MENTORING ACADEMICALLY AT-RISK STUDENTS: WHAT ARE THE EFFECTS?

by

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DISSERTATION

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ABSTRACT

Mentoring Academically At-Risk Students: What are the Effects?

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The purpose of this study was to determine if participating in the mentoring program Movement Towards a Future had any effect on a student's academic achievement and yearly attendance. By analyzing the number of credits obtained each year and the number of absences by year, a matched sample t-test was conducted to determine if there was any significant difference between the matched pairs.

A total of 50 students made of the 25 matched pairs participating in the study. Students participating in Movement Towards a Future were matched with students not participating in Movement Towards a Future by the socio-economic status, race, gender, and family composition.

It was determined that students participating in Movement Towards a Future earned significantly fewer credits during their first year of high school when compared to non-participants. In years two, three, and four the significant

difference between the two groups disappeared. Attendance data between the two groups never revealed any significance in years one, two, three, and four of high school.

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Dedication

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Table of Contents

Abstract ii

Acknowledgements iv

Dedication v

List of Tables vii

List of Figures viii

Chapter 1 Introduction 1

Movement Towards a Future 5

Statement of Problem 7

Purpose of the Study 7

Research Hypotheses 8

Orienting Theoretical Framework 9

Significance of the Study 12

Methods of Procedure 14

Definition of Terms 18

Limitations the Study 21

Summary 21

Chapter 2 Review of Related Literature 22

Effects of Dropping Out 23

Mentoring Programs 25

Population 31

Prevention 35

Movement Towards a Future 38

Summary 41

Chapter 3 Method of Procedure 42

Selection of Participants 43

Data Analysis 47

Summary 49

Chapter 4 Presentation of Analysis of Data .....

Credit Obtainment Data 57

Graduation Data 60

Attendance Data 61

Summary 63

Chapter 5 Summary, Findings, Conclusions, Implications and Recommendations 65

Findings 66

Limitations 68

Implications for Theory, Research and Practice 69

Recommendations for Future Studies 70

Conclusion 71

Appendix A Talking Points 73

Appendix B IRB Approval 75

References.....76

List of Tables

Table 3.1 Demographic Data for Participants.....47

Table 4.1 Credits earned by year 51

Table 4.2 Absences by Year 55

Table 4.3 Paired Sample Statistics for Credits.....58

Table 4.4 Paired Sample Test for Credits 59

Table 4.5 Graduation Data.....60

Table 4.6 Paired Sample Statistics for Absences.....61

Table 4.7 Paired Sample Test for Absences 62

List of Figures

Figure 1 Model of Youth Mentoring 12

Chapter 1

Introduction

The Texas Education Agency (2013) reported that between the 2010-11 and 2011-12 school year, the rate of students held back within Texas schools had risen in grades nine, ten, and eleven to 10%, 5.7%, and 5.2%, respectively, but had dropped in grade twelve to 5.5%, which was previously at 6.1% during the 2010-2011 school year (Texas Education Agency, 2013). On average, males often experience a higher retention rate (7.93%) in their high school years when compared to females (4.48%) (Texas Education Agency, 2013). The statistics are alarming because failing to progress with their respected cohort often leads to students making the decision to drop out of high school, thus never receiving a high school diploma (Bridgeland, Dilulio, & Morison, 2006).

The financial and societal impact of not completing high school has increased in recent years due to the evolution in the labor market (Bloom, 2010). High school dropouts are often under qualified for jobs and struggle to contribute to society. The availability of well-paying jobs not requiring at least a high school education has decreased dramatically in recent years (Bloom, 2010). Burrus and Roberts (2012) reported that high school dropouts, over the course of their lifetimes, will earn $375,000 less than individuals who obtain a high school education and $1,000,000 less than college graduates. These low earnings have produced a financial burden on communities, with approximately 40% of high

school dropouts between the ages of 16 and 24 requiring governmental assistance (Burrus & Roberts, 2012). On average, high school dropouts will cost the federal government $292,000 when compared to the average high school graduate (Sum, Khatiwada, & McLaughlin, 2009).

Though significant, the financial burden that high school dropouts place onto society is not the only consequence stemming from their failure to achieve a secondary education. Students who fail to obtain a high school diploma have higher rates of early death, unemployment, and divorce, and more likely to need public assistance (Bowers, Sprott & Taff, 2013; Bridgeland et al., 2006; De Ridder, Pape, Cuypers, Johnsen, Holmen, Westin, & Bjørngaard, 2013). Dropouts are at a greater risk of participating in delinquent and unlawful behaviors leading to incarceration (Hatt, 2011; Sweeten, Bushway, & Paternoster, 2009). Because of the ramifications of dropping out, it is important for educators to understand the influences that drive students to the decision of dropping out.

There are a number of influences that can affect a student's decision to dropout of high school including boredom and disengagement (Bridgeland et al., 2006). Researchers have found that students who express high levels of boredom have been found to have high levels of truancy (Roderick et al., 1997). When students do not attend school, they begin to develop a level of disengagement that can affect their academic and physical wellbeing (DeSocio, VanCura, Nelson, Hewitt, Kitzman, & Cole, 2007).

Another predictor of students at-risk of dropping out is low parental involvement and support (Bridgeland et al., 2006). One reason for this decline is because of a rise in the number of single parent homes and students living in poverty (Rhodes, Grossman, & Roffman, 2002). Rhodes et al. (2002) found that single, low-income parents often work multiple jobs to support their families and are then unable to be as involved in their children's education like middle- or upper-class parents. Further, due to safety concerns in many economically disadvantaged neighborhoods, parents are now restricting their child's access to other adults (Rhodes et al., 2002b) who might serve as mentors to their children when they are unavailable. As a result, many organizations have begun to establish mentor programs to provide the necessary emotional and physical support for children who would otherwise go without (Rhodes et al., 2002).

When at-risk students receive the proper support and services, they have experienced encouraging growth in multiple areas of their life (Porowski & Passa, 2011). According to Rhodes (2002), when students are appropriately served, they will show signs of social and emotional, cognitive, and identity development over an extended period of time. Similarly, DeSocio et al. (2007) found that mentoring programs could reduce the number of unexcused student absences and help to keep academically at-risk students engaged in school.

Because of the believed effectiveness mentoring has on academically at-risk students, many schools have began using academic mentoring programs as a

preventive approach to dissuade students from making the costly decision of dropping out of school (Cavell & Elledge, 2014). Though benefits from mentoring have been discussed in literature, there is little research that investigates how specific academic mentoring programs affect student attendance and grades. This particular study will focus on a mentoring program called Movement Towards a Future (MTF), which functions as a non-profit organization within a rural Texas community.

Movement Towards a Future is most similar to school-based mentoring (SBM). Mentor meetings often occur once a week; teachers can recommend students, and the mentoring processes are typically carried out on the school campus. Unlike traditional SBM programs, the school does not fund MTF; however MTF still requires guardian permission for participation, operates year round, and is supported by community volunteers, which are similar characteristics of community-based mentoring (CBM) programs (Herrera & Karcher, 2014). Because of similarities with both SBM and CBM, this study investigated MTF, a hybrid mentor program that has characteristics of both SBM and CBM programs. Currently there is a lack of evidence regarding program efficiency, so the purpose of this study was to investigate the program's impact on academic outcomes and student attendance. Findings from this study provided practitioners, researchers, and policymakers with data that further describes the academic effects mentoring has on at-risk students.

Movement Towards The Future

Movement Towards a Future (MTF) was founded in 2009 at a rural Texas high school. It is a faith-based program, in which the majority of its volunteers are derived from local religious organizations. The program operates out of the public library located at the high school but is not funded by the school district. Movement Towards a Future does have an ongoing collaborative relationship with the district, which allows MTF to pull students out of elective classes in order for them to participate in the mentoring program.

Potential participants in the MTF program are identified prior to their freshmen year of high school. During the identification process, the director of the program looks at the student's middle school grades, socioeconomic status, and family composition. In addition, the program takes recommendations from high school staff members for perspective participants as well, so even though a student may not participate in MTF their freshman year, they may receive services at a later date.

Involvement in the program is completely voluntary, and students can opt out of the services provided by the mentoring program at any time. While participating in the program, students will meet with their mentor once a week in the public library. They work closely together on organizational strategies, setting and obtaining goals, and planning for future life success. While this is occurring,

the mentor and the program work together to ensure the student's basic physical needs are being met such as food and shelter.

The MTF program operates with 70 mentors, who are trained volunteers from the local community. Initially the mentoring relationships begin by allowing the mentor and mentee an opportunity to get to know one another. These opportunities come during weekly one-hour meetings that take place on campus during the school day. In the beginning, the meetings are very scripted in order to guide the conversation between the mentor and mentee. The initial months, allow time for both participants to share what their interests are in and away from school. The conversations also provide the mentee an opportunity to describe the environment that they live in outside of school. Once a relationship is established, the meetings become much more ad-libbed but are guided by 24 talking points (See Appendix A), which are unique to MTF.

The progression of the talking points occurs overtime and some are used more frequently then others. More specifically, mentors are provided with a series of questions and explanations that could help guide the conversations of each topic. These questions only serve as a template for mentors; as the mentoring relationship develops the conversations should become much more natural and customized for each individual relationship.

The program has been successful. Over the last five years, 19% of the program's participants were considered homeless; an even higher percentage

(29%) of the students received community assistance. The mentoring program was able to find and provide 7% of these students permanent housing. The program has found that 82% of its senior participants complete high school, while only 15% of the overall participants drop out.

Statement of the Problem

In Texas, the rate of students failing to progress to the next grade level has been on the rise in grades 9 - 11 (Texas Education Agency, 2013). Research on student retention has shown that failure to progress with a cohort can lead to dropping out (Bridgeland, Dilulio, & Morison. 2006) and that making such a decision can directly affect an individual's health and well being, but is also a burden on society (Bowers, Sprott, & Taff, 2013; Bridgeland et al., 2006; De Ridder et al., 2013). To combat this problem, many practitioners have begun using youth mentoring programs as an intervention strategy to better serve academically at-risk students (AARS) (Larose & Tarabulsy, 2014). The sparseness of research on mentoring and whether or not the intervention increases the academic performance by AARS often leaves policymakers and school officials uninformed.

Purposes of the Study

Previous researchers have shown that high levels of truancy often stem from boredom and disengagement (Roderick et al., 1997), which can negatively affect a student's academic and physical well being (DeSocio et al., 2007). The

purpose of this study was to determine if participation of at-risk students in a formal mentoring program, Movement Towards a Future (MTF), had a positive affect on their school attendance and the academic achievement compared to that of similar non-participants.

Hypotheses

The following research hypotheses were applicable to the designated research site and guided the proposed study.

H_1: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their first year of high school.

H_2: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their second year of high school.

H_3: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program compared to those who do not participate during their third year of high school.

H_4: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program compared those who do not participate during their fourth year of high school.

H_5: There is no significant difference in absences during the first year of high school between students participating in a formal mentoring program and similar students who are not.

H_6: There is no significant difference in absences during the second year of high school between students participating in a formal mentoring program and similar students who are not.

H_7: There is a significant decrease in absences during the third year of high school by students participating in a formal mentoring program with similar students who are not.

H_8: There is a significant decrease in school absences during the fourth year of high school by students participating in a formal mentoring program with similar students who did not.

Orienting Theoretical Framework

The availability of theoretical models that are specific to mentoring is limited. The models that are available rely heavily on Bowlby's (1982) attachment theory, which describes a youth's willingness to be mentored. Students who are raised in an unstable environment who experience "low parental sensitivity may [develop] negative perceptions of self and others that are believed to undermine their faith in others as a source of support and in the usefulness of using support in crisis situations" (Larose & Tarabulsy, 2014, p. 304). When this occurs, a student may not be as willing to cooperate with other adults, such as

teachers and mentors. Therefore, attachment theory is often present in mentoring models because it explains the student's level of cooperation throughout the mentoring relationship (Larose & Tarabulsy, 2014).

The most notable model (see figure 1) reflecting the influences of mentoring on individuals was proposed by Rhodes (2002). It "assumes that mentoring relationships can promote positive outcomes for youth through a range of processes, specifically those that foster social-emotional, cognitive, and identity development" (Rhodes, 2005, p. 31). The model shows how mentoring relationships are built on mutuality, trust, and empathy. Effects of mentoring are often not noticed at the onset of the mentoring process, which could be explained by Bowlby's (1982) attachment theory, but as the mentor-mentee relationships develop over time, positive outcomes in academics, behavior, and emotional well-being will begin to emerge due to the development of empathy and trust between the participants.

Based on the foundation of attachment theory, the Model of Youth Mentoring provides a framework of how mentoring may affect academically at-risk students (Larose & Tarabulsy, 2002). The Model of Youth Mentoring has been shown to benefit youth in three specific areas: (1) social-emotional development, (2) cognitive development, and (3) role modeling and identification. The Model of Youth Mentoring depicts multiple pathways of how mentoring affects youth development in these three specific areas. Often students will

experience growth concurrently in all three areas. The benefits of mentoring may differ tremendously between individual students. Effects of mentoring are "complex and subtle, and may emerge over a relatively long period of time" (Rhodes, 2002, p. 50).

The Model of Youth Mentoring explains the process of mentoring and the expected outcomes that can be derived (Rhodes & DuBois, 2008). The model is appropriate for this study because it considers the duration of the mentoring relationship and how mentoring directly affects a student's social-emotional, cognitive, and identity development. As a student progresses through the mentoring process, the model projects that the student will also experience positive academic and behavioral outcomes.

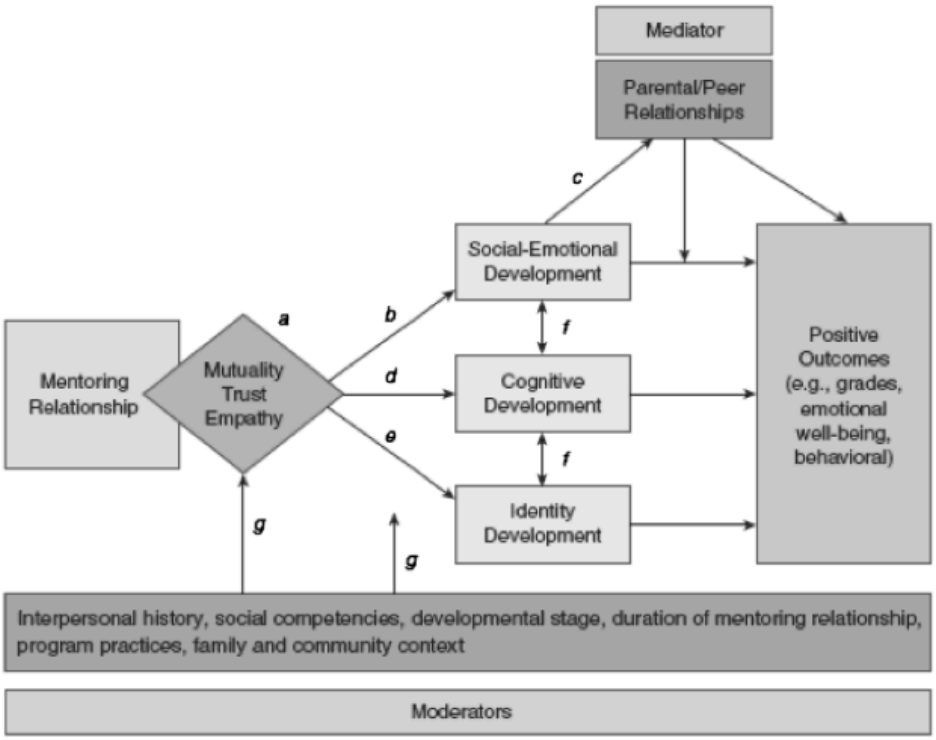

Figure 1. Model of Youth Mentoring. Used with permission (Rhodes & DuBois, 2008, p. 256)

Significance of the Study

The proposed study hypothesized that there would be a significant effect on a participant's attendance and academic achievement during the latter portion of their high school experience. If found true, the results would support Rhodes' (2005) Youth Mentoring Model and will show that participation in a mentoring program can gradually produce positive developmental gains over time (Larose & Tarabulsy, 2014). Understanding that youth mentoring brings about gradual

improvements and not immediate improvement is necessary when the intervention strategy is being considered for funding and implementation.

Findings from this study will inform practitioners on the effects of mentoring AARS and will provide researchers with an analysis of the effects of mentoring AARS over a four-year period. Furthermore, it provided additional research data that could be used to direct future governmental funding towards establishing and sustaining various student support initiatives. By constructing studies that are informed by theory and grounded by the findings of previous research, this study will help support initiatives such as the U.S. Department of Education's Student Mentoring Program, which is a federal grant program that focuses on supporting our nation's children (DuBois & Karcher, 2014).

The proposed study was the first study conducted on MTF. By examining such a program, the results of this study added to the sparse information available on the effectiveness of mentoring and provided practitioners with an evaluation of a previously unstudied program (Grossman, 2005). If it is determined that participation in MTF has a significant effect on student attendance and their academic success, future studies on the program could further inform the literature about effective intervention strategies that meet the needs of AARS, a need suggested by Larose and Tarabulsy (2014).

Method of Procedure

This study used a casual comparative research design. Casual comparative is considered to be a non-experimental research design that can assist researchers in identifying cause-and-effect relationships (Gall, Gall, & Borg, 2003). When examining a mentoring program and its effectiveness, researchers often want to know what would happen if a student did not receive mentoring. It is impossible to predict how a student would have responded to the absence of mentoring, so one must create a control group to make such a comparison (Grossman, 2005). Therefore, this was a casual-comparative research study that aimed to discover possible causes of at-risk students' cognitive and behavioral development and could serve as a link between descriptive and experimental research (Cohen, Manion, & Morrison, 2007). This study examined the academic effects on at-risk students who participated in MTF. It also looked to see if participation in MTF lowers the number of unexcused absences students acquire from year to year because low school attendance has been shown to be an early warning sign of students who are at-risk of dropping out of school (Neild, Balfanz, & Herzog, 2007).

Site

The research site was a single rural Texas high school that serves approximately 2400 students. This formal mentor program has been in place for the last five years at this site. The program works closely with school

administrators, teachers, parents, and community members to provide at-risk students with a structured network of support, but it is a separate entity and is not funded by the school. In doing so, the goals of the program are to increase the participants' overall academic progress and decrease the number of unexcused absences.

Sample Selection Process

Although random assignment to experimental control groups is the best method for creating two comparison groups, the program being examined was too small for such an approach (Grossman, 2005). Therefore, to provide greater control and strengthen validity a matched sampling method was used to investigate the effects of participating in the mentoring program (Cohen, Manion, & Morrison, 2007). Matched sampling refers to the selection of the control group from the population (Rubin, 1979). In the case of researching mentoring programs, in order to carry out such a selection "researchers must identify a group of nonparticipant youth whose outcomes credibly represent what would have happened to the participants in the absence of the program" (Grossman, 2005, p. 256, 2005). Ary, Jacobs, and Razavieh (1979) recommendd a minimum sample size of at least 30 individuals if any statistical analysis is taking place (Cohen et al., 2007).

Each matched pair consisted of one student who had participated in the mentoring program throughout high school and one student who had not ever

participated in the mentoring program Movement Towards a Future. Similar to the matching techniques used by DuBois, Neville, Parra, and Pugh-Lilly (2002), mentored and non-mentored students were identified and matched by the following characteristics: socioeconomic status, gender, ethnicity, and family composition such as coming from a single parent household. Unlike previous research (Dubois et al., 2002), socioeconomic status, which will be based off of a student's free and reduced lunch status his/her freshman year, was given priority over all other characteristics in the matching process for the sample because poverty is the largest factor affecting student success and academic achievement, as opposed to race, ethnicity, or gender (Williams-Boyd, 2010). Therefore, it was important to assure that matched pairs share similar socioeconomic statuses. By accounting for a students' socioeconomic status credibility can be improved when using a matched sampling method (Grossman, 2005).

Data Collection

Prior to seeking permission to conduct research within the selected site, the researcher contacted school officials via email and face-to-face communication. The email communication provided school officials with a written explanation of the study, and the face-to-face communication was intended to answer any inquiries that school officials might have. The goal of the communication was to gain access to archived student data and provide district officials with an overview of the study. Face-to-face and email communication

with the mentoring program's coordinator also was necessary to gain access to the program's own archived student rosters.

Acquiring student data from the mentoring program was necessary to determine which students were active in the mentoring program throughout high school. Individual archived student data were retrieved from the school's record keeping office. The data collected from the records office provided the researcher with not only student demographic data but academic and financial data as well. Attendance data were collected through student records kept at the school's record keeping office.

Variables

Two dependent variables and four independent variables were present within this study. The dependent variables were the number of high school credits obtained from year to year as well as the number of unexcused absences for each period on a day by year. The four independent variables were participation status in MTF for one, two, three, and four years.

Treatment of Data

Once the two comparison groups were formed, it was necessary to analyze the data in order to test each hypothesis and determine if there was a significant difference in attendance and academic achievement from year to year between the matched samples. To test each hypothesis a matched sample t-test was used to analyze the data. This allowed for a comparison between each group and

highlighted any significant differences in the students' academic achievement and attendance from year to year.

Definitions of Terms

School-Based Mentoring

The most common approach to mentoring is school-based mentoring (Chan, Rhodes, Howard, Lowe, Schwartz, & Herrera, 2013). Portwood and Ayers (2005) described school-based mentoring as a relationship that occurs at school, often times between a student and faculty member, and focuses on academic activities. In formal school-based mentoring relationships, mentees will regularly meet with their mentors one hour per week. Mentees are often selected for participation based on their prior academic struggles (Portwood & Ayers, 2005). This selection method is not uncommon and is why mentoring has began to be considered as an intervention strategy for academically struggling youth (Portwood & Ayers, 2005; Simões & Alarcão, 2014).

Simões and Alarcão (2014) view school-based mentoring as a vertical intervention strategy, which typically focuses on the social and academic development of mentees. They note that school-based mentoring programs will usually function with community volunteers serving as mentors. This provides students the opportunity to establish a relationship with an adult from the community within the school setting, that may not otherwise be available if the parent does not initiate such a relationship (Simões & Alarcão, 2014).

Community-Based Mentoring

Community-based mentoring often takes place in after-school programs operated by a paid staff (Mekinda & Hirsch, 2014). Hirsch and Wong (2005) explained that mentoring relationships occurring within the programs are often informal and are a product of shared experiences between a staff member and youth. Programs are often publically and privately funded, such as The Boys and Girls Club or The Boy Scouts of America, but are not consistently available to all children in need due to available funding (Rhodes, 2002). For the purpose of this study, community-based mentoring will be defined as a mentoring program that functions with public and private funds, and is staffed by members of the community.

Faith-Based Mentoring

Maton, Domingo, and King (2005) acknowledged that faith-based mentoring does not have a clear definition in research, but explain it as a formal mentoring program that is religiously sponsored and functions with volunteers from religious congregations. Maton, Domingo, and King (2005) clarified that sponsorship does not have to come in a monetary form. Oftentimes community religious organizations can come together to serve as source of volunteers for formal mentoring programs operating within the community. For the purpose of this study, a faith-based mentoring program is a program that recruits its volunteers from local religious congregations.

Academically At-Risk Students

Larose and Tarabulsy (2014) consider academically at-risk students as a heterogeneous group of students who are more likely to experience lower academic achievement and school dropout. Larose and Tarabulsy (2005) explained that students may be considered academically at-risk for a number of reasons including: "developmental problems, such as cognitive delays, attention deficit and hyperactivity disorders, aggressiveness, and non-normative development circumstances such as parental abuse and negligence, adolescent parenthood, and chronic poverty" (Larose & Tarabulsy, 2005, p. 441). Academically at-risk students typically have a history of lower academic achievement, but this not necessarily always the case.

Academic Growth

Herrera, Grossman, Kauh, and McMaken (2011) measured students' academic performance by having teachers complete a five-point scale survey on individual students to establish a baseline at the beginning of a nine-month mentoring relationship, and then repeated the procedure at the end of the period. Grossman (2005) suggested that grades or test scores are appropriate for measuring academic success. For the purpose of this study, academic growth will be defined as the number of academic credits earned by students.

Limitations

Due to the size of the mentoring program being examined, the sample size for this proposed study is relatively small. Also, the mentoring program is only active in one rural school district at this time; therefore, findings may not be transferable to other districts. Furthermore, students participating in the mentoring program for four years could already be more motivated than students who chose never to participate in the program.

Summary

The purpose of this study was to determine if participation in the mentoring program Movement Towards a Future had a positive effect on school attendance and academic achievement. The study examined the number of credits obtained and the number of absences accrued by year within a rural Texas high school. By matching students who participated in the mentoring program with students who did not participate in the program, a matched sample t-test was conducted to assist in predicting a cause and effect relationship (Grossman, 2005).

Chapter 2

Review of Literature

The Texas Education Agency (2013) found that grade retention rates had increased between the 2010-11 and 2011-12 school year in grades nine, ten, and eleven. Failing to progress with their cohort often leads to students making the hazardous decision of dropping out of high school and never receiving a high school diploma (Bridgeland, Dilulio, & Morison, 2006). The rise in grade retention needs to be accounted for because of the adverse effects failing to graduate has on students (Bowers, Sprott, & Taff, 2013; Bridgeland et al., 2006; De Ridder, Johnsen, Holmen, & Bjørngaard, 2013). and society (Bloom, 2010; Burrus & Roberts, 2012; Sum, Khatiwada, & McLaughlin, 2009).

We have seen a rise in various types of mentoring programs in recent years (Baker & Maguire, 2005; DuBois, Portillo, Rhodes, Silverton, & Valentine, 2011; Blakeslee & Keller, 2012). Initially community-based mentoring was the most prevalent form of mentoring and has had the most influence on the evolution of mentoring approaches (Baker & Maguire, 2005). Currently school-based mentoring is an emerging approach used to provide greater support for struggling at-risk students (Pryce & Keller, 2012).

A number of factors can influence a student's academic and social development. From a student's socio-economic status (Komro, Flay, & Biglan, 2011) to a student's family structure (Johnson, Pryce, & Martinovich, 2011),

educators lack at an array of factors in identifying factors that could influence a student's potential.

Effects of Dropping Out

Bjerk (2012) found that there are two groups of students who dropout, those who are either pushed out or students who are pulled out of school. Students who are pushed out of the educational system are students who do not like school, who experience discipline issues, and who choose to dropout due to other outside influences or factors. Their counterparts, students who are pulled out of school, often exit due to family needs, such as students who are entering the workforce to provide for their family. Bjerk (2012) focused on students who were on the verge of dropping out of high school and the benefits that could be gained by continuing their education by a few more months. Afterwards, the study then examined why some students experienced significant benefits from only a few more months of education.

By using the data of male students gathered from the National Longitudinal Survey of Youth 1997, Bjerk (2012) found that students who fail to progress to the twelfth grade experience a significant decrease in potential earnings and an increase in crime during their early twenties, when compared to students who do enter their senior year of high school and have similar background and academic achievement characteristics. The decision to only examine the data of male students was made due to the fact that females may

experience teen pregnancy, which will make it a necessity to be removed from the academic setting for an extended period of time. Females also have very different criminal behaviors and are a part of a different labor supply compared to their male counterparts (Bjerk, 2012).

Bjerk's (2012) emphasis between the two groups of students is important because students who are pulled out of education are not necessarily affected by the decision in the same manner as students who are pushed out. Bjerk (2012) suggested that students who are pulled out of education are not inactive in their time immediately following school, and increase their human capital within the job market. Where as, students who are pushed out of school, are prone to becoming idle in the evolution as an individual. Based on of this conclusion, Bjerk (2012) believes that the benefits of remaining in education may not necessarily come in the mode of academics but in the growth of "[soft] skills such as punctuality, responsibility, and respect for authority and rules" (Bjerk, 2012, p. 121).

Campbell (2015) examined the effects of dropping out of high school by comparing siblings. Deriving data from the National Longitudinal Study of Youth 1979, Campbell (2015) produced 843 sibling pairs, where one sibling dropped out of school and the other continued on through graduation. By conducting a conventional ordinary least squares regression estimation, Campbell (2015) found that students who failed to complete high school worked seven weeks less per

year than those who obtained a high school diploma. It was determined that failing to graduate also led to higher levels of economic adversity, which was found to be associated with delinquency and teen pregnancy.

Campbell (2015) concluded that the diversity among students who do and do not complete high school goes much further than a high school diploma (Campbell, 2015). When siblings were compared, Campbell found that a sibling who chose to dropout were at a much higher risk of economic hardship, meaning that their current economic situations were not merely a product of their early life economic and social situations. With that said, it was suggested that the disparity among students was greatly influenced by their social and economic circumstances. The study concludes that the disparity between high school graduates and non-graduates is rooted within their social and economic differences; therefore "efforts to improve the socioeconomic position of high school dropouts [can] not be limited to [the] classroom" (Campbell, 2015, p. 117).

Mentoring Programs

Blakeslee and Keller (2012) explored the development of knowledge in the field of youth mentoring. They identified a detailed network among researchers that work together advancing the knowledge of youth mentoring by analyzing peer-reviewed articles written between 1990 and 2010. A total of 228 articles were selected and organized by their authors, as well as publication information. Several categories were created to describe article characteristics;

correlational studies, program analysis, qualitative studies, theoretical studies, and policy analysis.

The study found that there were specific trends surrounding youth mentoring literature. In 1991, researchers began focusing on mentoring youth. In the years 2002, 2006, and 2010 multiple articles were published surrounding the topic. This could be contributed to specific journals releasing special issues on mentoring youth. Within the analysis of the articles a relationship among the authors began to emerge. It was determined that five key individuals co-authored the majority of the articles, or published articles individually. Jean Rhodes, David DuBois, Renee Spencer, Timothy Cavell, and Michael Karcher have played a significant role in strengthening the knowledge base of youth mentoring (Blakeslee & Keller, 2012).

DuBois, Portillo, Rhodes, Silverton, and Valentine (2011) conducted a meta-analysis that reexamined the effectiveness of mentoring on a new generation of mentees. The study provided a comprehensive evaluation of findings from multiple research studies. By analyzing studies conducted between 1999 and 2010, DuBois et al. (2011) found that there was a positive effect on youth participating in a mentoring program. Findings in the study indicated a positive influence on school attendance and academic achievement.

DuBois et al. (2011) determined that mentoring is an adequate intervention strategy for students who are victim to environmental adversity.

Through the use of the Model of Youth Mentoring, it was shown that mentoring programs can strengthen outcomes across multiple domains but noticeable effects are often modest in significance. DuBois et al. (2011) suggested mentoring has the opportunity to increase student academic achievement and school attendance. It is also suggested that "individual evaluations of mentoring programs clearly have value" (DuBoi, et al., 2011, p. 59), and can be incorporated into larger more comprehensive studies.

Community Based Mentoring

Community-based mentoring has greatly influenced the evolution of mentoring. As mentoring has grown in popularity many models have since adopted the traditional one-on-one model used in traditional community based mentoring programs, such as Big Brother Big Sister (Baker & Maguire, 2005). Community-based mentoring programs are often more unstructured than school-based programs and allow the mentor and mentee to determine many of the logistical aspects of the relationship (Weinberger, 2002). Furthermore, Community-based mentoring programs are often more costly to implement because of a much higher level of supervision required for the mentor-mentee matches.

Schwartz, Rhodes, and Herrera (2012) turned to data that was previously collected on the Big Brothers Big Sisters school-based mentoring program. In their quantitative study, the researchers examined the academic impact of planned

meeting times on mentored students. They hypothesized that matches that met during the school day, but not during lunch, would have a negative effect on a student's academic performance. Further, it was hypothesized that matched pairs that met outside of the school day or during lunch, would have a positive effect on the student's academic performance. Through the use of teacher reports and individual student grades, a two-level regression model was conducted to test each hypothesis. The study determined meeting outside of the school day had a positive significant impact in language and reading ($p<.05$), whereas pairs who met during the school day experience a significant negative impact in mathematics ($p<.01$).

In a study that proposed and tested a conceptual model of mentoring, and its influence on drug and alcohol use by youth over time, Rhodes, Reddy, and Grossman (2005) found that there was no significant effect between mentored students and non-mentored students. However, a significant effect was found on the frequency of alcohol use and parental relationships for mentored students who were engaged in a mentoring relationship longer than 12 months.

The study used the longitudinal data gathered by the national evaluation of the Big Brother Big Sister program. The sample in this study is nearly identical to the sample used in Rhodes, Grossman, and Resch (2000). Data were collected over the telephone, and mentees participated in pre- and post-test conducted over the course of an 18-month period. Rhodes, Reddy, and Grossman (2005) found

that long-term mentoring relationships often lead to more positive parental-mentee relationships, which could explain the less frequent use of drugs and alcohol. Though the study was unable to prove the mentoring model influences substance use, it was able to show a significant difference in the frequency of alcohol and drug use among mentees in long-term mentor relationships (Rhodes, Reddy, & Grossman, 2005).

Porowski and Passa (2011) conducted a quasi-experimental study to analyze the effects Communities in Schools (CIS) has on graduation and dropout rates on a secondary level. The study sampled 145 high schools from across seven states: Florida, Georgia, Texas, Michigan, North Carolina, Pennsylvania, and Washington. Four cohorts were created depending on the year CIS was implemented. The cohorts created ranged from the 1999-2000 school year to the 2002-2003 school year.

To measure effectiveness, a propensity score matched-pair sampling was used. This technique allowed for comparisons among groups. Matches were created between CIS schools and non-CIS schools and "analyses for each outcome measure utilized a difference-in-difference approach… Repeated measures ANOVA was also used to measure the significance of change within each group across the 4-year study period" (p. 29). It was determined that CIS schools increased graduation rates by 1% after the first year of implementation, while non-CIS schools decreased graduation rates by 1%. Schools that had a high

implementation were able to increase graduation rates by as much as 8.6% over a three-year period.

School-Based Mentoring

In a case study of a school-based mentoring program within a metropolitan area, Pryce and Keller (2012) used a mixed methods approach to examine the development of mentoring programs with in an elementary school setting. By selecting three elementary schools implementing a Big Brother/Big Sister mentoring program for the first year, the researchers observed and interviewed 26 mentor/mentee pairs. From this, researchers determined about half the relationships were progressive in nature, while others plateau and never really became productive mentor/mentee relationships. Other relationships seemed more stagnant and to have never really developed. Finally, the study did experience "breakthrough" (Pryce & Keller, 2012, p. 240) groups, relationships that struggled initially, but because of traumatic experiences were able to form a stronger bond.

With exception of the latter group, a Mann-Whitney test was conducted to compare the various groups. Mentors involved in a progressive relationship viewed their relationship as positive and high levels of closeness, where plateau relationships fostered an average sense of closeness and high levels of conflict. Stagnant relationships reported a lack of closeness and conflict, but sensed the relationships were positive between the participants (Pryce & Keller, 2012).

These findings emphasize the importance of active involvement and continuous assessment of mentoring relationships.

In another study, researchers examined a school-based mentoring program and its effects on increasing the students' self-regulated learning and academic achievement (Núñez, Rosário, Vallejo, & González-Pienda, 2013). By assessing two seventh-grade mentoring programs, researchers determined that mentoring was effective in increasing a student's self-regulated learning when compared to non-mentored students.

Academically, Núñez er al. (2013), determined that there were minimal differences in mentored and non-mentored students initially but the effectiveness of the treatment was larger as the duration of the relationship grew, which led to the conclusion that "academic mentoring depends on the measurement time after the program is implemented" (p. 19), which reiterated the importance of relationship duration highlighted by Rhodes, Reddy, and Grossman (2005).

Population

The following examines prior research on specific student populations. It is important to focus on students who are considered economically disadvantaged because it is the number one predictor for academic achievement (Komro, Flay, & Biglan., 2011; Payne, 2003). Afterwards, the review will then examine the effects of students residing in foster care and in a single parent family structure.

Economically Disadvantaged

A major factor influencing a student's academic and social development is the student's socio-economic status. The United States has struggled in the effort to reduce the country's child poverty rate, which is often considered to be two or three times that of other major western industrialized nations (Komro, Flay, & Biglan., 2011; Payne, 2003). Over the past decade, there has been a drastic increase in the percentage of the population living in poverty within the United States. In 2001, the poverty rate for all individuals resided around 11.7% (Payne, 2003) and rose to 14.3% by 2009 (DeNavas-Walt et al., 2009). This is alarming because poverty is considered to be "a major risk factor for several mental, emotional, and behavioral disorders, as well as other developmental challenges and physical health problems" (Komro et al., 2011, p. 111).

Low parental involvement and support have been also shown as a predictor of students at-risk of dropping out of high school (Bridgeland et al., 2006). With a rise in single parent homes and poverty rates, society has begun seeing a decrease in parental engagement. This is due to the need for parents to work multiple jobs (Rhodes, Grossman, & Roffman, 2002b). Reis and Díaz (1999) conducted a three-year study on 35 economically disadvantaged high school female students who excelled at a high level in multiple honor classes. Through a series of observations and interviews, Reis and Díaz (1999) found that the female students often attributed their determination to supportive adults within

the school and not necessarily from the home. Mentor figures, such as teachers, coaches, and counselors, often encouraged students as they progressed through their rigorous coursework.

Foster Care

Johnson, Pryce, and Martinovich (2011) conducted a quantitative study focusing on mentoring foster youth within a metropolitan area. By conducting a two by four ANOVA and one-way ANCOVAs, the researchers were able to compare subjects based on the amount of mentoring received during six-month periods. Within each period, the subjects were then fragmented into groups based on the amount of mentoring received within the time frame. The researchers determined that foster children who received a significant amount of mentoring showed substantial improvement in the areas of family and social functioning, school conduct, academic achievement when compared to foster youth who had not received mentoring. Johnson et al. (2011) concluded that mentoring must have a high level of frequency and duration if the intervention is to be beneficial for the youth.

In an earlier study, Collins, Spencer, and Ward (2010) examined the different types of supportive relationships foster youth received, the characteristics of these relationships, and the effect these relationships had on the youth. By surveying and interviewing 96 individuals who had been in foster care up to the age of 18 and were now 19 years or older, it was determined that 69% of

the individuals could identify a non-parental adult who was supportive and took a special interest in their well-being. It was also found that out of the 96 participants, 73% of mentored youth received a high school diploma or GED, as opposed to the 47% of the non-mentored youth who received a high school diploma or GED. It was determined that mentoring can play a positive role within the life of a child within the foster care system. It is suggested that formal mentoring programs, such as community- or school-based mentoring programs, are used to promote longevity of mentoring relationships (Collins, Spencer, & Ward, 2010).

In a later article that focused on mentoring youth who were exiting the foster care system, Spencer, Collins, Ward, & Smashnaya (2010) reviewed previous literature on mentoring and social work; it was determined that mentoring is an acceptable solution on an individual level but may not resolve the challenges that accompany child welfare systems (Spencer, Collins, Ward, & Smashnaya, 2010).

Single Parent

In a study that examined the effects of maternal partnership patterns on economically disadvantaged youth, Bachman, Coley, and Chase-Lansdal (2009) found that there were no immediate benefits or risk on a cognitive and socioemotional level, for adolescents whose mother married or entered a co-inhabitation. Bachman, Coley, and Chase-Lansdal (2009) examined longitudinal data collected from economically disadvantaged youth and conducted one-way

MANOVAs, They concluded that economically disadvantaged youth raised in a stable marriage were more successful academically and displayed fewer behavioral problems, as compared to children residing with a single mother or if the parent was co-inhabiting.

Williams and Bryan (2013) studied the factors that contributed to the academic success of eight economically disadvantaged African American youth, who were brought up within a single parent setting. Through the use of individual interviews and a focus group, it was determined that three key factors played a vital role in assisting youth to graduation: the home, the school, and the community. Williams and Bryan (2013) found that participants often acknowledged a positive parent-child relationship, as well as support from extended family. Students also "mentioned the connection to at least one caring adult in the school building who went beyond his or her role to help students" (Williams & Bryan, 2013, p. 296). Lastly, Williams and Bryan (2013) found that the community provided many resources to help motivate students to continue striving for academic excellence such as after-school activities that provided students with a safe place to go and positive relationships with community leaders.

Prevention

Cavell and Elledge (2014) believe that mentoring is a rudimentary preventative tool used to assist disadvantaged youth. The evolution of the research surrounding mentoring as a preventative tool has often been limited due

to sampling (DuBois, Doolittle, Yates, Silverthorn, & Tebes, 2006). Research focusing on the effects of mentoring often lacks statistical significance due to small sample sizes. Because of this limitation, most findings surrounding youth mentoring are not necessarily comprehensive of larger diverse populations (DuBois, et al. 2006).

Attendance

In a study conducted in the spring of 2001 within an urban setting, researchers examined if a student's participation in a teacher-student mentor relationship has any effect on absenteeism and school disengagement (DeSocio, VanCura, Nelson, Hewitt, Kitzman, & Cole, 2007). The study used data captured by the school district at the conclusion of each grading period. An ANOVA was used to compare students who would be participating in the school-based mentor program and students who were not. At the conclusion of the study, a Pearson Chi Square probability analysis was conducted to compare each group's likelihood of remaining in school (DeSocio et al., 2007). They found that students who participated in the mentoring program had a 7% attrition rate, while non-mentored students suffered a 16% attrition rate (DeSocio et al., 2007). The data also revealed that students who participated in the mentoring program had significantly fewer absences than their non-mentored counterparts, but because of the difference in attrition rate, the statistical power of the findings was diminished. The researchers believed that the difference in attrition was a product of the

mentoring program's effectiveness to decrease absenteeism and increase student engagement (DeSocio et al., 2007).

In a much larger longitudinal study, Rhodes, Grossman, and Resch, (2000) used previously obtained data and created a sample of 1,138 at-risk youth between the ages of 10 and 16 who participated in a Big Brothers Big Sisters mentoring program. Participants in the study took multiple assessments over an 18-month period and then participated in follow-up interviews. A six-item subscale of the Self-Perception Profile measured scholastic competence for Children. Grades and attendance were also evaluated, where grades were self-reported by the students and attendance was measured by the number of unexcused absences. The researchers determined that mentoring could directly affect school attendance and academic confidence.

Graduation

Witte and Cabus (2013) examined dropout prevention measures taken in the Netherlands and measured their effectiveness. By focusing on the individual level, the researchers identified student and neighborhood characteristics, time trends, and region effects that could place students at a higher risk of dropping out.

The data were aggregated and used to identify schools serving students who are at greater risk of dropping out. The study monitored 10 preventative measures that were put in place within the Dutch educational system to support these students. By using a nationwide database that tracks student enrollment up

to the age of 23, Witte and Cabus (2013) calculated the coefficient and t-statistics of student and postal zip code characteristics as well as the dropout prevention measures. They determined that out of 10 preventative measures studied, mentoring, which had a coefficient of -0.0403 and p-value 0.0990, was one of only three that proved to have a significant impact on an individual's decision to dropout.

Another study examined the impact of the *Mentoring for the Integration and Success of Science Students* (MIRES) program in mathematics, science, and technology on a post-secondary level. By conducting randomized pre- and posttest, researchers assessed the short-term effect of 150 mentees participating in MIRES program. Larose et al. determined that students who received mentoring had higher levels of motivation, a more detailed career decision profile, and higher rates of institutional attachment (Larose et al., 2011). The researchers also found that there was a positive impact on students being mentored within the first semester. This has not been commonly observed on the secondary level, where the effects of mentoring are usually dependent upon the duration of the mentoring relationship (Núñez, Rosário, Vallejo, González-Pienda, 2013).

Movement Towards a Future

The study investigated the effects Movement Towards a Future had on a students attendance and credit obtainment. The following is a summery of program characteristics. Because this is the first study conducted on the mentoring

program, no prior research is available the specifically focuses on the performance of Movement Towards a Future.

Movement Towards a Future is a volunteer mentoring program functioning within a rural Texas high school. MTF functions as a non-profit corporation and works closely with school faculty, parents, and the surrounding community, in an effort to provide academic and emotional support for at-risk high school students. Movement Towards a Future believes that at-risk students can overcome some of life's most difficult challenges with the support and encouragement from the program's trained mentors (Petty, 2016).

Seventy mentors volunteer to help support MTF. Many of the mentors are recruited from local religious organizations, predominantly the local Baptist church. Mentors are trained to assess the needs of students and work towards improving the student's current life circumstances. Over the course of eight months, mentors meet with students on weekly basis to review the mentee's academic situation and discuss any challenges that may be inhibiting the student's opportunity for achieving success (Petty, 2016).

Mentors are guided by a series of talking points to guide their discussions with each mentee. The talking points were designed by the program director, and are intended to provide the student with a more positive view of themselves and the world around them (Petty, 2016). By using the talking points, mentors are

better able to systematically address issues such as homelessness, poverty, abuse, low self-esteem, and academic failure.

As students progress through the program, mentors provide them with the encouragement and support that helps foster self-motivation. The staff and volunteers of MTF continuously work on exposing students to opportunities beyond their current situation. Through the ever-growing network of professionals, MTF has begun working towards providing students with an avenue to further their education and skill set. The goal is for mentors to assist their mentees in navigating through the procedural processes and difficult circumstances as they plan to attend postsecondary institutions or enter the workforce (Petty, 2016).

Since its establishment in 2009, 66% of MTF's at-risk students have earned the maximum number credits available per year or have earned more credits than the previous year. Accomplishments such as this have assisted in MTF's 82% senior graduation rate, compared to the 15% of mentees who choose to dropout of school (Petty, 2016).

Program success though is not merely measured by the academic achievements of students. Since 2009, 29% of the mentees have been able to obtain community assistance. Furthermore, 19% of the students served by MTF are considered homeless. Because of their participation in the mentoring program and through the dedication of volunteers, 7% of this population has been assisted in locating a permanent housing situation (Petty, 2016).

Students may be recruited at any point in time between their eighth grade and senior year. Students often are identified by teacher and administrator recommendations but this is not necessarily the only means of recruitment. Movement Towards a Future focuses on serving the most highly at-risk students within the district. Often times, students are first identified by their poor academic performance, but this is merely a byproduct of the situational factors that they face on a daily basis. Movement Towards a Future evaluates a multitude of factors before offering their services to students. By examining a student's socioeconomic status, living situation, historical academic trends, the academic experience of older siblings, and the influence of peers, MTF selects students who they believe are at the highest risk of failing to complete high school (Petty, 2016).

Summary

Chapter two discussed previous literature that examined the effects of dropping out of high school. It then discussed research surrounding various types of mentoring programs, such as community-based or school-based mentoring, and the array of effects they can have on student achievement and behavior. The review of literature then focused on specific student populations and family structures, and explored the preventative measures used to increase attendance and encourage academic achievement. Lastly, Chapter 2 provided a detailed description of the mentoring program Movement Towards a Future.

Chapter 3

Methods of Procedures

The purpose of this study was to examine the mentoring program, Movement Towards a Future, and assess its effectiveness in supporting academically at-risk students throughout their high school experience. Currently there is a lack of quantitative evidence supporting the program's effectiveness. The study analyzed academic and attendance data to determine if there was a significant impact on the mentees' credit and attendance rates from year to year, compared to similar non-mentee students. The following research hypotheses were applicable to the designated research site and guided the proposed study.

H_1: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their first year of high school.

H_2: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their second year of high school.

H_3: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program compared to those who do not participate during their third year of high school.

H_4: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program

compared those who do not participate during their fourth year of high school.

H_5: There is no significant difference in absences during the first year of high school between students participating in a formal mentoring program and similar students who are not.

H_6: There is no significant difference in absences during the second year of high school between students participating in a formal mentoring program and similar students who are not.

H_7: There is a significant decrease in absences during the third year of high school by students participating in a formal mentoring program with similar students who are not.

H_8: There is a significant decrease in school absences during the fourth year of high school by students participating in a formal mentoring program with similar students who did not.

Selection of Participants

The first step in identifying participants for the study was contacting the director of the mentoring program and requesting a list of students who had participated in the program throughout their high school experience. This list was then sent directly to individuals who manage campus and district student data. By doing so, the identity of participating students was protected.

Because of the limited sample size, random assignment to experimental control groups to create two comparison groups was not possible (Grossman, 2005). Therefore, to provide greater control and strengthen validity, a matched sampling method was used to investigate the effects of participating in the mentoring program (Cohen, Manion, & Morrison, 2007). Matched sampling allows researchers to hypothetically "predict what would have happened to participants in the absence of the program" (Cohen et al., 2005, p. 256).

The matching process was carried out by the district data manager and then returned back to the campus data manager, where all names and student identification numbers were removed. Each matched pair consisted of one student who had participated in the mentoring program throughout high school and one student who had not. Similar to the matching techniques used by DuBois, Neville, Parra, and Pugh-Lilly (2002), mentored and non-mentored students were identified and matched by the following characteristics: socioeconomic status, gender, ethnicity, and family composition, such as coming from a single parent household. Unlike previous research (Dubois et al, 2002), socioeconomic status was given priority over all other characteristics in the matching process for the sample because poverty is the largest factor affecting student success and academic achievement, as opposed to race, ethnicity, or gender (Williams-Boyd, 2010).

Table 3.1 describes the demographic data of participants used in the matching process. Participants are broken up into matched samples, so that their gender, ethnicity, socio-economic status, and family composition can be easily compared to their matched counterpart.

Table 3.1
Demographic Data for Participants

Matched Samples		Gender	Ethnicity	Economically Disadvantaged	Housing
Mentored	1	Female	Hispanic or Latino	No	Both Parents
Non-Mentored	1	Female	Hispanic or Latino	Yes	Both Parents
Mentored	2	Male	Hispanic or Latino	Yes	Mother
Non-Mentored	2	Male	Hispanic or Latino	Yes	Mother
Mentored	3	Female	White	No	Both Parents
Non-Mentored	3	Female	White	No	Both Parents
Mentored	4	Female	White	No	Both Parents
Non-Mentored	4	Female	White	No	Both Parents
Mentored	5	Female	White	Yes	Father
Non-Mentored	5	Female	White	No	Father
Mentored	6	Female	White	Yes	Both Parents
Non-Mentored	6	Female	White	Yes	Both Parents
Mentored	7	Male	White	No	Father/Step-Mom
Non-Mentored	7	Male	White	No	Father/Step-Mom
Mentored	8	Male	White	Yes	Mother
Non-Mentored	8	Male	White	Yes	Mother

Table 3.1 Continued

Matched Samples		Gender	Ethnicity	Economically Disadvantaged	Housing
Mentored	9	Male	White	No	Father
Non-Mentored	9	Male	White	No	Father
Mentored	10	Female	White	No	Mother
Non-Mentored	10	Female	White	No	Mother
Mentored	11	Female	White	No	Mother
Non-Mentored	11	Female	White	No	Mother
Mentored	12	Female	White	No	Mother
Non-Mentored	12	Female	White	Yes	Mother
Mentored	13	Female	White	Yes	Mother
Non-Mentored	13	Female	White	Yes	Mother
Mentored	14	Male	White	Yes	Grandparents
Non-Mentored	14	Male	White	Yes	Mother
Mentored	15	Male	Hispanic or Latino	Yes	Both Parents
Non-Mentored	15	Male	Hispanic or Latino	Yes	Both Parents
Mentored	16	Male	Hispanic or Latino	Yes	Mother
Non-Mentored	16	Male	Hispanic or Latino	Yes	Mother
Mentored	17	Female	White	Yes	Both Parents
Non-Mentored	17	Female	White	Yes	Both Parents
Mentored	18	Female	White	No	Both Parents
Non-Mentored	18	Female	White	No	Both Parents
Mentored	19	Female	White	Yes	Mother
Non-Mentored	19	Female	White	Yes	Mother

Table 3.1 Continued

Matched Samples		Gender	Ethnicity	Economically Disadvantaged	Housing
Mentored	20	Male	African American	Yes	Mother
Non-Mentored	20	Male	White	Yes	Mother
Mentored	21	Male	White	Yes	Other
Non-Mentored	21	Male	White	Yes	Other
Mentored	22	Female	White	No	Mother and Step-Father
Non-Mentored	22	Female	White	No	Mother and Step-Father
Mentored	23	Female	White	Yes	Mother
Non-Mentored	23	Female	White	Yes	Mother
Mentored	24	Male	African American	No	Both Parents
Non-Mentored	24	Male	African American	No	Both Parents
Mentored	25	Male	White	Yes	Both Parents
Non-Mentored	25	Male	White	Yes	Both Parents

Data Analysis

The study used a casual comparative research design, which often assists researchers in identifying possible cause-and-effect relationships (Gall, Gall, & Borg, 2003). Six different variables were involved in the analysis of the data. The four independent variables that were present in the study were participation in the mentoring program for one, two, three, and four years. The two dependent

variables were then number of academic credits obtained from year to year and the number of absences acquired from year to year.

Once the campus records office received the matched samples from the district records office, all names and identification numbers were removed to assure confidentiality. The campus records office then created an excel spreadsheet that detailed the number of credits and absences obtained by each student from year to year, as shown in Table 4.1 and Table 4.2. Student demographic data and graduation status were also collected by the campus records office and provided to the researcher. The data then were sent to the researcher, where they were imported into SPSS for analysis.

Initially, all outliers had to be identified and adjusted for to correct any skewness within the data. This was accomplished by calculating the z-scores of each matched sample pair. Any data receiving a z-score greater with an absolute value greater than 3.29 were considered an outlier and adjusted to the nearest non-outlier score within the variable data set (Tabachnick & Fidell, 2007).

Once all outliers were identified and adjusted a matched sample t-test was conducted to test each hypothesis. By using a matched sample t-test, a comparison between each group was made that highlighted any significant differences in the students' academic achievement and attendance by year. Eight comparisons between groups were made for each academic year for credit obtainment and attendance.

Summary

Chapter three provided an overview of the methods used within the current study. Matched samples were created based off of a student's socio-economic status, family structure, gender, and ethnicity. Once matched samples were created data was collected that detailed the number of credits obtained each year, as well as the number of absences accrued by year. A matched sample t-test was then used to determine if there was a significant difference between the matched samples by year.

Chapter 4

Findings

The primary purpose of this study was to determine if the participation of at-risk students in a formal mentoring program, Movement Towards a Future (MTF), had a positive effect on their school attendance and the academic achievement compared to that of similar non-participating students. Students participating in the mentoring program were matched to students not participating in the program, but shared similar characteristics.

Once the matching process was complete, a matched sample t-test was used to compare the number of academic credits and unexcused absences. Data pertaining to credits earned each year and absences are depicted in Table 4.1 and Table 4.2.

Four of the eight hypotheses focused on the number of academic credits earned. They were:

H1: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their first year of high school.

H_2: There is no significant difference in the number of academic credits obtained by students participating in a formal mentoring program with those not participating during their second year of high school.

H_3: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program compared to those who do not participate during their third year of high school.

H_4: There is a significant increase in the number of academic credits obtained by students participating in a formal mentoring program compared those who do not participate during their fourth year of high school.

Table 4.1 depicts the number of credits earned by each student by year. The table is broken up by matched sample so a comparison can be easily made between each pair. Data was collected for years one, two, three, four, and five of high school, but was not available for every students.

Table 4.1
Credits earned by years

Matched Samples		Year 1	Year 2	Year 3	Year 4	Year 5
Mentored	1	6.5	6.5	6	2.5	-
Non-Mentored	1	6	4.5	7	8.5	-
Mentored	2	5.5	2	4.5	2.5	9.5
Non-Mentored	2	7	7	6	5	-
Mentored	3	7	7.5	7	4.5	-
Non-Mentored	3	7	8	8	5	-
Mentored	4	7	5.5	5	6.5	-
Non-Mentored	4	9	7	7	6	-
Mentored	5	9.5	7	7	5	-
Non-Mentored	5	9	7	7	6	-

Table 4.1 Continued

Matched Samples		Year 1	Year 2	Year 3	Year 4	Year 5
Mentored	6	2.5	4.5	6.5	6.5	4
Non-Mentored	6	9	7	6.5		
Mentored	7	4	9	7	6	-
Non-Mentored	7	7	7	7	6	-
Mentored	8	7.5	6.5	5	6.5	-
Non-Mentored	8	8.5	7	6.5	5.5	-
Mentored	9	3.5	7	7	1	-
Non-Mentored	9	9	7	2.5	7	-
Mentored	10	8	7.5	7	5	-
Non-Mentored	10	8.5	7	6	5	-
Mentored	11	8	7	6	6	-
Non-Mentored	11	7	7	7	5	-
Mentored	12	5.5	7	6.5	7	-
Non-Mentored	12	7.5	7.5	7	5	-
Mentored	13	6.5	7	6.5	6.5	-
Non-Mentored	13	7	6	7	6	-
Mentored	14	5	8	6	WD	-
Non-Mentored	14	8	7	9	WD	-
Mentored	15	6	2.5	3	WD	-
Non-Mentored	15	6	2.5	7	8.5	-
Mentored	16	4.5	1.5	3.5	WD	-
Non-Mentored	16	4.5	6	5.5	8.5	-
Mentored	17	8	7	5	7	-
Non-Mentored	17	8	7	8	7	-
Mentored	18	2.5	1.5	4	2	-
Non-Mentored	18	7	WD	-	-	-

Table 4.1 Continued

Matched Samples		Year 1	Year 2	Year 3	Year 4	Year 5
Mentored	19	4	5	6.5	9	-
Non-Mentored	19	7.5	7	7	5	-
Mentored	20	5.5	7	7	4.5	-
Non-Mentored	20	8	6.5	3	WD	-
Mentored	21	4	1.5	3	6	-
Non-Mentored	21	8	6.5	3	WD	-
Mentored	22	7.5	7	6.5	5	-
Non-Mentored	22	9	7	6	WD	-
Mentored	23	7	7	7	5	-
Non-Mentored	23	1.5	0	WD	-	-
Mentored	24	7	7	6	WD	-
Non-Mentored	24	6	2.5	1	-	-
Mentored	25	6	7	WD	-	-
Non-Mentored	25	8.5	7	5	-	-

Note. WD = With Drawn; - = Unavailable data.

Table 4.1 shows the number of credits earned by year for both mentored and non-mentored students. When analyzed, students who did not participate in Movement Towards a Future earned a significant number of credits more than their mentored peers during the first year of high school. After their first year of high school, mentored students closed the achievement gap that was present during the first year but never gained a significant amount more than their non-mentored counterparts.

Four of the eight hypotheses focused on the number of absences. They were:

H_5: There is no significant difference in absences during the first year of high school between students participating in a formal mentoring program and similar students who are not.

H_6: There is no significant difference in absences during the second year of high school between students participating in a formal mentoring program and similar students who are not.

H_7: There is a significant decrease in absences during the third year of high school by students participating in a formal mentoring program with similar students who are not.

H_8: There is a significant decrease in school absences during the fourth year of high school by students participating in a formal mentoring program with similar students who did not.

Table 4.2 depicts the number of absences earned by each student by year. Absences were calculated by period, so students had multiple opportunities per day to be counted absent. The table is broken up by matched sample so a comparison can be easily made between each pair. Data was collected for years one, two, three, four, and five of high school, but was not available for every students.

Table 4.2
Absences by year

Matched Samples		Year 1	Year 2	Year 3	Year 4	Year 5
Mentored	1	49	3	33	3	-
Non-Mentored	1	108	112	139	110	-
Mentored	2	108	46	57	8	-
Non-Mentored	2	12	2	41	8	-
Mentored	3	132	126	110	135	-
Non-Mentored	3	31	67	85	35	-
Mentored	4	12	23	11	37	-
Non-Mentored	4	56	40	36	28	-
Mentored	5	12	102	124	84	-
Non-Mentored	5	0	3	19	2	-
Mentored	6	35	20	96	96	26
Non-Mentored	6	54	64	50	108	-
Mentored	7	35	68	22	43	-
Non-Mentored	7	38	42	7	22	-
Mentored	8	42	224	191	121	-
Non-Mentored	8	30	91	115	42	-
Mentored	9	19	27	15	18	-
Non-Mentored	9	70	58	68	65	-
Mentored	10	22	48	59	67	-
Non-Mentored	10	56	48	70	66	-
Mentored	11	29	74	43	57	-
Non-Mentored	11	41	67	84	117	-
Mentored	12	50	62	42	153	-
Non-Mentored	12	35	67	40	70	-

Table 4.2 Continued

Matched Samples		Year 1	Year 2	Year 3	Year 4	Year 5
Mentored	13	49	37	20	68	-
Non-Mentored	13	93	92	95	97	-
Mentored	14	44	54	72	WD	-
Non-Mentored	14	132	139	253	WD	-
Mentored	15	60	119	68	WD	-
Non-Mentored	15	18	6	19	16	-
Mentored	16	25	62	18	WD	-
Non-Mentored	16	57	42	14	53	-
Mentored	17	38	47	104	37	-
Non-Mentored	17	7	0	14	2	-
Mentored	18	30	59	91	31	-
Non-Mentored	18	167	WD	-	-	-
Mentored	19	45	38	49	43	-
Non-Mentored	19	38	59	75	130	-
Mentored	20	1	50	53	119	-
Non-Mentored	20	67	78	64	WD	-
Mentored	21	10	52	27	40	-
Non-Mentored	21	15	7	0	WD	-
Mentored	22	62	81	59	57	-
Non-Mentored	22	25	18	41	WD	-
Mentored	23	73	146	101	94	-
Non-Mentored	23	254	800	WD	-	-
Mentored	24	36	10	22	WD	-
Non-Mentored	24	3	7	8	4	-
Mentored	25	74	76	WD	-	-
Non-Mentored	25	14	24	5	-	-

Note. WD = Withdrawn; - = Unavailable Data

Credit Obtainment Data

A matched sample t-test was conducted to determine if there was a statistically significant mean difference between the number of academic credits earned each year, and the number of absences, by students participating in MTF compared to similar students who were not participating in MTF. Three outliers were detected by calculating the z-scores of each variable. If a z-score had an absolute value greater than 3.29, then the data were adjusted to the closest non-outlier (Tabachnick & Fidell, 2007).

Table 4.3 describes the paired sample statistics for credits from year to year for each group of students. A significant difference in the number of credits earned during the first year of high school was found. In years two, three, and four, mentored students never outperformed their non-mentored peers, but were able to close the achievement gap that was present during the first year of high school.

Table 4.3
Paired Sample Statistics for Credits

	Mean	N	Std. Deviation
Year 1			
Mentored Credits	5.920	25	1.8239
Non-Mentored Credits	7.460	25	1.3143
Year 2			
Mentored Credits	6.021	24	2.0980
Non-Mentored Credits	6.167	24	1.8977
Year 3			
Mentored Credits	5.795	22	1.3062
Non-Mentored Credits	6.091	22	1.9739
Year 4			
Mentored Credits	5.321	14	2.1178
Non-Mentored Credits	5.929	14	1.1579

Table 4.4 describes the results of the paired sample t-test for credits between the two groups. The only significant differences (p=.002) was found in year one, where students not participating in the mentoring program earned more credits than their mentored counterparts.

Table 4.4
Paired Sample Test for Credits

	(Paired Differences) Mean	Std. Deviation	t	Sig.
Year 1 Mentored Credits - Non-Mentored Credits	-1.54	2.1886	-3.518	.002 (2-tailed)
Year 2 Mentored Credits - Non-Mentored Credits	-.1458	2.66	-.269	.791 (2-tailed)
Year 3 Mentored Credits - Non-Mentored Credits	-.2955	2.2973	-.603	.723 (one tailed)
Year 4 Mentored Credits - Non-Mentored Credits	-.6071	2.7608	-.823	.787 (one tailed)

When analyzing the data pertaining to hypothesis two, it showed no significant difference in the number of academic credits obtained by students participating (M=*6.021*, SD=*2.098*) in a formal mentoring program their second year, when compared to students who were not receiving mentoring (M=*6.167*, SD=*1.8977*). A mean difference of *-.1458*, *95%* CI [*-1.27, .98*], t(*23*)=*-.269*, (p=*.791*) was produced, therefore the researcher accepts the null hypothesis.

When analyzing the number of credit obtained during their third year of high school, there was no statistically significant differences between the means *-.2955*, *95%* [*-1.31, .72*], t(*21*)=*-.603*, (p=*.723*) of students receiving mentoring (M=*5.795*, SD=*1.3062*), as opposed to not receiving mentoring (M=*6.091*,

SD=*1.9739*). The results of the data analysis has failed to reject null hypothesis, and therefore the alternative is not accepted.

When assessing hypothesis four, the data failed to reject the null hypothesis that a significant difference in the number of academic credits would by obtained by students participating in a formal mentoring program during their fourth year of high school. Students participating in the mentoring program earned fewer credits (M=*5.321*, SD=*2.1178*) as compared to students who did not participate in the mentoring program (M=*5.929*, SD=*1.1579*). A paired samples t-test showed no significant difference between the two groups. A mean difference of -*.6071* was produced at *95%* CI [-*2.20, .99*], t(*13*)=-*.823*, (p=*.787)*.

Graduation Data

Table 4.5
Time to Graduation for mentored and non-mentored students

	Total Number of Students	Number of Graduates	Graduation Rate	Average Years to Graduate	Number of Students Still Enrolled	Number of Students Withdrawn
Mentored Students	25	15	60%	4.1	1	9
Non-Mentored Students	25	17	68%	4	2	6

When compared, 15 of the 25 (60%) mentored students graduated from high school, while 17 of the 25 (68%) of the non-mentored students graduated, as

shown in Table 4.5. On average, mentored students graduated in 4.1 years, while their non-mentored counterparts graduated in four years.

Attendance Data

Table 4.6 describes the paired sample statistics data for unexcused absences from each period in a day produced when analyzing the 25 matched samples, while Table 4.7 describes the results of the paired sample t-test for absences between the two groups. No significant difference was found between the two comparison groups by year.

Table 4.6
Paired Sample Statistics for Absences

	Mean	N	Std. Deviation
Year 1			
Mentored Absences	43.680	25	29.8994
Non-Mentored Absences	53.360	25	47.1636
Year 2			
Mentored Absences	66.458	24	49.0722
Non-Mentored Absences	53.000	24	41.4341
Year 3			
Mentored Absences	58.864	22	43.8930
Non-Mentored Absences	55.591	22	41.6421
Year 4			
Mentored Absences	67.000	14	47.2977
Non-Mentored Absences	64.286	14	42.7073

Table 4.7
Paired Sample Test for Absences

	(Paired Differences) Mean	Std. Deviation	t	Sig.
Year 1 Mentored Credits - Non-Mentored Credits	-9.68	57.2994	-.845	.407 (2-tailed)
Year 2 Mentored Credits - Non-Mentored Credits	13.4583	58.9716	1.118	.275 (2-tailed)
Year 3 Mentored Credits - Non-Mentored Credits	3.2727	52.9781	.290	.613 (one tailed)
Year 4 Mentored Credits - Non-Mentored Credits	2.7143	66.1821	.153	.560 (one tailed)

Attendance data collected pertaining to hypothesis five from the first year of high school showed no statistical significance between students participating in a formal mentoring program (M=*43.68*, SD=*29.8994*) as compared to students not participating in a mentoring program (M=*53.36*, SD=*47.1636*). After conducting a paired sample t-test, a mean difference of *-9.68* was determined at a *95%* CI *[-33.33, 13.97*], t(*24*)=-*.845*, (p=*.407*). Therefore, the null hypothesis that there will be no significant difference in school attendance the first year between the matched pairs is accepted.

After running a paired sample t-test on attendance data gathered from the matched pairs second year of high school, the null hypothesis that no significant

differences would be found in the students' school attendance data during the second year of high school is accepted. Mentored students (M=*66.458*, SD=*49.0722*) were recorded absent more often then non-mentored students (M=*53.00*, SD=*41.4341*). A mean difference between the two groups of *13.4583* was established at *95%* CI [-*11.44, 38.36*], t(*23*)=*1.118*, (p=.*275*).

A matched sample t-test on attendance data for both hypotheses seven and eight, that there will be a significant difference in school attendance during the third and fourth year of high school. It was determined that students participating in a formal mentoring program during their third (M=*58.864*, SD=*43.8930*) and fourth (M=*67.00,* SD=*47.2977*) year were absent more than their non-mentored counterparts third (M=*55.592,* SD=*41.6421*) and fourth (M=*64.286,* SD=*42.7073*) year of high school. Attendance data collected from year three showed a mean difference of *3.2727* at a *95%* CI[-*20.22, 26.76*], t(*21*)=.*290*, (p=.*613*). The mean difference declined in year four to *2.7143*, with a *95%* CI [-*35.50, 40.93*], t(*13*)=.*153*, (p=.*560*). Because no significance was determined for either year, the data failed to reject the null hypothesis for both years. Therefore, the alternative hypothesis for both years is rejected.

Summary

The results of the matched sample t-test showed that there was a significant difference in the number of credits earned by non-mentored students during their first year of high school, compared to mentored students. After year

one, there was no longer a significant difference between either of the groups when analyzing the number of credits earned. The data did not show any significant difference in the number of absences at any point in time during the students' high school experience.

Chapter 5

Summary, Findings, Conclusions, Implications and Recommendations

When students do not progress with his or her respected cohort, he or she is more likely to face the hazardous decision of dropping out of high school and never receiving their high school diplomas (Bridgeland, Dilulio, & Morison. 2006). According to the Texas Education Agency (2013), grade retention rates increased by 10%, 5.7%, and 5.2% in grades nine, ten, and eleven during the 2010-2011 school year. That same year, the United States experienced a dropout rate of 7.1% (Marchbanks et al., 2015). Coupled with our nations current labor market issues, the decision of dropping out carries a high financial burden with it than in years past (Bloom, 2010).

By choosing to dropout of school, students limit their opportunity for future jobs and increase the their likelihood of requiring governmental assistance. Burris and Roberts (2012) estimated that nearly 40% of high school dropouts between the ages of 16 and 25 rely on some form of welfare to meet their daily needs. On average, a high school dropout will cost the federal government approximately $292,000 (Sum, Khatiwada, & McLaughlin, 2009).

Beyond public assistance, individuals who do not obtain a high school education have an earlier rate of death, unemployment, and divorce (Bowers, Sprott, & Taff, 2013; Bridgeland et al., 2006; De Ridder, Johnsen, Holmen, & Bjørngaard, 2013). Failure to complete high school also increases the likelihood

of an individual participating in unlawful behavior and the possibility of future incarceration (Hatt, 2011; Sweeten, Bushway, & Paternoster, 2009). Coupling all of these consequences together has an impact beyond the individual; the ramifications of dropping out have now become a societal issue and concern.

The purpose of this study was to determine if the participation of academically at-risk students in a formal mentoring program, Movement Towards a Future, had a positive effect on a student's attendance and academic achievement, when compared to similar students not participating in the mentoring program. Ten hypotheses guided the study.

Findings

The first four hypotheses were used to assess the effect of mentoring on academic achievement. Through the use a matched sample t-test, it was determined that non-mentored freshmen acquired a significantly higher number of academic credits than when compared to their mentored peers in the same year. During years two, three, and four there was no significance found between the number of credits gained by mentored and non-mentored students.

Hypotheses five, six, seven, and eight assessed the attendance of mentored and non-mentored students. Mentored students had fewer recorded absences during their first and second years of high school, but no significant difference could be found between the two groups during any time in high school.

The findings in this study show that at no point in time during high school did mentoring produce a significant difference in a student's academic achievement or attendance when compared to non-mentored students. In fact, non-mentored students obtained a significantly higher number of credits their first year of high school. The lack of significant differences between the two groups throughout high school is explained by The Model of Youth Mentoring and the expectation that the effects of mentoring may not have a noticeable presences for a long period of time (Rhodes, 2002).

Effects of mentoring have been considered "complex and subtle, and may emerge over a relatively long period of time" (Rhodes, 2002, p. 50). The effects on attendance do not coincide with previous studies (DeSocio et al., 2007). Though mentored students had fewer absences throughout the course of their high school career, the attrition rate of mentored students was higher. Because of attrition rates from both groups, the statistical power of the current study's attendance data was diminished, as was the case in previous studies (DeSocio et al., 2007).

This study determined that there was no significant difference in the number of credits obtained between mentored and non-mentored students. Unlike Larose et al. (2011), this study was unable to establish any significant impact on student achievement within the first year of mentoring. This has not been an uncommon occurrence because previous research has shown that the effects of

mentoring are usually dependent upon the duration of the mentoring relationship (Núñez, Rosário, Vallejo, González-Pienda, 2013).

Limitations of the Study

Grossman (2005) identified multiple weaknesses that occur when examining a mentoring program and using a matched sample:

1. Random assignment is the most optimal procedure for examining a mentoring program but is often an unethical approach, especially when comparing smaller sample sizes.
2. Outcomes between the two groups can differ because of other reasons besides mentoring.

Other weaknesses that arose within the study are as follows:

1. The attrition of students within the study directly affected the number of absences recorded in the later years of high school.
2. Students could not be perfectly matched to increase a stronger internal validity.
3. The sample size of this study was relatively small.
4. The study did not consider each student's previous academic ability.
5. The study did not consider each student's previous attendance data.

Many of the students were withdrawn from the school before completing high school, or data for the students was no longer available. Because of this the attrition of students within the study was higher than expected, Students within

the study were also not perfectly matched. Socio Economic status was given priority but was not always able to be shared within the matched pairs because doing so would mean sacrificing multiple other matching characteristics.

One of the biggest limitations within the study was the small sample size of the study. Because Movement Towards a Future is a small mentoring program at one school, this was an expected limitation prior to conducting the study and why a matched sampling procedure was used.

The study also found that students that were did not participate in Movement Towards a Future a significant amount more of academic credits their first year of high school, as compared to student participating in the mentoring program. The study did not consider prior academic and attendance data of the matched samples. It is unknown if the achievement gap present during the students' first year of high school was present in prior years as well. It is also unknown if their had ever been a significant difference in attendance in earlier years.

Implications for Theory, Research and Practice

The study supports The Model of Youth Mentoring as it pertains to the duration of mentoring relationships (Rhodes, 2002). As students remained in the mentoring program, the significant gap in credits between the two groups began to diminish. Also, the differences that mentoring made on students may also not

be in the area of cognitive development, but within the student's social-emotional and identity development, which were not measured within the study.

Practitioners should further explore the effects of mentoring. The duration of the mentor-mentee relationship is important to consider when implementing any type of mentoring program. By making a mentoring program available to students earlier in their educational experience, more noticeable effects may be present during the later stages of the student's educational career.

Recommendations for Future Studies

The study demonstrated that non-mentored students no longer obtained a higher number of credits after their first year of high school as compared to those students who participated in one mentoring program. The study was only able to capture the effects of mentoring over a four-year period during the students' high school experience. The following are recommendations for future research:

1. It should examine the effects on a student's social-emotional development.
2. It should examine the effects on a student's identity development.
3. It should focus on the number of discipline actions taken on mentored students.
4. A longitudinal study should be conducted on students who participated in a mentoring program to determine if noticeable effects were present after their high school experience.

The purpose of this study was to determine if mentoring through MTF had a positive effect on student achievement and attendance. The study found that students who participated in the mentoring program Movement Towards a Future overcame a significant deficit in their credits after their freshman year, when compared to non-mentored students. No significance was found at anytime during the students' high school experience. The lack of significance during high does not mean mentoring failed to make a difference in the lives of students.

The effects of mentoring often go unnoticed for a prolonged period of time. Furthermore, there are multiple areas of development that are affected by mentoring and a student's cognitive development may not necessarily be the initial area that demonstrates positive growth as a result of mentoring. Educators need to be aware of the complexity of mentoring and its effects on students. As we better understand the complexity of mentoring we can begin to train our teachers to build relationships that create a safe learning environment that promotes student engagement and achievement.

Conclusion

Every year, our schools are serving academically at-risk students that are facing greater challenges outside of the classroom that inhibit their opportunity for achievement inside the classroom, as compared to their peers. Grade retention rates have been on the rise in grades nine, ten and eleven (Texas Education

Agency, 2013), which statistically lowers a student's likelihood of completing their high school education (Bridgeland, Dilulio, & Morison. 2006).

The findings in this study did not show that students participating in Movement Towards a Future performed significantly better than non-mentored students at any point in time during their high school education. This does not mean that mentoring was not making a difference. The mentoring program selected students they believe were the most at-risk of dropping out. The study showed that after their first year of high school, mentored students performed at the same level as their non-mentored peers. This in itself is significant because of the expectation that the effects of mentoring may not be noticeable for extremely long periods of time.

Appendix A

The following is a list of talking points used to guide mentor and mentee discussions. Each talking about is accompanied with suggested questioning that could be used by the mentor to stimulate a deeper discussion. There is not a set order for which the talking points should be carried out in, nor is it necessary for every talking point to be covered during the mentoring process.

1. Why does school matter?
2. How do the classes you take in school help you in real life?
3. Why is attendance necessary?
4. What are the consequences of dropping out?
5. What is the cost of living?
6. Why is goal setting important?
7. What is the importance of getting involved in extra curricular activities?
8. How do understand and build your own self-esteem?
9. How do you learn?
10. What are great study habits to begin to practice?
11. What are great testing strategies?
12. Do you have self-confidence?
13. Who are your influences?
14. What is your potential?

15. What are you future goals and what obstacles could keep you from accomplishing them?
16. What does it take to become a successful person?
17. What is your opinion of respect?
18. How do you conduct a self-assessment?
19. What jobs are you interested in?
20. What are you future goals and what path must you take to achieve those goals?
21. How do you build a resume?
22. How do you prepare to be interviewed?
23. How can you fund my academic aspirations after high school?
24. Have your goals changed?

Appendix B

Your Protocol has been returned 1Protocol #2015706559

ERA <erahelpdesk@uta.edu>

Thu 5/7/2015 3:05 PM

To:Washburn, Adam J <adam.washburn@mavs.uta.edu>;

Dear Washburn, Adam J,

Your IRB Protocol: 2015-00655 - "Protocol for Mentoring Academically At7Risk Students: What Are The Effects? " has been returned for changes by the IRB Coordinator with the following comments:

Good afternoon Adam,

I just spoke with Dr. Hardy regarding your IRB Protocol resubmission for protocol 2015-0655, "Protocol for Mentoring Academically At Risk Students: What Are The Effects?" and he has confirmed that at this time, all of the student data that you will receive will be completely de-identified by the time that it enters your hands. Therefore, your project would not require IRB review since it would not fit the definition of research with human subjects. However, if in the future you may need to access identifiable data, please let us know and we'll be happy to work with you to obtain a protocol at that time.

Thank you, and please feel free to let me know if you have any questions at astearns@uta.edu .

Alyson.

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