 264 high-risk, middle class, primarily Caucasian youth. Examining data drawn from both permanent school records and self-report questionnaires, Eggert et al. (1990) concluded that students who received RY earned higher grades, completed more course credits, were absent from school fewer days, and were less likely to drop out of school, compared with students who were not enrolled in the RY program.

In a second investigation of the RY program, Eggert, Thompson, Herting, Nicholas, and Dicker (1994) examined 259 high-risk primarily Caucasian students from an urban high school in the northwestern U.S. After one semester, students in the RY program showed increased GPA and decreased drug use, but no difference in school attendance compared with students in the randomly-selected control group. Moreover, at five and ten month follow-ups those in RY had a lower rate of school dropout. Analyses indicated that teacher support, peer group support, monitoring school attendance, and skills training in self-esteem enhancement were all important contributors to program effectiveness. Young women were particularly responsive to the program, as they demonstrated reductions in deviant peer bonding after participation in RY (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994).

A third RY inquiry examined 201 primarily Caucasian high-risk students in an urban environment. Eggert, Thompson, Herting, and Nicholas (1994) reported increased school performance over time as measured by grades. Students in the RY program increased their

grades over time, while the controls showed no change in grades. No change in attendance was noted for students in either group. In a fourth study, Thompson, Horn, Herting, and Eggert (1997) reported similar results. Thompson et al. assigned 280 primarily Caucasian students to two groups to determine the RY program's impact on academic achievement. At pretest, both groups showed poor levels of school performance, as recorded both in school records and through self-report questionnaire; however, over time the grades earned by students in the RY group increased, while grades among the control group remained the same.

As these studies illustrate, previous evaluation research of the Reconnecting Youth program has included experimental control groups and has utilized objectively measured data. These elements of quality research are not always present in evaluation studies of other prevention programs, which often instead rely on uncontrolled analyses and subjective self-report data (Blum & Ellen, 2002; Brooks, 2006; Lopez et al., 2002). Although RY is supported by studies employing sound research methodology, to date published evaluations of Reconnecting Youth have relied on ethnically heterogeneous, primarily Caucasian samples in regular school settings, typically located in the Midwestern U.S. (Lopez et al., 2002). The effectiveness of RY has not yet been documented with Mexican American youth. Moreover, many RY evaluation studies artificially created high-risk samples from among the students in regular high school settings by screening potential participants according to attendance, dropout history, grades, and discipline (Eggert et al., 1990; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). No known published investigations have evaluated the effectiveness of the RY program in education settings specifically designed to serve high-risk teens.

### *The Present Investigation*

The present investigation examined a sample of high-risk Mexican American youth attending an urban alternative charter high school dedicated to serving high-risk youth in the American Southwest. The Reconnecting Youth program was offered to randomly selected students at this school in the spring of 2005. This study analyzed objective student grade and attendance data from Reconnecting Youth participants and compared them with data from a randomly selected control group of students at the same school who did not participate in RY. By utilizing an ethnically homogeneous group of authentically high-risk Mexican American adolescents in the Southwestern U.S., this study expands the body of research evaluating RY and addresses previous limitations.

### *Research Questions*

The present investigation examines a sample of high-risk Mexican American youth attending an urban alternative charter high school in the American Southwest. This study addresses the following research questions:

*Research Question 1:* Is there a difference over time between students who participated in the Reconnecting Youth (RY) Program and students who did not participate in the RY program in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?

*Research Question 2:* Is there a difference over time between males and females in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?



*Research Question 3:* Is there a difference between students who participated in the RY Program and students who did not participate in the RY program in school attendance, as recorded in school records (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?

*Research Question 4:* Is there a difference between males and females in school attendance, as recorded in school records, (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?

### *Hypotheses*

*Hypothesis 1:* For this sample of high-risk Mexican American adolescents, it was predicted that there would be a difference over time from the Fall of 2004 to the Spring of 2005 between students who participated in the Reconnecting Youth (RY) Program and students who did not participate in the RY program in mean semester grades. It was predicted that the students in the RY treatment group would improve more than the students who did not receive RY.

*Hypothesis 2:* For this sample of high-risk Mexican American adolescents, it was predicted that there would be a difference over time from the Fall of 2004 to the Spring of 2005 between males and females in mean semester grades.

*Hypothesis 3:* For this sample of high-risk Mexican American adolescents, it was predicted that students who participated in the Reconnecting Youth Program (a) would record fewer absences during the 2004-2005 school year (the school year in which the RY program was implemented) and (b) would record fewer absences during the 2005-2006 school year (one

school year after the RY program was implemented), compared with students who did not participate in the program.

*Hypothesis 4:* For this sample of high-risk Mexican American adolescents, it was predicted that females and males (a) would differ in number of absences during the 2004-2005 school year (the school year in which the RY program was implemented) and (b) would differ in number of absences during the 2005-2006 school year (one school year after the RY program was implemented).

## CHAPTER III

### METHOD

#### *Participants and Setting*

The data for this study were gathered in the 2005-2006 school year at a small alternative charter high school serving high-risk students in a large culturally diverse city in the Southwest United States. The total enrollment at this school for the 2004-2005 school year was 200 students. The student population at this school was predominantly Mexican American (92%), 4% Caucasian, and 4% African American. Eighty-three percent of the student body was eligible for free or reduced lunch. This school primarily serves high-risk Mexican American students who have previously dropout out of school, become teenage parents, were expelled from traditional schools, and/or have been in trouble with the law for fighting, drug use, and truancy. The school serves 9<sup>th</sup> through 12<sup>th</sup> graders of whom 91% are economically disadvantaged. The gender makeup of the school is equitable with 53.5% female and 46.5% male. Most students enrolled in this charter school had been expelled from the public school system for various offenses and/or withdrew from the public school system due to difficulties, such as using or selling drugs on campus, gang association, fighting, truancy, pregnancy, or poor academic achievement. A minority of students had previously dropped out of high school and returned to obtain their high school diploma. In 2005-2006, the school was rated as Academically Acceptable by the Texas Education Agency.

The present study evaluated a portion of a 5-year dropout prevention project, funded through a grant from the Center for Substance Abuse and Prevention, in which this high school participated. With permission from the school administrators and from the administrators of the grant that funded the implementation of the RY program in the school, and with university IRB approval, a total of 100 de-identified student records were obtained for analysis. Of the 100

participants, 70 were enrolled in the Reconnecting Youth program (treatment group) during the spring 2005 semester. The 70 students enrolled in RY (treatment group) were selected as follows: One hundred students in the high school were randomly selected and placed in the Reconnecting Youth program as an elective course. Of the 100 students, 72 signed consent forms and agreed to participate in the 'Project Respect' program evaluation. Drawn from the 72 students who participated in the Reconnecting Youth Program and Project Respect Study, 70 de-identified student records were available for inclusion in the study.

For the purpose of conducting this study, a comparison group of 30 students subsequently was selected at random from among those students enrolled in the school during the 2004-2005 school year but who did not participate in the Reconnecting Youth Program or Project Respect Study. Pre-intervention grades and attendance for both the treatment and comparison groups were obtained from school records.

Participant demographics are summarized in Table 3. Forty-five (45%) of the participants were female and 55 (55%) were male. Their mean age was 17 years (range of 15 to 21 years). The vast majority (92%) of the participants were Mexican American.

Table 3.

*Age, Gender, Grade Level, and Ethnicity of Study Participants (n=100).*

	RY (Treatment) (n = 70)	Comparison (n = 30)
Age (years)		
Mean	17.0	17.8
SD	.19	.31
Grade		
9th	21	8
10 <sup>th</sup>	23	4
11 <sup>th</sup>	12	3
12 <sup>th</sup>	14	15
Gender		
Male	38	17
Female	32	13
Ethnicity		
Mexican American	66	26
Caucasian	0	4
African American	4	0

*Measures*

All study participants were evaluated on two key outcome variables drawn from permanent school records: (1) mean semester grades and (2) attendance. For mean semester grades, data were obtained from two different time periods. Time 1 data represented the Fall

2004 semester, as recorded in December of 2004 (the semester immediately preceding the RY program); Time 2 data reflected the Spring 2005 semester, as recorded in May of 2005 (the end of the semester in which the RY program was implemented). At the time these retrospective data were gathered from the school's files however, attendance data were not available to be broken down by semester, but were recorded only for entire school years. For this reason, when examining school attendance in the present investigation, Time 1 data represented the 2004-2005 school year (the school year during which the RY program was carried out) and Time 2 data reflected attendance for the 2005-2006 school year (the year after RY was carried out).

*Mean Semester Grades.* Grades for students in the treatment and comparison groups were obtained from archival student records. Student grades ranged from 0 to 100 on a percentage scale. These data were made available by teachers and no mention was made in respect to whether or not these grades were weighted averages. Therefore, some caution should be made in interpreting grades as the specific criteria used for assigning grades may have differed from teacher to teacher. To measure improvements in mean semester grade, participants' mean semester grade as of December 2004 (prior to exposure to the Reconnecting Youth curriculum) was recorded and compared with their mean semester grade as of May 2005 (post-intervention).

*Attendance.* Student attendance data was tabulated by calculating the total number of days absent during the 2004-2005 school year. The same procedure was used to analyze attendance during the 2005-2006 school year.

### *Procedure*

*Curriculum implementation.* The Reconnecting Youth (RY) curriculum was implemented in the spring of 2005 with the treatment group. To ensure fidelity and integrity of the RY program, the project coordinator and research staff worked closely with school representatives in all aspects of program implementation, including teacher identification and selection. The lead

teacher was selected from among four candidates. The project coordinator and school staff agreed on the lead teacher after two interviews and several practice sessions implementing the curriculum. All staff involved in the project completed an intensive five-day training session, conducted by certified RY trainers. The author of this study was employed as a research assistant/field worker. Her primary responsibility was to help the lead teacher implement the RY curriculum by passing out materials, sitting and interacting with the group, encouraging group involvement, providing insight, giving examples, sharing experiences, and building trust and rapport with students in RY. Her field worker responsibilities included phoning home to check with chronic skippers and students who were absent, and transporting to school those students who did not have a ride to school. Of note, she was also responsible for leading the class when the lead teacher was absent or ill. Thus, she attended the five-day training conducted by a trainer certified by Reconnecting Youth developers.

Multiple instruments were used to evaluate implementation of the RY program. The project coordinator made five unannounced observational visits to the RY classroom for the purpose of checking the fidelity with which the RY program components were followed. The project coordinator used a scoring rubric to determine the lead teacher's adherence to published standards and guidelines for program implementation. In addition, the teacher maintained daily lesson logs to track the number of lessons taught, the time spent on skill development, and their assessment of students' reaction to the lesson. These logs were examined and the degree of adherence to the program was analyzed as part of the fidelity check. The RY staff monitored students' attendance and grades weekly to determine eligibility for pro-social activities and fieldtrips. RY implementation was conducted ethically and followed all standard procedures and guidelines as outlined by the published curriculum.

*Data Collection.* In order to obtain data for the comparison group, three years after the project was implemented the district superintendent and school principal granted permission for the author to access permanent school records for the purpose of obtaining a comparison group. Although school records for the comparison group were obtained 2 years after program implementation, the comparison group consisted of students who were enrolled in the school during the same spring 2005 semester as the treatment group. The school secretary selected 30 student records from the Spring 2005 semester electronic database. The school secretary informed the author that school records were only kept for two years following withdrawal and graduation. As such, due to withdrawal, drop-out, and graduation only 30 student records for students who did not participate in the RY program were available. The secretary deleted all identifying information, leaving only information regarding age, gender, ethnicity, semester grades, attendance, and grade level.

#### *Data Analyses*

A quasi-experimental design with non-equivalent groups was used to test the effects of the Reconnecting Youth program. The analyses were conducted in two stages. In the first stage, descriptive statistics were tallied for the treatment and comparison groups. Preliminary analyses also were carried out to compare the demographic similarity of the treatment and comparison groups according to age, school grade level, gender, and ethnicity. Chi-square tests were performed to examine group differences in gender, school grade level, and ethnicity. Independent sample t-tests were used to analyze group differences in age and mean semester grades at pre-intervention.

To investigate research questions 1 and 2, data were analyzed using a 3-factor mixed (i.e. split-plot) factorial analysis of variance (ANOVA) with one within subjects factor (time) and two between subjects factors (treatment group and gender), and with mean semester grades as the



dependent variable. The analysis was computed using the general linear model repeated measure function (GLM) through SPSS software. The data were interpreted for significant main effects, two- way interactions, and three-way interactions.

To investigate research question 3, two independent samples t-tests were carried out. For the first t-test, treatment group was the independent variable and absences during the 2004-2005 school year served as the dependent variable. For the second t-test, treatment group was the independent variable and absences during the 2005-2006 school year served as the dependent variable. Similarly, to investigate research question 4, two independent samples t-tests were carried out. For the first t-test, gender was the independent variable and absences during the 2004-2005 school year served as the dependent variable. For the second t-test, gender was the independent variable and absences during the 2005-2006 school year served as the dependent variable. Additional independent sample t-tests were carried out where needed.

## CHAPTER IV

### RESULTS

#### *Descriptive Statistics*

Students' mean semester grades ranged from 0 to 95 during the Fall 04 semester and ranged from 40.4 to 93.4 during the Spring 05 semester, with an overall mean of 72.9 (SD = 19.47) at Time 1 and 74.9 (SD = 11.66) at Time 2. At Time 1, students in the RY group recorded a mean semester grade of 73.7 (SD = 18.51), while students who did not participate in RY recorded a mean semester grade of 71.0 (SD = 21.66). At Time 2, students in the RY group recorded a mean semester grade of 75.5 (SD = 11.70) and students who did not participate in RY recorded a mean semester grade of 73.5 (SD = 11.60). Table 4 summarizes student grades for the RY and comparison groups, both at Time 1 (before the RY intervention) and at Time 2 (after RY was administered). Figure 1 illustrates the distribution of grades for the RY and comparison groups as a box- and-whiskers graph.

In regards to absences, students in the treatment group recorded a mean of 21.9 (SD=18.53) absences and students in the comparison group recorded a mean of 29.2 (SD=13.75) absences at Time 1. Males in the treatment group recorded 21.9 (SD=20.57) absences and females in the treatment group recorded 21.9 (SD=16.17) absences at Time 1. Males in the comparison group recorded 26.3 (SD=15.29) absences and females in the comparison group recorded 36.2 (SD=5.12) absences at Time 1. At Time 2, students in the treatment group recorded a mean of 17.6 (SD=15.42) absences and students in the comparison group recorded a mean of 26.5 (SD=18.50) absences. Males in the treatment group recorded 17.3 (SD=15.78) absences and females in the treatment group recorded 17.9 (SD=15.27) absences at Time 2. Males in the comparison group recorded 18.5 (SD=14.47) absences and females in the comparison group recorded 45.8 (SD=11.65) absences at Time 2. Table 5 summarizes student

absences for the RY and comparison groups, both at Time 1 (during RY) and at Time 2 (after RY was administered).

Table 4.

*Mean semester grades by gender before and after RY.*

All Participants (N = 100)					
<u>Group</u>	<u>Pre-Intervention</u>		<u>Post-Intervention</u>		<u>Difference</u>
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	
RY	73.7	18.51	75.5	11.70	+1.79
Comparison	71.0	21.66	73.5	11.60	+2.47
Males (n = 55) <sup>a</sup>					
RY	67.1	22.35	72.1	12.30	+4.96
Comparison	63.0	24.87	69.9	11.54	+6.92
Females (n = 45) <sup>b</sup>					
RY	81.6	7.29	79.6	9.62	+1.96
Comparison	81.5	9.90	78.2	10.28	+3.35

*Notes.* RY = Reconnecting Youth Group; <sup>a</sup> n = 38 (RY), n = 17 (comparison); <sup>b</sup> n = 32 (RY), n = 13 (comparison).

\*  $p < .05$

Figure 1.

*Boxplot for Treatment and Comparison Groups and Mean Semester Grades.*

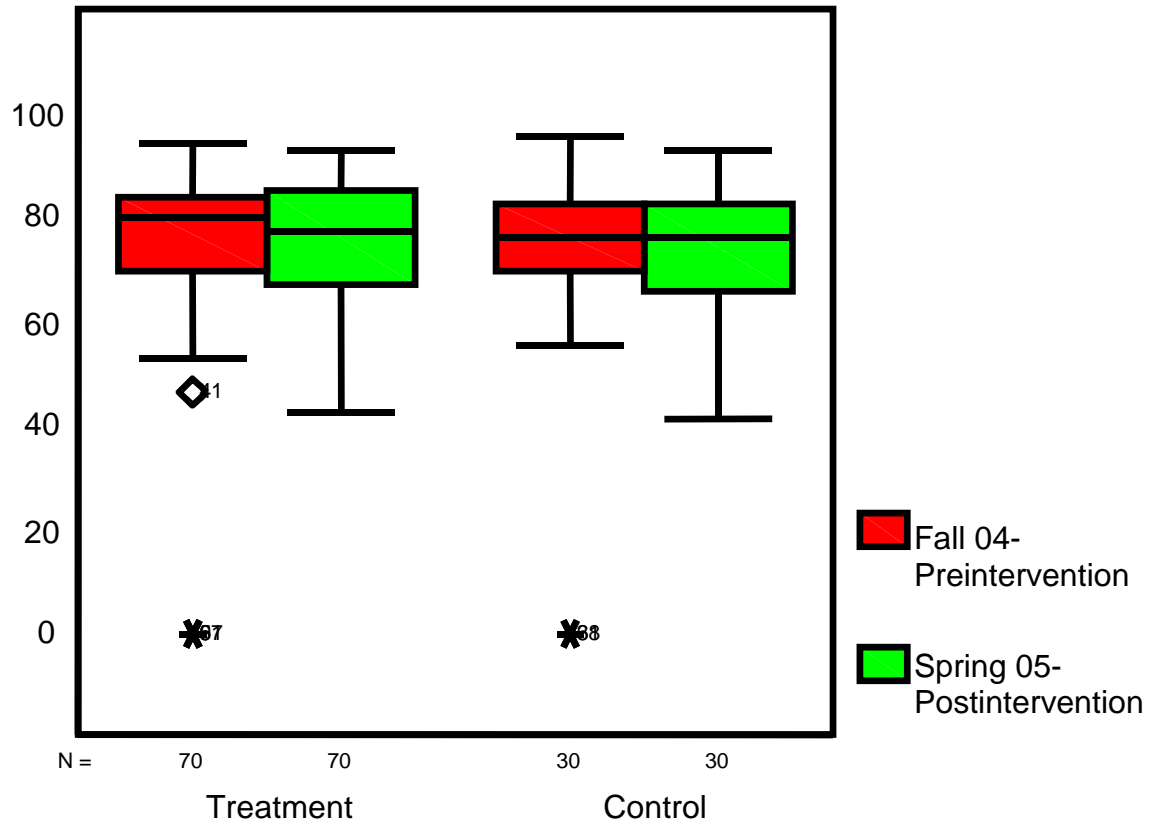


Table 5.

*Mean number of absences by gender before and after RY.*

All Participants (N = 76) <sup>a</sup>					
<u>Group</u>	<u>Pre-Intervention</u>		<u>Post-Intervention</u>		<u>Difference</u>
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	
RY	21.9	18.53	17.6	15.42	-4.32
Comparison	29.2	13.75	26.5	18.50	-2.65
Males (n = 44) <sup>b</sup>					
RY	21.9	20.57	17.3	15.78	-4.63
Comparison	26.3	15.29	18.5	14.47	-7.75
Females (n = 32) <sup>c</sup>					
RY	21.9	16.17	17.9	15.27	-3.96
Comparison	36.2	5.12	45.8	11.65	+9.60

*Notes.* <sup>a</sup>Attendance data not available from school records for 24 participants; <sup>b</sup> n = 32 (RY), n = 12 (comparison); <sup>c</sup> n = 27 (RY), n = 5 (comparison); \* p < .05

### *Differences Between Groups*

*Demographic differences.* The participants in the Reconnecting Youth (treatment) group were younger ( $M = 17.0$ ) than those in the comparison group ( $M = 17.8$ ),  $t(98) = -2.254, p < .05$ . The RY ( $M = 10.3$ ) and comparison groups ( $M = 10.8$ ) also differed in grade level,  $\chi^2(3, N = 100) = 10.28, p = .016$  and by ethnicity,  $\chi^2(2, N = 100) = 11.18, p = .004$ . There were more African Americans in the treatment group ( $n = 4$ ) and fewer African Americans ( $n = 0$ ) in the comparison group than expected on the basis of chance alone. By contrast, there were fewer Caucasians ( $n=0$ ) in the treatment group and more Caucasians ( $n = 4$ ) in the comparison group than expected. The treatment and comparison groups did not differ by gender,  $\chi^2(1, N = 100) = 2.34, p = .48$ .

*Pre-intervention differences on outcome variables.* Mean semester grades for the RY and comparison participants did not differ at pre-intervention (fall 2004, before the implementation of RY),  $t(98) = 0.685, p > .05$ . However, a significant difference between males and females was found on pre-intervention mean semester grades,  $t(98) = -4.726, p < .001$ . Students who participated in the RY program had fewer absences than students who were not in the program during the 2004-2006 school year (the year RY was implemented),  $t(83) = -2.264, p < .05$ .

### *Effects of the Reconnecting Youth Program on Academic Outcomes*

*Research Question 1: Is there a difference over time between students who participated in the Reconnecting Youth (RY) Program and students who did not participate in the RY program in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?*

No main effect was found for time,  $F(1, 96) = .638, p > .05$ , indicating that overall, grades did not increase from December 2004 to May 2005, controlling for gender and treatment condition. The test of between-subjects effects also revealed no main effect for treatment group,  $F(1,96) = .557, p > .05$ , showing that overall, the treatment and comparison groups did not differ in regard to mean semester grades, controlling for time and gender. No interaction was found between grades and group status,  $F(1, 96) = .005, p > .05$ . As such, there was no significant difference in grade trend over time between the RY group and the comparison group. Table 6 shows the results of the repeated measures ANOVA that addressed research questions 1 and 2.

*Research Question 2: Is there a difference over time between males and females in mean semester grades, when comparing grades at post-intervention (Spring 2005; semester in which the RY program was implemented) with grades at pre-intervention (Fall 2004; semester before the RY program was implemented)?*

A between-subjects main effect was found for gender. Overall, mean semester grades were different for males and females,  $F(1, 96) = 22.447, p < .01$ . A follow-up independent sample t-test showed a significant difference between males' and females' grades in Spring 2005,  $t(98) = -3.582, p < .01$ ; females' grades were higher. Gender differences did not vary across treatment condition,  $F(1, 96) = 0.221, p > .05$ , and no gender differences were found over time in grade trend between the treatment and comparison groups,  $F(1,96) = .166, p > .05$ . However, an interaction was found between time and gender,  $F(1, 96) = 4.377, p < .05$ , indicating overall gender differences in the trajectory of mean semester grades from pre- to post-intervention. Independent sample t-tests showed that although females had higher mean semester grades both in Fall 2004 and Spring 2005, males' mean semester grades improved during this time, while females' grades declined,  $t(98) = -3.582, p < .01$ . Figure 1 illustrates this graphically. See Table 6 for numerical results.



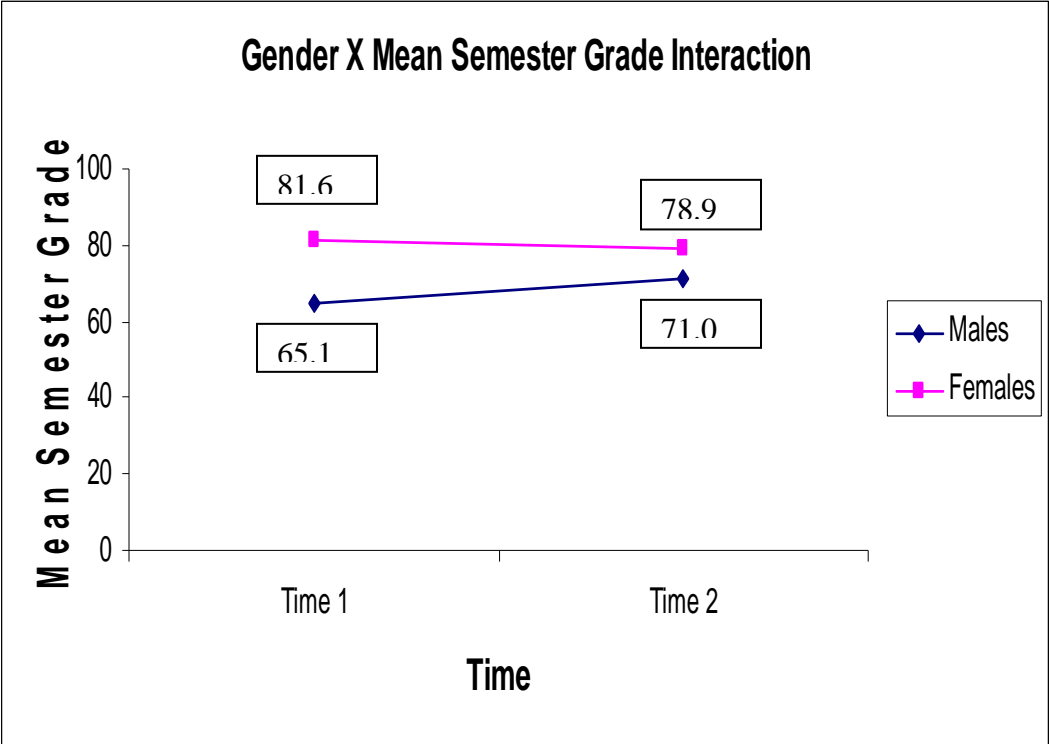
Table 6.  
*Repeated measures analysis of variance for mean semester grades.*

Source	<i>df</i>	<i>F</i>	<i>p</i>	$\eta$	Observed power
Within subjects					
Time	1	.638	.426	.007	.124
Time x Group	1	.005	.944	.000	.051
Time x Gender	1	4.377	*.039	.044	.544
Time x Group x Gender	1	.166	.685	.002	.069
Error (Time)	96				
Between subjects					
Group	1	.557	.457	.006	.115
Gender	1	22.447	*.000	.190	.997
Group x Gender	1	.221	.639	.002	.075
Error	96				

Note. \* $p < .05$

Figure 2.

*Gender differences over time in mean semester grades.*



*Research Question 3. Is there a difference between students who participated in the RY Program and students who did not participate in the RY program in school attendance, as recorded in school records (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?*

Participants in the RY program recorded significantly fewer absences than members of the comparison group,  $t(83)=-2.264, p < .05$ , during the 2004-2005 school year (school year in which RY was implemented). Students who participated in the RY program recorded significantly fewer absences than the comparison group,  $t(83)= -2.015, p < .05$ , during the 2005-2006 school year (one school year after the RY program was implemented). Both in 2004-2005 and in 2005-2006, participants in the RY program recorded fewer absences than students in the comparison group. Table 7 displays means and standard deviations by group.

Table 7.

*Means and Standard Deviations by Group for Measures of Attendance.*

Group	Total Days Absent (SD)	
	2005-2006 Attendance (Time 1)	2005-2006 Attendance (Time 2)
Reconnecting Youth	21.9 (18.53)	17.6 (15.42)
Comparison	29.2 (13.75)	26.5 (18.5)

*Research Question 4: Is there a difference between males and females in school attendance, as recorded in school records, (a) when comparing absences during the 2004-2005 school year (the school year in which the RY program was implemented)? (b) when comparing absences during the 2005-2006 school year (one school year after the RY program was implemented; one-year follow-up)?*

The Levene's test for equality of variances indicated equal variances during the 2004-2005 school year,  $F(83)=1.060, p > .05$ , and during the 2005-2006 school year,  $F(74)=2.676, p > .05$ . Overall, males and females did not differ in regards to the total number of absences during the 2004-2005 school year,  $t(83)=.395, p > .05$ . Similarly, males and females did not differ in respect to the total number of days absent during the 2005-2006 school year,  $t(74)=-1.224, p > .05$ . Table 7 and 8 provide numerical results.

Table 8.

*Independent sample t-tests by gender and group status on attendance.*

Gender	<i>t</i>	<i>p</i>
Time 1	.395	.694
Time 2	-1.224	.225
Males		
Time 1	-1.776	.082
Time 2	-.233	.817
Females		
Time 1	-1.311	.198
Time 2	-3.857	.001**
Group		
Time 1	-2.264	.026*
Time 2	-2.015	.048*
RY		
Time 1	.004	.997
Time 2	-.159	.875
Control		
Time1	.477	.638
Time 2	-3.722	.002**

\**p* < .05; \*\**p* < .01

Follow-up independent sample *t*-tests determined that whereas the number of absences among males did not differ for treatment or control groups at either Time 1,  $t(54)=-1.776, p > .05$ , or Time 2,  $t(54)=-.233, p > .05$ , and the number of absences experienced by females did not differ for treatment or control groups at Time 1,  $t(43)=-1.311, p > .05$ , the number of absences by females did differ across the treatment and control groups at Time 2,  $t(43)=-3.857, p < .01$ . Figures 2 and 3 graphically illustrate these differences over time for males and females, respectively. Males and females in the RY and comparison groups did differ significantly. In 2005-2006, not only did females in the comparison group show poorer attendance than females in the RY group,  $t(43)=-3.857, p < .01$ , but females in the comparison group also experienced poorer attendance than males in the comparison group,  $t(98)=-3.58, p < .001$ . The number of absences among males did not differ across treatment groups during the 2004-2005 school year,  $t(54)=-1.776, p > .05$ , and the 2005-2006 school year,  $t(54)=-.233, p > .05$ . Whereas the number of absences among females did not differ by treatment group in 2004-2005,  $t(43)=-1.311, p > .05$ , group differences were found in 2005-2006,  $t(43)=-3.857, p < .01$ . Figures 2 and 3 graphically illustrate the differences in attendance over time for males and females, respectively, and the numerical results detailing the *t*-tests are shown in Table 8.

Table 9.

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*Mean number of absences by gender and treatment group in 2005-2006.*

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Group	Mean	Standard Error
<hr/> Reconnecting Youth		
Male	19.6	2.53
Female	19.9	2.76
<hr/> Comparison		
Male	22.4	4.14
Female	41.0	6.40

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Figure 3.

*Number of Male Absences Over Time.*

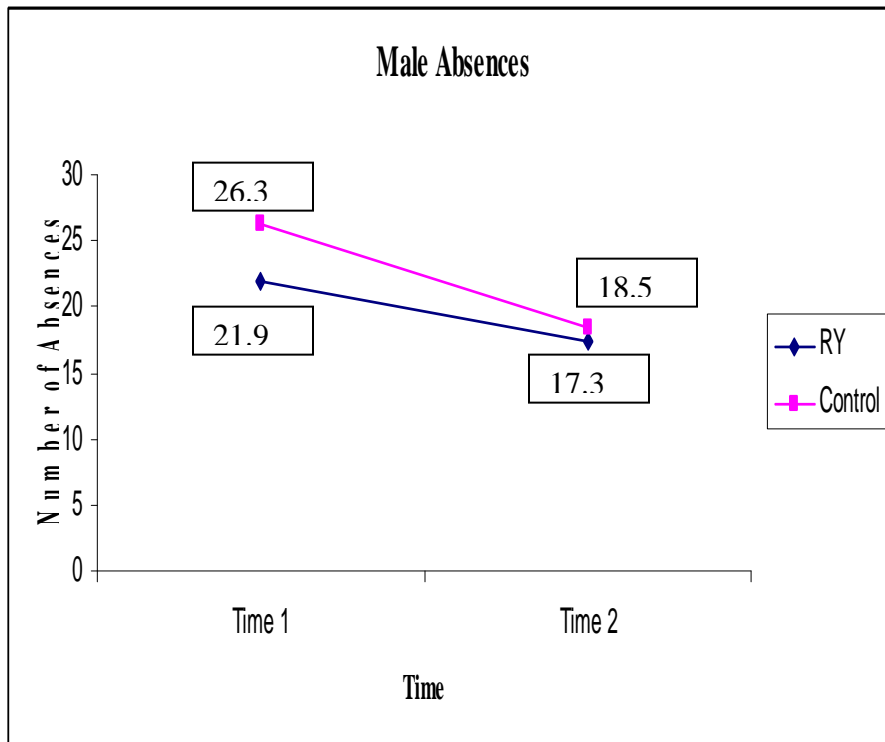
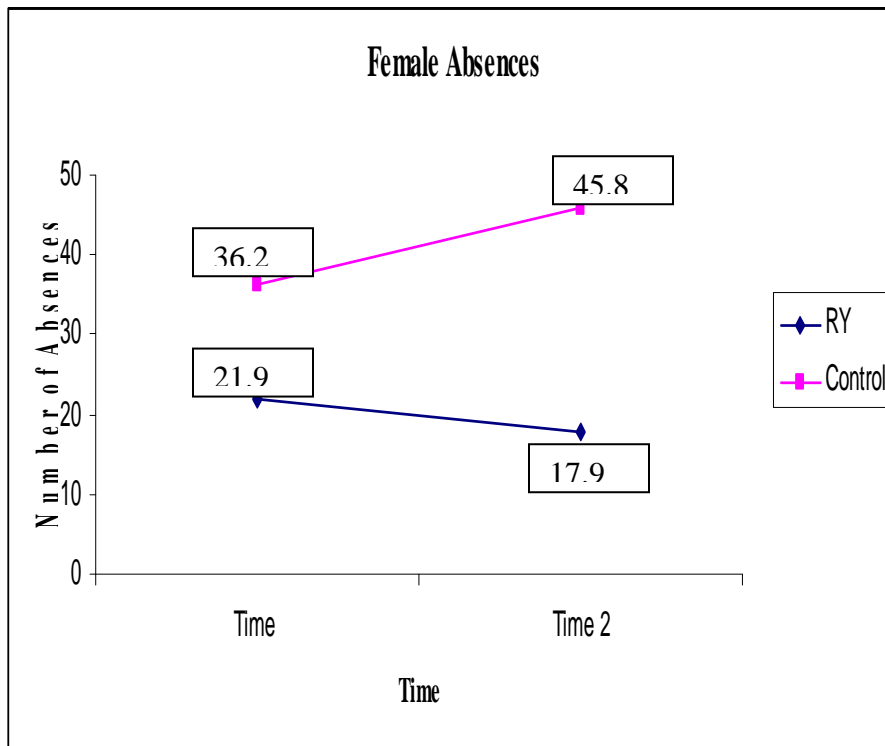




Figure 4.

*Number of Female Absences Over Time.*



## CHAPTER V

### DISCUSSION

The present study examined the impact of the Reconnecting Youth Indicated Prevention/Intervention Program on academic and attendance outcomes with an ethnically homogeneous Mexican American sample of high-risk youth in the Southwestern U.S. Our analyses suggest that, when implemented in this alternative charter high school setting, and with our sample, the Reconnecting Youth program was not as effective as it was in previous studies.

Hypothesis 1 predicted that participation in the Reconnecting Youth program would be associated with better grades over time, relative to the comparison group of youth who did not participate in RY. Grade differences in favor of the RY participants were anticipated on the basis of past research (Eggert et al., 1990, Eggert et al., 1995; Eggert, Thompson, Herting, & Nicholas, 1994; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Thompson et al., 1997). In contrast to these prior studies, our participants did not show significantly better mean semester grades over time compared to the comparison group. Thus, we failed to support Hypothesis 1.

There are several possible reasons why Hypothesis 1 was not upheld. One possible explanation is that the power of our analysis was limited by the small sample size. Indeed, in the present study, although the total sample consisted of 100 youth, our comparison group contained only 30 students, due to constraints in the amount of data available from school archival records. By contrast, the previous RY research we cited had access to much larger samples, ranging from 201 students (Eggert, Thompson, Herting, & Nicholas, 1994) to 280 youth (Thompson et al., 1997).

It is unfortunate that we were unable to access data for participants who dropped out of school between 2005 and the time we accessed the archival data from school records (fall of 2008). It is possible that those students who subsequently dropped out may have performed even

more poorly than the students who remained in school and that had these data been available, differences may have been evident in the grade trajectory between the treatment groups.

Another possible explanation for the apparent failure of RY to impact on grades for our sample of high-risk Mexican American youth may be that for this sample, a longer duration of exposure to the RY was needed. Given the 24% dropout rate for Mexican Americans versus the 12% for African Americans and 7% for Caucasians, a one-semester course may not be strong enough to impact student's semester grades (NCES, 2006). Eggert, Thompson, Herting, Nicholas, and Dicker (1994) noted the need for RY to be tested with high-risk minority youth to ascertain the program's effectiveness with youth from minority backgrounds. Given that the RY program was developed and piloted on Caucasian youth and subsequent studies demonstrated its effectiveness with Caucasian youth, the findings from the present investigation indicate program components might not resonate as well with individuals from different cultures. Alternatively, it may be that more than a single semester of RY may be needed in alternative school settings that serve exclusively high-risk students. Indeed, Eggert, Thompson, Herting, Nicholas, and Dicker (1994) speculated that a one-semester intervention might be insufficient for some high-risk youth. At this school, many students had dropped out several times due to teenage pregnancy, admitted drug use, experienced poverty, or had trouble with the law.

Hypothesis 2 predicted a gender difference in mean semester grades between the treatment and comparison groups. Gender differences were expected based on several factors: (1) gender differences in national high school dropout rates, in which Hispanic females have a lower dropout rate compared to Hispanic males (NCES, 2004; NCES, 2006); (2) high pregnancy rates among Hispanics; and (3) previous empirical findings with the Reconnecting Youth program, which suggested that females were more responsive to RY than males (Eggert, Thompson, Herting, Nicholas, & Dicker, 1994).

Among this sample of participants, gender differences in grades were observed. A main effect for gender was found whereby females earned higher grades, both before and after the semester in which RY was administered. A different trend in grade change over time also was identified for males and females. Males' grades increased and females' grades decreased over time in both the treatment and comparison groups. Therefore, Hypothesis 2 was supported.

Based on prior research reporting that students who participate in Reconnecting Youth demonstrated better attendance than students in control conditions (Eggert et al., 1990; Eggert et al., 1995; Eggert, Thompson, Herting, Nicholas, and Dicker, 1994), Hypothesis 3 predicted that differences would be observed between the RY and comparison groups in attendance. Our results supported this hypothesis. Overall differences in attendance were observed, between the RY and comparison groups, and students in the comparison condition missed more days of school, compared with the RY participants, both during the school year in which RY was implemented (2004-2005) and one year later (2005-2006). The most straightforward explanation for these findings is that despite the random assignment of students to treatment conditions, pre-existing differences existed between treatment and comparison students. These group differences, due to factors extraneous to this study, led to higher absenteeism among comparison students throughout the study, from Fall 2004 through Spring 2006.

Another possible explanation for these findings relates to limitations in the archival data that we utilized in the present study. In this study, attendance data were available only for entire school years. Unfortunately, it was not possible to access student attendance data for the school year prior to the introduction of RY, and the unavailability of pre-post attendance data did not allow us to compare attendance before and after the Reconnecting Youth intervention. Instead, our attendance data for Fall 2004 (before the RY curriculum was offered) were combined (confounded) with the data collected in Spring 2005 (during the RY program). It may be

speculated that the attendance in Fall 2004, before RY, was the same for the comparison and RY students, especially since participants had been randomly assigned to the RY and comparison conditions. If this is the case, the overall differences in attendance would be attributable to the RY program.

Hypothesis 4 predicted gender differences on absenteeism. This hypothesis was not upheld. However, females in the comparison group recorded more absences during the 2005-2006 school year than females in the treatment group, and also compared with males overall. The literature on high-risk Hispanic females suggests several explanations for the increase over time in absenteeism that we observed for comparison group females (Children's Defense Fund, 2008; Doll & Lyon, 1998).

One possible explanation for this finding is increased age. Given the 83% pregnancy rate for Hispanic teens (Goodyear, et al., 2002; Hamilton et al., 2009; Ventura et al., 2008), it seems likely that teens were more likely to have babies in 2005-2006 than they were in 2004-2005 because they were older and more mature, and teen motherhood is associated with increased school absenteeism (Kenney et al., 1997). If participation in the RY program was successful in deterring females from becoming pregnant, the females in the comparison group would have been more likely to have babies than those in the RY group, and therefore more likely to be absent from school.

A second potential reason for the 2005-2006 surge in absences among females who did not participate in RY is that the teens who did not participate in RY may have been more vulnerable to social pressure from the Hispanic community to stay home to fulfill traditionally feminine roles, such as to perform household chores for their families or to help rear siblings. Particularly with the population under investigation, female teenagers are far more likely than males to deal with pregnancy, illness, children's illness, and single parenting issues. One

particularly interesting finding was that males and females who participated in the RY program had similar number of absences while females who were not in the RY program experienced more absences than males who were also not in the program.

### *Strengths of This Study*

The present study evaluated the effectiveness of a school-based mental health program, a contribution to an area identified as being in critical need of attention (Weist et al., 2000). In conducting this investigation, we answered the call for conducting program evaluation research with methodological rigor, as recommended by Blum and Ellen (2002), Brooks (2006), and Lopez et al. (2002). We included a comparison group, rather than attempting to draw conclusions based solely on within-group change, and we employed random selection and random assignment to conditions (Brooks, 2006, Lopez et al., 2002). Our RY and comparison participants attended the same school during the same time period, a methodological improvement over some previous studies that compared treatment and control data across multiple schools or over different periods of time (Cho, Hallfors, & Sanchez, 2005; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994; Thompson, et al., 1997).

In this study, the RY program was implemented with integrity. The program coordinator conducted random fidelity checks four times a month. Furthermore, all individuals who were part of the program underwent an intensive two-week training that incorporated role-play, quizzes, and practice. It is also important to note the characteristics of the program implementer or ‘lead teacher’. The lead teacher was dynamic and of similar ethnic background as were other program “stakeholders”, which is especially important because program evaluation literature meticulously details the need for ensuring cultural competence (Pumariega, 1996).

In the interest of ethical practice, it is imperative that empirical studies be conducted with minority participants in order to enhance the effectiveness of interventions for a variety of target

populations. Despite the fact that the results of this study failed support our research hypotheses, this investigation constitutes a valuable addition to the RY literature. Previous studies that found RY beneficial were conducted on largely Caucasian, middle class adolescents enrolled in regular schools. This is the first known investigation of RY to explore the program's effectiveness with a largely Hispanic sample of youth and the first to investigate RY in an alternative high school setting targeting exclusively high-risk students (Eggert et al., 1990, Eggert, Thompson, Herting, Nicholas, & Dicker, 1994). In addition, independent researchers conducted this study of the RY program curriculum, which is different from the studies conducted by the program developers.

### *Limitations*

One limitation of the current study was the small sample size. Data were gathered three years after program implementation, and unfortunately some data were unavailable, as the school had recently upgraded from a paper filing system to an electronic system. In addition, files for students who graduated or dropped out of school were kept for only two years, and therefore could not be accessed for this investigation. A larger sample size would have improved the power of the analyses.

A second flaw in this study was the discrepancy in time for the two dependent variables where mean semester grade data points were obtained for two semesters and attendance data points were obtained for two school years. While mean semester grade data were gathered in an optimal manner for data analysis, attendance data was not ideal. If the data had been obtained from the same time frame, mixed repeated measured MANOVAs, rather than a ANOVAs could have been performed. By incorporating multiple outcome measures, we would have been able to obtain a more complex and efficient analysis of the phenomena under investigation.

It was unfortunate that the archival attendance data was obtained for an entire school year and was not divided by semesters. Therefore, the measure of the Reconnecting Youth program

on attendance was confounded by attendance data from the semester before the intervention. Semester attendance would have been ideal, as it would have shown the precise impact of the Reconnecting Youth program before, during, and after participation in the program. However, as the data were collected, attendance data that comprised the Time 1 (intervention variable) were confounded by pre-intervention attendance data. Post-intervention data were not affected and were a good measure of post-intervention attendance. Still, program components were strong enough to impact attendance as significant attendance differences were found between students who participated in the program and those who did not. The aforementioned was noted for future research and for improved data collection and results. A fourth weakness in this study is the unequal sample sizes for the treatment and comparison groups.

In this investigation, due to limitations in the amount of data available from the school records, it was not possible to match the students in the treatment and comparison groups for grade level and age. Although the treatment and comparison groups were matched on mean semester grades pre-intervention, the groups differed in regard to gender, age, grade level, and race. Gender differences were of particular importance, given the gender differences in high school dropout rates and academic achievement (Hamilton et al., 2009; NCES, 2006).

The length of the program could have also been a factor for this particular population. Given the 24% dropout rate for Mexican Americans versus the 12% for African Americans and 7% for Caucasians, a one-semester course may not be strong enough to impact student's semester grades (NCES, 2006). In light of the findings, program developers should consider extending the length of the program to at least a year, particularly with high-risk population. In fact, previous studies future directions sections underscored the need for researchers to implement the program for longer intervals as single semester courses were limited in their effect potential (Eggert et al., 1990; Eggert, Thompson, Herting, Nicholas, & Dicker, 1994)



### *Directions for Future Research*

Given the strong evidence of effectiveness for RY reported in previous investigations, the differences between our findings and those of prior studies strongly emphasize the need for expanding RY research with more ethnically diverse samples. It will be especially important to examine the effectiveness of prevention programs such as RY with Mexican Americans, given their exceptionally high risk of dropout. Even though the Hispanic population is growing exponentially, there is a relative dearth of research with Mexican American and other Hispanic adolescents (NCES, 2006).

Schools are ideal settings for replicating and empirically validating components of prevention programs. Furthermore, research has underscored the need for involving families and communities in program development and implementation through wraparound services, coordinated services, and community and family involvement (Brooks, 2006). Because students in alternative high schools often have multiple, long-standing psychosocial problems that are particularly difficult to address and change, it also will be important to conduct additional research on the effectiveness of RY with other highly challenging youth. Future research should ascertain the extent to which RY can be effective in helping young people with the kinds of complex and longstanding problems typically experienced by students enrolled in alternative schools, or whether its effectiveness is limited to teens manifesting moderate levels of dropout risk.

A mixed methods approach including both qualitative and quantitative data would add to the comprehensiveness of future evaluations of the RY program. Affective and anecdotal components regarding the perceptions of various stakeholders regarding program effectiveness,

school climate, and school belongingness are important components of a complete program evaluation (Nastasi, 2002).

### *Conclusion*

The literature is clear when emphasizing the need for increased rigor in program evaluation research (Blum & Ellen, 2002; Brooks, 2006; Lopez et al., 2002; Maher, 1978; Weist et al., 2000). Decades of research have resulted in many school-based dropout prevention programs lacking program evaluation support. New national initiatives and legislation, and ethical obligations underscore the need for demonstrating the efficacy of school-based prevention programs.

Based on the results of the present study, it appears that attendance self-monitoring via daily recording and weekly graphing has a positive impact on attendance. The data also suggests that robust reinforcement contingent upon school attendance can positively impact attendance. That is, eligibility for reinforcements, including field trips, dinners, and school parties was dependent upon good attendance. Other components like school climate, positive peer and adult relationships, and school bonding and belongingness may have had ancillary impacts on attendance.

This particular line of research identifies effective programs and specific components that can be incorporated into school-based mental health program or in general to improve school attendance. Results from the current study should be used to inform practice namely program development. Such findings allow for direct manipulation of environmental resources identified in the literature that school personnel and psychological services personnel have direct impact over. Effective components need to be discovered through research, and disseminated through publication, and finally implemented in the classrooms to improve outcomes for students.

Previous research has shown that the Reconnecting Youth program can be effective in helping high-risk youth increase their academic achievement and school attendance for Caucasian, middle class youth. The present controlled study examined the effectiveness of RY with Mexican American youth attending an alternative high school in the American Southwest and failed to replicate the findings reported in the prior literature in respect to mean semester grades but replicated findings in regards to the program's impact on absenteeism. Additional research is needed to better understand these findings.

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