UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

THE IMPACT OF MENTORING: AN ANALYSIS OF PSYCHOSOCIAL MEDIATORS IN YOUTH TRANSITION OUTCOMES

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

Degree of

DOCTOR OF PHILOSOPHY

By

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Norman, Oklahoma
2018

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THE IMPACT OF MENTORING: AN ANALYSIS OF PSYCHOSOCIAL MEDIATORS IN YOUTH TRANSITION OUTCOMES

A DISSERTATION APPROVED FOR THE
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My decision to pursue a doctorate is rooted in a firm belief that "to whom much is given, much is required" (Luke 12:48). I am forever grateful to those who took an interest in my development. My Lord and Savior blessed me with unique talents and a divine purpose. My prayer is that I am obedient in using His gifts to bring glory to Him. I pray that my words, thoughts and actions are pleasing in His sight. I dedicate this doctorate to the purpose God has placed upon my life. My heart's desire is that it is a blessing to others and a solution to unanswered problems. I am forever grateful to God for the three wise sages He sent to nurture and guide me.

My late grandmother, Excella Hodo Marks, not only introduced me to Jesus the Christ as my friend, confidant and personal Savior, but she also taught me to pray and give my best to any task entrusted to me. My late pastor and friend, Dr. J. H. Flakes Jr. instilled in me the importance of community building, dedication, and resolve. He often reminded us all to finish what you start. Dr. George Henderson remains the consummate mentor and friend who unselfishly invests his time to develop me, and who continues to be a beacon for all in improving human relations in our world.

For all of the sacrifices made for me, to those that have gone before me to make the way straight, and to those who will allow me to share my blessings to help others, I dedicate this doctorate.

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Abstract

Opportunity youth range in age from 16 to 24. They are not in school or working, and each of the 6.7 million of them cost taxpayers an average of $51,350 on an annual basis. Opportunity youth create a drain on economic resources at all levels of government and present a formidable problem worthy of immediate attention. This study uses data from the Flint Adolescent Study to analyze the mediation of psychosocial variables on mentoring to impact transition outcomes for high school students. Theoretically, a positive transition will decrease the chance of them becoming opportunity youth. Mediation analysis indicates that determination, goal setting, self-efficacy, and trust mediate the effects of mentoring on positive outcomes. Strong, positive correlations exist between goal setting and positive outcomes. One of the effects of mentoring youth is a socially developed entrant into the workforce and a potential reduction in the number of youth-based crimes traditionally committed by at-risk youth. The findings show that mentoring is effective in influencing positive youth behavior. Goal setting is a strong predictor of success and a worthwhile inclusion in high school curriculum. Natural mentors, in particular parental figures, should encourage and support their youth through goal setting activities, and training in determination and self-efficacy. This study informs policy development in local communities and provides research-based evidence to those entrusted with decision-making authority and stewardship of limited fiscal resources.

Keywords: youth mentoring, opportunity youth, mediation, mentors, psychosocial variables, transition outcomes

Chapter 1: Introduction

Problem Identification

Unemployed youth are a formidable problem worthy of our attention. The effect of youth unemployment manifests itself in crime rates, taxpayer expenses and presents a drain on limited resources. Most countries in the Organization for Economic Cooperation and Development have a unique term to describe youth aged 16-24 who are not in school and are not working. In the United States, they are called opportunity youth and may include youth with care-giving responsibilities, youth with mental health conditions that inhibit their activities or more specifically, unemployed youth who are not in school (Belfield, Levin, & Rosen, 2012).

In a 2012 report, Belfield et al., determined there were approximately 6.7 million opportunity youth in the United States who created a demand for economic resources at all levels of government. Economists measured the fiscal burden by determining lost earnings and included lost tax payments, health expenditures to Medicaid, welfare support programs, and the cumulative cost of crimes committed by youth. The social burden included reduced quality of life for victims of crimes committed by unemployed youth and loss of economic gains from a more productive workforce.

Using extremely conservative estimates, economists calculated the true cost of opportunity youth. The immediate burden to the U.S. taxpayer was $51,350 ($13,900 for the fiscal burden and $37,450 for the social burden). With an average U.S. median income of $45,900, this represented about 111% of that amount (Belfield et al., 2012).

These figures represented an annual amount for each of the 6.7 million opportunity youth that enter this cohort each year.

The impact of this problem plagues communities across the United States as they struggle to develop and implement sustainable solutions for a host of challenges. One of the over-arching challenges is to alleviate the problem of the large opportunity youth population and decrease their exposure to risks that lead to associated negative transition outcomes. Examples of negative transition outcomes include unemployment, homelessness, pregnancy or expecting parent, substance abuse, and a lack of education.

As part of the Office of Justice, the 1974 Juvenile Justice and Delinquency Prevention Act established the law that addresses potential negative outcomes that youth encounter. The chief aims of this law are to prevent youth from committing crimes and from becoming victims of crime. The Office of Juvenile Justice and Delinquency Prevention (OJJDP) is an advocate of youth mentoring and provides appropriated federal funding aimed at evidence-based practices (U. S. Department of Justice, 2018). Higher than economists, the OJJDP estimates the economic burden of opportunity youth somewhere between $1.6 million and $2.3 million per youth, and combines a range of strategies, including mentoring, to counter this problem.

Mentoring

The first instance of mentoring dates back to Greek mythology and chronicles a trusted friend providing guidance to a young charge. Since that time, mentoring has evolved into more robust developmental contexts as either being processes that result in career mentoring, or that result in psychosocial mentoring (Campbell, Smith, Dugan, & Komives, 2012). Where career mentoring involves professional development and

associated outcomes, psychosocial mentoring involves role modeling, advocacy and guidance. Psychosocial mentoring functions provide an appropriate context to explore transition outcomes in a study of adolescents and opportunity youth.

Every community has citizens who can mentor opportunity youth. Mentoring relationships form in both formal and informal settings. Formal mentoring relationships involve structured screening and match processes, similar to those found in school-based mentoring and Big Brother Big Sister programs. However, informal mentoring presents a greater number of instances for relationships with youth to form. O'Connor (2005) found that over 71% of mentors do so informally without the support of an organization. Informal mentors come from the pool of adults representing teachers, coaches, religious leaders, and family friends.

Other forms of mentoring include electronic mentoring (eMentoring) and peer mentoring. eMentoring describes any electronic forum that facilitates mentoring functions in either a dyadic or group setting. eMentoring can consist of electronic communication only, or as an augmentation of a formal or informal program (Ensher & Murphy, 2007). Peer mentors typically share the same experience level as their mentees, can expand the pool of available mentors, serve as a drop out intervention for younger youth, and serve as a role model for community service (Dennison, 2000). A study aimed at assessing attitudes about gangs after peer intervention identified a decreased interest in gang violence and participation (Sheehan, DiCara, LeBailly, & Christoffel, 1999).

The field of mentoring research is rich with empirical evidence that chronicles the power of mentoring. Mentoring provides a direct investment for the concern,

growth, and development of another. For example, the positive influence of a mentor can result in better academic performance (Herrera, Grossman, Kauh, & McMaken, 2011; Sanchez, Esparza, & Colon, 2008). Whether delivered in a school-based setting, community setting, via eMentoring, or provided by siblings and peers, mentoring has the potential to influence opportunity youth to have a positive transition into adulthood.

A number of variables shape all aspects of a youth's development. Every person who encounters a young person will impart some form of influence on his or her development, whether intentionally or accidentally. When youth transition from high school and find their way in the world, making adult choices, one of these is the selection of a community in which to reside.

The positive presence of community citizens in the lives of youth cannot be overstated. Conversely, the negative presence or the absence of community members in the lives of youth can have a negative impact on their development and transition outcome. Commensurate with their investment in opportunity youth, citizens will reap the return as youth develop and their behavioral outcomes affect local communities. Communities benefit from the positive effects of mentored youth by having a socially developed entrant into the workforce. This potentially reduces the number of youth-based crimes traditionally committed by at-risk youth.

Opportunity youth are not optimizing their potential and may benefit from having a mentor, positive role model, or other caring adult, such as a parent, who can help them develop their identity. Theoretically, an understanding of psychosocial variables that mediate positive outcomes informs mentoring practitioners and

policymakers by providing evidence-based research aimed at improving mentoring approaches in local communities.

Psychosocial Mediators

Earlier work in the mentoring field documents the presence of psychosocial support functions in mentoring relationships as well as the inclusion of role models (Kram, 1983; Noe, 1988). While these studies were conducted in adult working environments, the growth of mentoring research shows that these same factors are present in youth mentoring relationships (Madia & Lutz, 2004; Munson & McMillen, 2009).

Psychosocial variables include psychological components that address individual assessments about one's ability and character; and a component that addresses social influences. Previous research on at-risk youth provides evidence that a relationship exists between youth with mentors and psychosocial variables (Munson & McMillen, 2009). The current study analyzed several psychosocial variables of interest, the first of which is determination. Determination is the tenacity to both pursue and bring something to completion, and is measured by assessing factors and student attitudes that suggest a desire to finish whatever was started.

In a randomized control trial of twenty programs in the United States, Ciocanel, Power, Eriksen, and Gillings (2017) conducted an exhaustive meta-analysis to understand the effectiveness of intervention strategies to decrease risk behaviors among adolescents, while increasing positive outcomes. Among other things, the trial assessed resilience, self-determination, spirituality and self-efficacy. Mixed findings highlighted the significance and importance of defining models that resulted in positive outcomes

for youth. However, the factors assessed in this study were on par with an evaluation of self-determination in programs designed to improve outcomes for youth with disabilities (Geenen et al., 2013). In the later study, research implications suggest the development of determination skills and goal definition, facilitated by mentoring, as a means to achieve positive transition outcomes.

Goal setting requires the identification of a desired future outcome or aspiration, and the implementation of a calculated plan of attainment. Mentors can assist youth in determining steps necessary to accomplish their goals. Likewise, youth can then assess the requirement and make a decision about the commitment. Youth in high quality mentoring relationships experience higher self-efficacy towards goal setting and planning for the future (Lau, Zhou, & Lai, 2017).

Persistence is the steady application of continuous effort, regardless of the perceived difficulty. In a 2010 study of scholarship recipients with family incomes below the median, Hu and Ma found positive associations between having a mentor and student persistence. Likewise, in a 2009 study that examined the relationship between role models and resilience, Hurd, Zimmerman, and Xue found that the existence of a role model enhanced youth's resilience when faced with negative influences. Resiliency permits one to bounce back from adversity.

Self-efficacy is the belief in one's own ability to achieve outcomes. A recent study by Baier, Markman, and Pernice-Duca (2016) found that the development of self-efficacy through mentoring led to academic success and the retention of college freshman. Furthermore, they found that self-efficacy increased the intent to persist towards academic goals. In a randomized controlled trial, Deane, Harré, Moore, and

Courtney (2017) found increased levels of self-efficacy amongst youth participants in a thirteen-month mentoring program. Additional analyses determined that the effects of mentoring on academic and social self-efficacy were still present one year after the program ended.

Trust is a measure, reliability on, or a belief in someone (or something) not to bring harm to you; and a reliance on the character of another to do what they say by honoring their commitment. It is a key component of any mentoring relationship and must be present for the bond to form. In a qualitative study designed to understand successful mentoring relationships (Dallos & Comley-Ross, 2005), youth stated that trust was an important factor in defining the quality of their mentoring relationship.

Positive Transition Outcomes

The body of research on youth mentoring chronicles successful outcomes. Youth who receive mentoring make better grades, achieve academic goals, attain academic success, and are less likely to drop out of school (Dubois & Karcher, 2005; Zimmerman, Bingenheimer, & Behrendt, 2005). High school completion provides an essential foundation for employment and continued education. In a national longitudinal study, DuBois and Silverthorn (2005) found that mentorship increased the likelihood that a student graduated from high school and attended college, and it resulted in reduced gang involvement amongst adolescent youth.

The opportunity for informal mentoring relationships is greatest when youth participate in extracurricular activities. Given the large pool of volunteers, mentorship is likely to occur when youth participate in church activities (Rhodes & Chan, 2008). Students who participate in extracurricular activities tend to experience higher

satisfaction with school (Gilman, 2001). Additionally, new directions in mentoring research suggests that youth involvement in community activities promotes positive youth development (Liang, Spencer, West, & Rappaport, 2013). Participation in church, school and community activities presents opportunities for youth to develop by taking on leadership roles within these respective organizations.

Flint Adolescent Study

Researchers at the University of Michigan conducted the Flint Adolescent Study (FAS) over a 12-year period with three primary objectives, grouped in four-year increments. In waves one through four, the study focused on a cohort of high school students of interest to examine "risk and protective effects of psychosocial factors" (Zimmerman, 2014) with an emphasis on what does not work. The next four waves studied the cohort as they transitioned into adulthood with an emphasis on the effects of drug and alcohol use, and psychosocial variables. The last four waves of the study for the cohort, now in their late 20s, sought to understand the root causes that put them at risk for drug and alcohol use. These factors ultimately led to negative outcomes such as abuse, homelessness, unemployment, incarceration, and death.

Purpose of the Study

While the Flint Adolescent Study findings highlighted an understanding of what does not work and how the sample of interest landed negative outcomes partially mediated by drug and alcohol use, it did not identify what does work. The current study seeks to determine if mentoring produces psychosocial variables that result in positive outcomes in youth as they transition into adulthood.

The long-term objective is to validate this theory for use in practical ways to move youth away from opportunity youth status. The long-term strategy is to empower communities with needed evidence to fund formal mentoring programs, and to increase community awareness about informal mentoring opportunities. The Flint Adolescent Study survey instrument provided data used to construct a latent mentoring variable for the current study, along with measurements for psychosocial mediators and positive transition outcome measures. The current study uses the fourth wave of the Flint Adolescent Study to evaluate the presence of positive outcomes during the year participants transitioned from high school.

Analyses in the current study evaluate the effects of identified mentors, identified neighbors, role models, natural mentors, and peers and siblings who perform the functions of a mentor. The study seeks to inform whether mentoring results in leadership, participation in community, school, and religious activities; produces evidence of academic performance and academic goals, and whether mentorship deters gang participation.

Previous research shows that when mentoring relationships form correctly, youth benefit academically (Rhodes & DuBois, 2008). While match quality, duration of the relationship, and specific activities all determine the quality of the relationship (Grossman & Rhodes, 2002), the scope of this study is limited to the presence of a mentor to produce positive behavioral outcomes in youth.

Theoretical Model

A careful review and analysis of the survey instrument resulted in identifying observed indicators used to develop a latent variable of mentoring. This research design seeks to determine if observed indicators cause the latent variable, or if the latent variable causes the observed indicators. Identified mentors, neighbors who display mentoring attributes, role models, natural mentors, and peers and siblings who display mentoring attributes represent observed indicators in this research. This study tests the existence of a relationship between observed indicators and the latent mentoring variable, and between mentoring and positive outcomes. Figure 1 represents the measurement model.

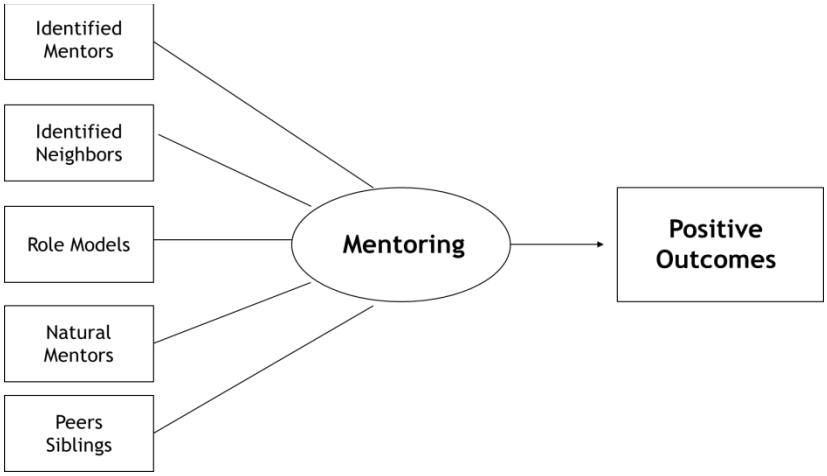


Figure 1. Mentoring Model (Direct Path to Positive Outcomes)

Research Questions

While mentoring alone is theorized to result in positive transition outcomes, other factors may mediate the effect. This study also tests the existence of an indirect relationship between mentoring and positive outcomes, mediated by psychosocial variables.

RQ1: Does determination mediate the effect of mentoring to result in positive youth outcomes?

RQ2: Does goal setting mediate the effect of mentoring to result in positive youth outcomes?

RQ3: Does persistence mediate the effect of mentoring to result in positive youth outcomes?

RQ4: Does resiliency mediate the effect of mentoring to result in positive youth outcomes?

RQ5: Does self-efficacy mediate the effect of mentoring to result in positive youth outcomes?

RQ6: Does trust mediate the effect of mentoring to result in positive youth outcomes?

Figure 2 represents the structural model.

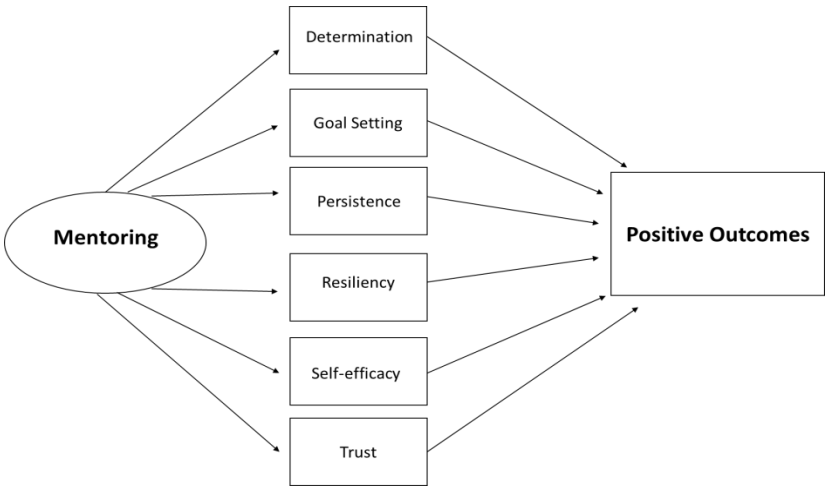


Figure 2. Mediation Model (Indirect Path to Positive Outcomes)

Chapter 2: Method

The current study utilizes data collected from the Flint Michigan Adolescent Study (FAS): A Longitudinal Study of School Dropout and Substance Use. The United States Department of Health and Human Services funded the data collection over a twelve-year period. The fourth wave of the data set was readily available from the University of Michigan Interuniversity Consortium for Political and Social Research. The FAS survey instrument provided data used to construct a latent mentoring variable for the current study, along with measurements for psychosocial mediators and positive transition outcome measures.

Sample

The initial sample consisted of 850 ninth grade students from four public high schools in Flint, Michigan. In subsequent waves, 812, 783, and 770 (Wave 4) participants were available for the study. The average grade point average of the sample was below 3.0 on a 4.0 scale. Students were Black/African American, White/Caucasian and Biracial (Black/White). Hispanic and Caucasian students represented roughly 3% of the student population. Due to funding constraints, they were not included in the study. The demographics of the sample were representative of the student population in the school district.

Collection Procedures. Trained interviewers questioned students face-to-face. Interviews were conducted at the start of the academic year. Four waves of data collection resulted in 660 unique items (Zimmerman, 2014). One hundred thirty-two (132) items from Wave 4 were used in the present research.

Measure

The overarching purpose of the analyses is to determine the mediating effect of psychosocial variables on behavioral outcomes represented by mentored students. The psychosocial variables of interest included determination, goal setting, persistence, resiliency, self-efficacy and trust. The outcomes of interest are leadership, academic goals, academic performance, participation in church activities, community activities, and school activities, and non-participation in gangs.

Mentoring

Mentoring provides a direct investment for the concern, growth and development of another, and encompasses three basic features. Mentors have more experience than their mentees. The mentor helps to enable the development and growth of the mentee. The bond predicated on trust helps to form the mentoring relationship. All three of these elements must be present for a true mentoring relationship (DuBois & Karcher, 2005). Behaviors meeting the definition of providing a direct investment for the concern, growth and development of the student meet the definition of mentoring under this construct. Measurement of the five observed indicators comprising the global mentoring construct is described next.

Identified mentors (IDMENT). Interviewers asked students to identity someone over the age of 25 who they considered as their mentor, who provided support, guidance on important decisions and inspired them to do their best. They also asked students to identify a second person. Two dichotomous survey responses formed this variable.

Identified neighbor (IDNEIGH). Students indicated if they could go to someone in their neighborhood if they needed advice. In this study, mentoring functions include trust placed in an individual with more experience who is concerned about the development of another. One survey response formed this variable.

Role model (RMODEL). Interviewers asked participants several questions about their closest and older siblings. They wanted to know if they helped with homework, helped with personal problems and if they could go to them for help. Interviewers also asked them if their older sibling was a good student. Interviewers asked participants if they looked up to this sibling. Only the score from the last response in this series of questions formed this variable.

Natural mentors (NATURAL). Students evaluated the level of truth regarding statements about their mother, father or parental figure. The items included statements such as encouragement to stay in school, reliance on them for moral support and concern about doing well in school. Interviewers also asked about concern for doing homework, getting good grades. Interviewers inquired about private talks about things that interest them, talks with them about plans after high school, and reaction to the student receiving failing grades. The mean of twenty-six scores constructed this variable.

Peers and siblings (PEER). Students were asked to evaluate if their friends thought it was cool for them to get very good grades, participate in school clubs or activities, and if they did their homework regularly and kept up at school. Interviewers asked students if they could rely on friends for emotional support, if friends gave them needed moral support, and if friends were good at helping them solve problems.

Interviewers asked students to evaluate how true the statement was that they learned more useful things from friends and relatives than in school. Students indicated the frequency in which their closest sibling helped with homework, and with personal problems. The mean of nine scores constructed this variable.

Psychosocial Variables

A detailed review of the Flint Adolescent Study survey instrument resulted in the identification of possible measures of mediation. The psychosocial variables of interest include determination, goal setting, persistence, resilience, self-efficacy, and trust. The next section provides a summary of how each variable was measured in the current study using sixty unique items.

Determination (DETER). Students evaluated the truth pertaining to statements about standing up for what they believe, regardless of the consequences; that hard work is the best possible way to get ahead in life, going to school to help reach their goals, and their ability to do almost all schoolwork if they do not give up. Interviewers asked students about the certainty they could figure out the most difficult schoolwork. Students were also asked the frequency over the last month in which they felt they were on top of things and that they found themselves thinking about things they need to do. The mean of seven responses constructed the score for this variable.

Goal setting (GOSET). Students answered questions about their current educational attainment plans and their school attendance plans for the following year. Students evaluated the truth about statements on thoughts about future jobs, the importance of grades and the importance of being successful. Finally, students indicated what they planned to due after June of the following year. After one response

was masked for confidentiality, the mean of the remaining five responses constructed the score for this variable.

Persistence (PERSIST). Students evaluated the level of truth about statements on completing tasks once decided upon, not allowing their personal feelings to get in the way of job completion, learning even if the work in school is hard and working until an assignment is finished. The mean of four responses constructed the score for this variable.

Resiliency (RESIL). Students evaluated how true it was that their religious faith helped them cope during times of difficulty. Students were asked to evaluate the frequency within the last month they felt successful dealing with daily hassles, success in handling important life changes, their ability to handle personal problems, and their ability to control hassles in life. The mean of five responses constructed the score for this variable.

Self-efficacy (SELFEFF). Students evaluated the truth of statements on feelings they could make their life what they wanted, interest in doing things that other people thought could not be done, doing well in school as a requirement for success, the ability to do the hardest school work with effort, and given enough time, doing a good job on all their schoolwork. Students indicated how much they agree with the statement that they do extra work on their own in class. Students indicated how often they felt in control of their life over the last month. The mean of seven responses constructed the score for this variable.

Trust (TRUST). Interviewers asked students to evaluate the truth about having deep sharing relationships with their mother or father. Interviewers asked students

about the frequency in which they went to their closest sibling for help with schoolwork. Participants also indicated feelings about the likelihood that neighbors would help them in an emergency. The mean of four responses constructed the score for this score.

Positive Behavioral Outcomes

This study postulates a latent mentoring variable that results in positive behavioral outcomes, and analyzes the possible existence of relationships between mediating variables and outcomes. Survey items identified outcomes of potential interest to assist in the development of local mentoring programs.

Leadership (LEADER). Interviewers asked students to evaluate the truth on statements on whether other people usually follow their ideas, that they are often a leader in groups, and they can usually organize people to get things done. Interviewers asked students a series of questions to determine if they previously held or were currently in leadership positions in school, church, or the community. Interviewers specifically asked them to name the leadership position (captain, president, or any other officer). Scores from eighteen items formed this variable.

Church Activity (CHURCH). Interviewers asked about their participation level, the months involved and the frequency of the activities. Interviewers allowed students to identify multiple activities. Scores from eleven items formed this variable.

School Activity (SCHOOL). This variable was measured the same as church activity.

Community Activity (COMMUNIT). This variable was measured the same as church activity.

Gang Activity (GANG). In previous waves of the study, interviewers asked students if they were a member of a gang, if they wore gang clothing to indicate membership, and the number of hours spent with other gang members in an average week. The fourth wave of the study only inquired about gang membership.

Academic Goals (ACAGOAL). Interviewers asked students about the likelihood that they would graduate from high school, go to a trade school or college, go to a trade school or community college, or go to a 4-year university. The mean of four responses constructed the score for this score.

Academic Performance (ACAPERF). Interviewers asked students how often they felt schoolwork was useful, their class standing based on credits, and how frequently they actually attended school but skipped class in the last four weeks. Interviewers also asked students to best describe their average grade. Scores from four items formed for the score for this variable. The table on the next page summarizes the unique survey items used from Wave 4 of the Flint Adolescent Study.

Table 1 Unique Survey Items from the Flint Adolescent Study (Wave 4)

Observed Indicators	**Wave 4**
IDMENT – Mentor	2
IDNEIGH – Identified Neighbor	1
NATURAL – Parent/Guardian	26
RMODEL – Role Model	1
PEER - Peer/Sibling	9
TOTAL	**39**

Psychosocial Variables	**Wave 4**
DETER - Determination	7
GOSET - Goal Setting	6
PERSIST - Persistence	4
RESIL - Resiliency	5
SELFEFF - Self-efficacy	7
TRUST - Trust	4
TOTAL	**33**

Outcome Variables	**Wave 4**
LEADER – Leadership	18
CHURCH - Church Activity	11
COMMUNIT - Community Activity	11
SCHOOL - School Activity	11
GANG – Gang	1
ACAGOAL - Academic Goals	4
ACAPERF - Academic Performance	4
TOTAL	**60**

Procedure

The current study uses a data set obtained from the University of Michigan Interuniversity Consortium for Political and Social Research (ICPSR) Repository. Descriptive statistics for the measurement variables provide the mean and standard deviation. Correlations for the eighteen measurement variables are analyzed. WLSMV is used as the parameter estimator for the confirmatory factory analysis. The maximum likelihood (ML) parameter estimator is used for the direct and mediation mentoring model (Muthén & Muthén, 1998-2011).

Confirmatory factor analysis (CFA) is appropriate to test a measurement model where observed variables specify a latent variable. CFA statistically tests the theorized mentoring construct against the data collected from the Flint Adolescent Study. The structural model tests relationships between the observed indicators, latent variables, and dependent variables within the structural equation model. The structural equation model is comprised of the measurement model and the structural model permitting mediation modeling to analyze various outcomes.

Mediation testing is suitable to determine if factors not explained in the latent variable construct influence the dependent variable. The total effect of the independent variable is measured by adding the direct effect of the independent variable on the dependent variable, and the indirect effect of the independent variable, through mediating variables, on the dependent variable. In this case, mediation modeling allows the simultaneous comparison of theories within SEM to determine which, if any, of the psychosocial variables mediate mentoring, to a greater or lesser degree (Preacher & Hayes, 2008).

Chapter 3: Results

Descriptive Statistics

The table below summarizes the descriptive statistics of the eighteen measurement variables.

Table 2 Descriptive Statistics of Measurement Variables

	Mean	Standard Deviation
IDMENT	3.701	1.786
IDNEIGH	3.654	1.751
RMODEL	3.038	1.012
NATURAL	3.990	1.721
PEER	3.400	0.863
DETER	4.549	0.858
GOSET	3.580	1.242
PERSIST	3.471	0.832
RESIL	3.278	0.932
SELFEFF	3.116	1.206
TRUST	4.432	0.912
ACAGOAL	2.956	1.408
CHURCH	3.909	1.010
COMMUNIT	4.108	0.953
SCHOOL	2.100	1.287
ACAPERF	3.294	1.442
GANG	4.655	0.782
LEADER	4.371	1.133

Correlations

Mentoring variables. Having an identified mentor (IDMENT) positively correlates to having a neighbor (IDNEIGH, 0.777) who performs mentoring functions, and with having a natural mentor (NATURAL, 0.711). A positive correlation exists between having a natural mentor and a neighbor who mentors (0.726), and between having a role model (RMODEL) and a peer mentor (PEER, 0.548).

Mentoring and outcomes. Positive correlations exist between having an identified mentor and academic goals (ACAGOAL, 0.593), and with leadership (LEADER, 0.536). A positive correlation also exits between neighbors who mentor and

academic goals (ACAGOAL, (0.619), and with leadership (LEADER, 0.490). A positive correlation exists between natural mentors and with academic goals (ACAGOAL, 0.643), and with leadership (LEADER, 0.515). Negative correlations exist between gang participation (GANG) and having an identified mentor (IDMENT, -0.013), an identified neighbor (IDNEIGH, -0.013), a natural mentor (NATURAL, -0.010), and a peer mentor (PEER, -0.005). A positive correlation exists between having a role model (RMODEL) and gang participation (GANG, 0.053).

Psychosocial variables. A positive correlation exists between persistence (PERSIST) and determination (DETER, 0.492), and with resilience (RESIL, 0.636).

Psychosocial variables and outcomes. Positive correlations exists between goal setting (GOSET) and academic goals (ACAGOAL, 0.726), and with leadership (LEADER, 0.586).

Outcomes. Positive correlations exist between academic goals and leadership (LEADER, 0.467), between participation in church activities and participation in community activities (COMMUNIT, 0.455), and between participation in school activities and academic performance (ACAPERF, 0.456). Negative correlations exists between gang participation (GANG) and participation in church activities (CHURCH, -0.008), participation in community activities (COMMUNIT, -0.062), participation in school activities (SCHOOL, -0.023) and in academic performance (ACAPERF, -0.025).

Correlations of all measurement variables are shown on the next page in Table 3.

Table 3 Correlations of All Measurement Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	1.000																	
2	0.777	1.000																
3	0.212	0.172	1.000															
4	0.711	0.726	0.200	1.000														
5	0.181	0.138	0.548	0.220	1.000													
6	0.211	0.150	0.322	0.175	0.403	1.000												
7	0.583	0.607	0.153	0.644	0.189	0.193	1.000											
8	0.257	0.203	0.550	0.256	0.708	0.492	0.224	1.000										
9	0.240	0.165	0.559	0.187	0.564	0.372	0.148	0.636	1.000									
10	0.097	0.040	0.202	0.081	0.150	0.153	0.077	0.151	0.122	1.000								
11	0.144	0.136	0.233	0.142	0.180	0.200	0.128	0.238	0.250	0.184	1.000							
12	0.593	0.619	0.168	0.643	0.154	0.164	0.726	0.215	0.124	0.096	0.109	1.000						
13	0.183	0.129	0.209	0.160	0.161	0.182	0.166	0.185	0.206	0.204	0.359	0.112	1.000					
14	0.138	0.142	0.228	0.176	0.229	0.171	0.112	0.259	0.235	0.184	0.397	0.090	0.455	1.000				
15	0.106	0.084	0.232	0.076	0.246	0.067	-0.008	0.175	0.133	0.113	0.021	0.042	0.077	0.106	1.000			
16	0.154	0.197	0.201	0.157	0.149	0.108	0.030	0.104	0.089	0.080	0.115	0.108	0.086	0.181	0.456	1.000		
17	-0.013	-0.013	0.053	-0.010	-0.005	0.042	0.017	-0.021	0.052	0.101	-0.056	0.026	-0.008	-0.062	-0.023	-0.025	1.000	
18	0.536	0.490	0.144	0.515	0.184	0.318	0.586	0.238	0.170	0.086	0.157	0.467	0.176	0.171	-0.045	0.033	0.042	1.000

Note. 1. IDENT; 2. IDNEIGH; 3.RMODEL; 4.NATURAL; 5. PEER; 6. DETER; 7. GOSET; 8. PERSIST; 9. RESIL; 10: SELFEFF; 11. TRUST; 12. ACAGOAL; 13. CHURCH; 14. COMMUNIT; 15. SCHOOL; 16. ACAPERF; 17. GANG; 18. LEADER

Confirmatory Factor Analysis

Confirmatory factor analyses (CFA) was conducted to examine the fit indices for the measurement model of mentoring in Mplus. Good fit was indicated by Confirmatory Factor Index, CFI (Bentler, 1990) and Tucker-Lewis Index, TLI (Tucker & Lewis, 1973) ≥.95; root-mean square error of approximation, RMSEA (Steiger & Lind, 1980) ≤ .05; and weighted root mean-mean-square, WRMR (Muthén & Muthén, 1998-2011) ≤ 1.

Table 4 Confirmatory Factor Analysis Model Fit Statistics

Model Fit Index	CFI	TLI	RMSEA	WRMR
	0.982	0.963	0.035	0.595

Based on Table 4, the model fit of the measurement model of mentoring is good.

Mediation Assessment Model

Mediation models were tested using path analysis in Mplus using maximum likelihood estimation (ML). The direct effect of mentoring on positive outcomes was first tested. Next, the six mediating psychosocial variables were added to the model. The psychosocial variables were tested with bias-corrected bootstrapping with 10,000 bootstrap samples (Preacher & Hayes, 2008).

Mediation analysis (Figure 3) indicates that greater determination (β = 0.020, 95% CI = [0.006, 0.039]), goal setting (β = 0.231, 95% CI = [0.182, 0.285]), self-efficacy (β = 0.004, 95% CI = [0.001, 0.012]), and trust (β = 0.016, 95% CI = [0.005, 0.033]) mediate the effects of mentoring on positive outcomes. In the context of the other psychosocial variables, it does not appear that persistence (β = 0.001, 95% CI =

[-0.027, 0.027]) and resilience (β = -0.015, 95% CI = [-0.036, 0.002]) mediate the effects of mentoring on positive outcomes. The direct effect is reduced but remains significant (β = 0.589, 95% CI = [0.929, 1.015]), suggesting partial mediation.

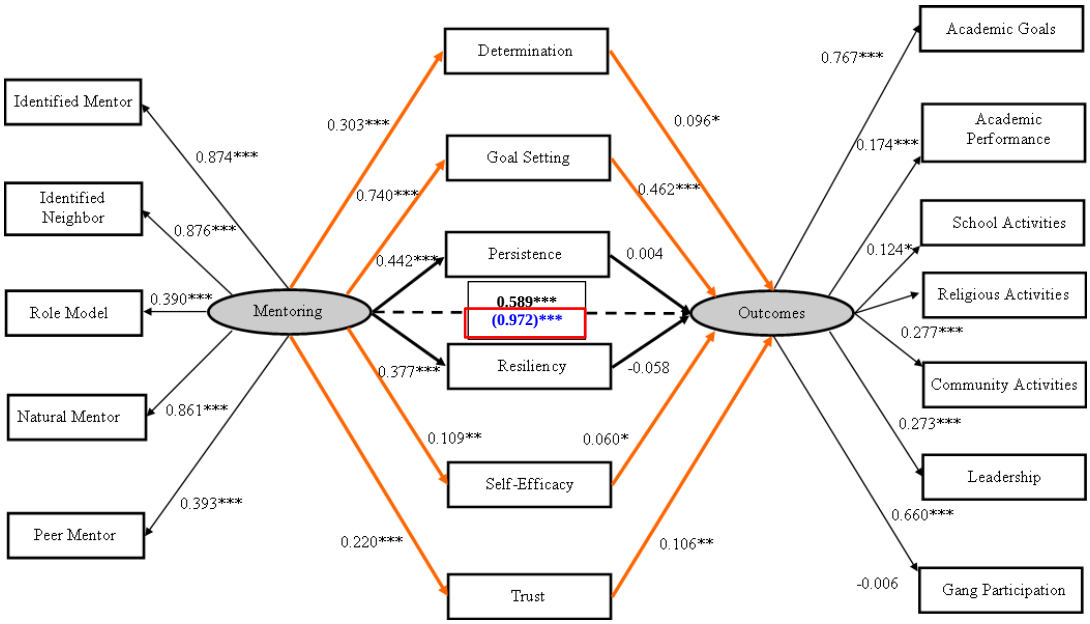


Figure 3. Illustrated Mediation with Coefficients
Note 1. Orange paths indicate significant mediation paths.
Note 2. Blue coefficient bordered **in red** indicates direct effort without mediators present
Note 3. *p<0.05; **p≤0.01; ***p<0.001

The results from the direct effect model shows that mentoring predicts more positive outcomes (β = 0.972, 95% = [0.929, 1.015]).

Chapter 4: Discussion

This study demonstrates that mentoring produces psychosocial variables in youth that lead to positive outcomes. Confirmatory factor analysis supports an effect indicators model construct (Bollen & Lennox, 1991) consisting of five observed indicators (identified mentor, identified neighbor, role model, natural mentor, and peer mentor) and one latent variable. The study proves that students who receive mentoring from one source tend to receive mentoring from a range of up to four other sources. The results of this analysis reaffirms previous evidence (Eby, Allen, Evans, Ng, & DuBois, 2008; Zimmerman, Bingenheimer, & Notaro, 2002) that mentoring has the potential to result in positive transition outcomes.

The findings of this study are consistent with previous research indicating that mentorship results in the achievement of academic goals (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011; Miranda-Chan, Fruiht, Dubon, & Wray-Lake, 2016). Participants who achieve academic goals also show a propensity for leadership. Surprisingly, this study did not find a significant relationship between mentoring and gang participation. Previous research by Black, Grenard, Sussman, and Rohrbach (2010) determined that the influence of a natural mentor is instrumental in reducing risky behaviors among adolescents.

The mediation model determined that goal setting is the strongest predictor of positive transition outcomes. Effective mentors establish environments of trust where youth feel safe to discuss topics of importance to them. When youth have a clear vision about their future, make a commitment, and rely on self-efficacy, they are very likely to reach their goal (Locke & Latham, 2002). The correct alignment of focused persistence

is vital to staying on task and reaching targeted goals such as graduating from high school, acceptance into college, or even securing employment.

Implications

This research is important for several reasons. First, it contributes to the existing field of mentoring research through the linkage of psychosocial mediators to positive outcomes for transitioning youth. Second, it identifies specific psychosocial skills youth can learn with the assistance of a mentor, role model or other caring adult vested in their development and future success. Third, it provides a financial perspective for decision makers charged with stewardship of limited resources. Fourth, it informs policy development in local communities and provides areas of emphasis for natural mentors to focus. Based on the results of the analyses, natural mentors should place greater emphasis on developing psychosocial skills early in the life of their children.

Psychosocial skills are good indicators of positive behavior outcomes as youth transition into adulthood. While these results are derived from informal mentoring relationships, formal mentoring programs may also benefit by incorporating these characteristics into mentor training and evaluating its effectiveness in programs with similar participants. The findings of this study support the importance of previous commentary by Larson, Wilson, & Mortimer (2002) that advocates for deliberate interventions aimed at ensuring youth successfully transition into adulthood.

On a larger scale and outside of a mentoring program, the incorporation of training on goal setting in public educational institutions may increase the attainment of academic goals such as high school graduation and the likelihood that students will attend a trade school, community college, or a four-year university. Training in large-

scale organizations with young adults in the opportunity youth age bracket has proven to improve resiliency and psychological health (Lester, Harms, Herian, Krasikova, & Beal, 2011).

Limitations

This study is not without limitations. Due to time constraints, the research was restricted to the use of secondary data. The original design of the Flint Adolescent Study survey instrument measured different topics of interest. A new survey instrument that measures mentoring without the confluence of other variables might yield different results. Finally, inconsistent interview practices during data collection may have resulted in errors.

Future Research

It has been twenty years since data was first collected for the Flint Adolescent Study. Future research could focus on a replication study to explore changes in the population to analyze if outcomes will differ from a new sample. As an added contribution to the field of youth mentoring, a future study could analyze participants in this 1997 cohort, now in their mid-40s, to determine if they went on to mentor protégés of their own. While the current study focused on participants who were mentored and positive transition outcomes, a new study could analyze transition outcomes of those who did not receive mentoring. Finally, a replication study could analyze a more diverse or racially inverse population to determine if similar mentoring and mediating effects are present.

Summary

The development of human capital is essential to creating a society of citizens who contribute to the economic well-being of our nation. Efforts to reduce the number of opportunity youth requires a plethora of tailored approaches. Mentoring presents a feasible and economical method to achieve these results with minimal financial investment. While simultaneously developing youth with needed psychosocial skills, relationships based on trust can ignite collaboration amongst multigenerational citizens. This new research compliments recommended approaches by Liang, Spencer, West and Rappaport (2013) that support and encourage civic responsibility amongst youth.

The average annual cost per youth for mentoring programs ranges from $567 (school-based) to $1,369 (community-based) (Herrera, Sipe, & McClanahan, 2000). Depending on the program format, this amounts to roughly $3.8B to $9.2B on an annual basis. From a programmatic standpoint, natural mentors provide a virtually expense-free option to provide mentorship to youth. Estimates show that the economic burden of 6.7 million opportunity youth costs $342B annually, and is growing each year. This current study demonstrates that the mediation of mentoring by psychosocial variables results in positive outcomes that potentially chip away at the fiscal burden imposed by opportunity youth. The development and implementation of strategies to reduce the growth of opportunity youth must be a priority in every community. Our youth represent the greatest investment we must make in the future of the United States.

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