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Social interest and self -efficacy levels among high school volunteer mentors and their non -mentor peers: A comparison study

Courtney Brewer
Walden University

Walden University

COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES

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Courtney Brewer

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ABSTRACT

Social Interest and Self-efficacy Levels among High School Mentors and their
Nonmentor Peers: A Comparison Study

by

Courtney Brewer

MS, Long Island University, 1995
BA, State University of New York at Stony Brook, 1992

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Psychology
College of Social and Behavioral Sciences
School of Psychology

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ABSTRACT

This study examined social interest, social self-efficacy, and general self-efficacy levels of high school volunteer mentors and their nonmentor peers. School-based peer mentoring has become a popular method for providing support services to students. While several studies examining mentee outcomes appeared in the past decade, less research has examined characteristics of the high school mentors involved. The choice of variables was grounded in Bandura's Social Learning Theory and Adler's Individual Psychology. Thirty-seven mentors and 32 nonmentors from a suburban New York high school completed the Social Interest Scale and the Self-efficacy Scale. Mentor volunteers scored significantly higher in social self-efficacy than their nonmentor peers, $t(67) = 2.98$, $p < .006$. The relationship between being mentored and becoming a mentor was examined using a chi-square analysis, and was found to be statistically significant, $\chi^2(1, N = 69) = 4.18$, $p = .041$. Females demonstrated higher levels of social interest than males, $t(67) = 2.78$, $p < .006$. The social change implications of this research include gaining insight into the characteristics of high school mentor volunteers, providing program coordinators with a mechanism for ensuring more positive outcomes for both mentees and mentors. Creating more positive outcomes for mentees may inspire them to become mentors later on, which increases the overall benefits of mentoring in the community. Providing an outlet for social interest and bolstering self-efficacy levels among mentors will increase the potential for future successful endeavors.

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction of Chapter

This study was designed to examine the characteristics of high school volunteer mentors with respect to two separate measures: social interest and self-efficacy. This study attempted to answer the question, are students who volunteer as mentors higher in either self efficacy or social interest than their nonmentor peers. Knowledge of such fundamental characteristic differences will allow mentoring program coordinators to enhance developmental outcomes for mentees, and provide higher quality experiences for all students involved.

Schools are being asked to address an ever-widening scope of issues which exist within their student populations. Beyond academics, parents and society in general both look to the school system to provide students with a social education as well the basics of reading, writing and arithmetic. Increasing positive social interactions and reducing the risk of negative or aggressive behaviors are central aspects of education in many schools. Character development curricula abound, and schools seek to foster the opportunity for positive, prosocial behaviors, as well as academic achievements.

The term *mentor* implies a relationship between a more experienced, wiser individual, and a younger, less experienced person. A basic understanding of the word mentor is attributed to Homer, and his epic tale of the heroic warrior Odysseus. Odysseus has left his own son, Telemachus, in the care of an old and trusted friend, Mentor. Mentor serves as a guide and source of support for the young Telemachus in his father's absence (Rouse, 1937).

Structured mentoring programs have become an accepted tool in schools within the past decade. Big Brothers Big Sisters of America sponsors the largest number of structured mentoring programs in the US (Herrera, 2004), and the reported successes of its community-based model have fueled the development of current school-based models. (Herrera, 1999, 2004; Herrera et al., 2007).

Designed to increase positive, prosocial behaviors while decreasing the risk for negative and aggressive behaviors, developmental mentoring programs have gained a foothold in schools across the U.S. MENTOR/The National Mentoring Partnership, an organization dedicated to the support and promotion of youth mentoring programs, estimated that as of 2005, over 3 million young people were participating in structured mentoring activities (MENTOR/The National Mentoring Partnership, 2005). Examinations of various school-based programs have noted the advantages gained through the use of school-based mentoring programs (Herrera, 1999, 2004; Herrera, Sipe, & McClanahan, 2000). By staging programs within the schools, factors such as transportation and parental involvement have less chance of evolving into barriers. As a result, higher risk students (those with less parental involvement and fewer resources) are more easily engaged in school-based mentoring (Herrera 1999, 2004; McCluskey, Noller, Lamoureux, & McCluskey, 2004).

The use of high school students as volunteer mentors has also become an accepted practice, allowing program administrators to reduce the time and cost spent on lengthy background checks that were required in community-based programs, where adult volunteers were meeting with mentees one-on-one in their larger community. Oversight and administration of school-based programs is also more cost effective, with program

supervisors being able to monitor and supervise several mentor-mentee pairs at one time (Herrera, 1999; Karcher, Davis, & Powell, 2002). In addition to ease of supervision and increased access to mentees, school-based programs have the advantage of increased teacher involvement. Teachers are able to provide mentors and program coordinators with valuable feedback regarding academic and behavioral aspects they observe during the course of the day (Herrera, 1999).

Characteristics of High School Mentors

The number of formal school-based mentoring programs is growing (Herrera, 2004) Approximately 45% of mentoring programs are reportedly site-based, with 70% of all site-based mentoring programs being school-based (Karcher, Kuperminc, Portwood, Sipe, & Taylor, 2006). Accompanying this growth has been a concern for evaluative standards of program outcomes. While the literature on school-based mentoring indicated a trend toward success and positive outcomes, many of the reported outcomes are in the form of testimonials or qualitative descriptions. Less information exists regarding measurable, quantifiable outcomes of participation in structured mentoring programs. While mentoring studies often focused on outcomes for mentees (DuBois & Rhodes, 2006; Grossman & Rhodes, 2002; Herrera et al., 2007; Karcher, 2005; King, Vidourek, Davis, & McClellan, 2002), it is less common to examine the factors associated with mentors in school-based programs (Karcher & Lindwall, 2003). This study was designed to measure mentor characteristics, which may serve as bases for mentor selection. Specifically, the constructs of self-efficacy and social interest among mentors, and the possible relationship between the two factors within mentors, were examined.

Theoretical Foundation of Study

The underlying basis for the reported successes of mentoring programs can be traced to Bandura's (1977) Social Learning Theory. Observational learning is a key factor in human growth and survival. Without the capacity to learn through observation, humans would be less successful in their development (Bandura). By observing the successes and difficulties experienced by models, learners have a greater chance of successfully completing tasks with less risk of injury, as well as failure.

Learning by observation is the key component in mentoring programs; the mentor serves as a role model, demonstrating positive and adaptive interaction patterns, while the mentee observes these behaviors and learns to successfully incorporate them into his or her own behavioral repertoire. Developmental mentoring programs often model tolerance of others, coping with frustration and disappointment, and techniques and tips for making and keeping friends (Karcher et al., 2006). Mentees have the opportunity to practice conversation starters and demonstrate empathy for and interest in others, factors which will lead to generalization and more positive interactions outside of the confines of the mentoring program itself.

In addition, school-based programs also have as a goal increasing school connectedness in mentees (Karcher, 2005). By providing an opportunity for supportive and positive interactions within the walls of the school, developmental mentoring programs are designed to increase positive associations to school held by mentees, who often are referred to programs as a result of lower levels of engagement across social and academic realms. A more positive general feeling toward the school itself can lead to

higher levels of connectedness, leading to better overall performance (Catalano,

Haggerty, Oesterle, Fleming, & Hawkins, 2004).

Abstract Modeling

Rather than providing mentees with a specific set of skills, which can be

duplicated in other interactions outside of mentoring programs, school-based mentoring

instead relies upon abstract modeling. Bandura (1977) described abstract modeling as

providing a learner with a general set of principles or rules, which guide behaviors in

future interactions. Learners cannot exactly replicate responses learned in later, novel

situations; instead, the goal is for them to apply a general principle or guideline which has

been successfully modeled, to new and different social situations outside of the

mentoring program.

Perceived Competence of Mentors

Mentors are viewed by mentees as being socially successful and competent, and

mentees assign a certain status to mentors. Perceived competence of the mentor plays a

crucial role in the likelihood that mentees will emulate mentor behaviors (Brewer &

Wann, 1998). If mentees consider their mentor as being trustworthy, likeable, and

competent, they will be more likely to value and incorporate mentor behaviors into their

own interactions (Brewer & Wann). Thus, the higher the perceived status of the mentor,

the more engaged the mentee becomes and the more likely they are to emulate the

behaviors modeled by the mentor.

Self-efficacy Beliefs

Bandura (1977) defined self-efficacy as the belief in one's ability to create certain

outcomes. The degree to which a person believes they are effective in coping with

adversity or difficult situations will determine the extent to which they make an effort to do so. Known as efficacy expectations, individuals will determine how much effort they will expend and how long they will persist in the face of obstacles based upon their belief in the likelihood of their own success. The stronger a person's self-efficacy beliefs are, the more active their efforts will be in creating certain desired outcomes. Those outcomes then serve to strengthen future assessments of efficacy; a self-fulfilling prophecy develops where successful outcomes lead to stronger beliefs in success, while unsuccessful outcomes lead to lowered levels of self-efficacy and less effort expended in future situations (Bandura).

Positive mentoring experiences can become corrective experiences for mentees who have low efficacy expectations. Efficacy beliefs with regard to social and coping skills can be bolstered through execution of successful interactions with mentors. By practicing positive behaviors which have been modeled, and receiving positive feedback regarding their efforts, mentees can have self-efficacy levels raised.

By the same token, mentors can come to have stronger efficacy beliefs regarding their own ability to make a difference in someone else's life by observing the success of their mentees. Mentors who expect to meet with success in their role are more likely to present themselves as competent to their respective mentees; this expectancy can lead to increased levels of positive interactions and better program outcomes. Self-efficacy in mentors has been positively correlated with positive experiences within mentoring relationships, and with greater amounts of mentor/mentee contact (Parra, DuBois, Neville, & Pugh-Lilly, 2002). This particular aspect of mentoring has been studied less extensively. This study attempted to address this gap by examining the self-efficacy

beliefs of high school mentors and has provided a comparison between mentor self-efficacy levels and self-efficacy levels of their nonmentor peers.

Social Interest Levels

Social interest is said to represent a reflection of one's identification with humanity and feeling of belonging to community (Karcher & Lindwall, 2003). A central component in Adler's Individual Psychology, social interest is an innate characteristic, yet is also one that requires fostering during developmental years (Adler, 1964). By having caring, altruistic and cooperative behavior modeled for them, young children can create a bond with their fellow humans and be able to work for the good of the community and not be absorbed by personal conquests alone (Adler).

Mentoring can be seen as an activity which benefits society as a whole, by instilling knowledge and values in the future adult members who will someday hold decision-making power. Social interest is viewed as having a connection to society, and a desire to participate in solving problems of society (Adler, 1964). Altruism has been linked to social interest, and it is a common assumption that students higher in social interest will be more likely to volunteer to participate in altruistic activities, such as mentoring younger students (Karcher & Lindwall, 2003). By allowing an outlet for social interest to be expressed and modeled by mentors, mentoring programs can serve as an effective method for improving school climate.

<div align="center">Statement of the Problem</div>

The existing literature on the effects of mentoring has been largely based on narrative and qualitative information (Dubois, 2002; King et al., 2002). While the number of empirical studies yielding quantitative data has grown in recent years, the focus of

many mentoring studies has been the effects of mentoring on the mentees. The specific variables of self-efficacy and social interest among mentors have received very little attention. This study was designed to address the problem of this gap in quantitative research on school-based mentoring, and provide mentoring program coordinators with more useful tools for creating successful programs.

Social Change Implications

This study sought to expand the existing knowledge of the measurable characteristics of high school mentors, which can lead to more effective outcomes and more efficient mentor screening procedures. By identifying those students who are more likely to persist in their mentoring relationship, through both time and adversity, schools and program developers can build stronger programs for those students who receive mentoring services.

Avoiding premature termination of the mentoring relationship by utilizing highly motivated and interested mentors can protect mentees from the negative effects of such early termination. These negative effects have been established within the literature on mentoring (Grossman, & Rhodes, 2002; Karcher, 2005; Rhodes, Grossman, & Resch, 2000). In addition, providing mentors with an outlet for positive expression of their desire to make a positive contribution in their society can become an affirming experience, bolstering self-efficacy levels and allowing them to face future challenges with even more confidence and resiliency. Finally, creating more positive outcomes for mentees may inspire them to become mentors later on, which exponentially increases the overall benefits of mentoring in the community.

Purpose of the Study

The question of whether or not social interest and self-efficacy are correlated with one another in volunteer mentors is one which has received limited attention in the current literature. This study examined the link between social interest and self-efficacy in high school mentors, by measuring levels of social interest and self-efficacy among high school mentors and their nonmentor peers.

Nature of the Study

This study examined both social interest and self efficacy levels among high school students who have volunteered as mentors, and compared those levels to a group of their nonmentor peers. In addition, the relationship between the two constructs within mentors was examined, to determine if those students highest in self efficacy are also highest in social interest. Social interest and self efficacy levels were compared among mentors, to determine if those students who are returning mentors (i.e., those who are persisting in their efforts) are higher in either or both characteristics. Effects of gender were also studied. Finally, an examination of whether or not more current mentors were mentees themselves provided some insight into the likelihood that being mentored can increase the desire to become a mentor later on.

This study utilized a questionnaire method and is quantitative in nature. It was designed to ascertain the self-efficacy and social interest levels of high school students who have volunteered as mentors in a school-based mentoring program. These results were compared to results obtained for high school students who have not volunteered as mentors; the resulting scores for mentors were also be compared within the group to

determine which students are highest in either characteristic. All participants were high school students in a suburban school district located in New York.

<div align="center">Research Questions and Hypotheses</div>

The following research questions and related hypotheses have been formulated, and have been drawn from the existing literature on the effects of school-based mentoring on student mentors and mentees (Karcher, 2005; Karcher, Davis & Powell, 2002; Karcher & Lindwall, 2003; Lee, 1999; McCluskey et al., 2004; Rhodes, 2008).

Research question (1): Are social interest levels higher in those students who volunteer as mentors than in those students who do not? Hypothesis (1): Those high school students who volunteer as mentors will score higher on social interest levels as measured by the Social Interest Scale (Crandall, 1975) than their nonmentor peers. Null hypothesis (1): There will be no significant difference in social interest levels as measured by the Social Interest Scale (Crandall) between high school mentor volunteers and their nonmentor peers.

Research question (2): Are self-efficacy levels higher in those students who volunteer as mentors than in those students who do not? Hypothesis (2): Those high school students who volunteer as mentors will score higher on self-efficacy levels on the Self-efficacy Scale (Sherer et al., 1982) than their nonmentor peers. Null hypothesis (2): There will be no significant difference in self-efficacy levels as measured on the Self-efficacy Scale between high school mentor volunteers and their nonmentor peers.

Research question (3): Do high school mentors who have higher social interest levels also have higher self-efficacy levels? Hypothesis (3): Among mentors, those students with higher social interest scores will also have higher self-efficacy scores,

indicating a relationship between the two variables as measured by a significant positive correlation between scores on the Social Interest Scale (Crandall, 1975) and the Self-efficacy Scale (Sherer et al., 1982). Null hypothesis (3): There will be no significant correlation between mentor scores on the Social Interest Scale and the Self-efficacy Scale.

Research question (4): Are students who were mentored more likely to become mentors than their nonmentored peers? Hypothesis (4): There will be more students who were mentored themselves among the volunteer mentor group than among the nonmentor group as measured by a significantly higher number of former mentees in the mentor group than in the nonmentor group. Students were asked to self-report on their former mentee status. Null hypothesis (4): There will be no difference in the number of former mentees among the mentor group and the nonmentor group.

Research question (5): Are those mentors who are returning to the program highest in both self-efficacy and social interest among the mentor group? Hypothesis (5): Among mentor volunteers, those who are returning after one year or more of mentoring will have higher levels of both social interest and self efficacy, demonstrating both a commitment to social change and a willingness to persist in their efforts with mentees. This will be evident in a significantly higher average score among returning mentors on both the Social Interest Scale and the Self-efficacy Scale than among new mentors. Null hypothesis (5): There will be no significant difference in average scores on the Social Interest Scale and the Self-efficacy Scale among returning mentors and first time mentors.

Definition of Terms

Mentor: An individual who has chosen to volunteer their time in a structured program designed to increase the overall social functioning of a younger, less mature individual with whom they are paired on a regular basis. In the developmental mentoring program this study was concerned with, mentors are charged with modeling socially appropriate behaviors and skills in response to various, typically occurring social situations which mentees are likely to find themselves in.

Mentee: An individual who has been identified as potentially benefiting from participation in a structured program designed to increase their overall social functioning, by meeting with an older, more mature mentor on a regular basis. In the developmental mentoring program this study was concerned with, mentees are encouraged to adopt behaviors modeled by mentors and incorporate those behaviors into their own set of social skills.

School-based mentoring: A type of site-based mentoring program which takes place on school grounds, typically during regular school hours, for 1 hour each week (Karcher et al., 2006).

Developmental mentoring: Student-to-student mentoring in which high school students volunteer to mentor elementary or middle school students either after school or on the weekends (Karcher et al., 2006). The primary focus in developmental mentoring is the development of the mentoring relationship, as a vehicle for promoting positive growth in mentees (Karcher et al.)

Peer mentoring: Also known as cross-age peer mentoring, this type of mentoring program typically is school-based. Older youth are utilized as mentors for younger

students; the focus of peer mentoring programs is relationship building rather than the achievement of academic or behavioral goals. Instead, goals are developmental and include social skills, connectedness to school, and self-esteem (Karcher et al., 2006).

Social learning theory: A framework for understanding human thought and behavior which emphasized that thoughts, emotions, and behaviors can be markedly influenced by observation as well as by direct experience (Bandura, 1977, p. vii). An agentic perspective, social learning theory stated that individuals have the capacity to both influence and be influenced by the interactions of cognitive, behavioral, and environmental factors (Bandura, 1999).

Abstract modeling: A process in observational learning where learners extract common attributes and underlying principles of modeled behavior, and can later behave in ways that are stylistically similar to the model (Bandura, 1977, p. 41). Specific responses cannot be mimicked in abstract modeling; instead, learners must apply general rules or principles to novel situations (Bandura).

Self-efficacy: The belief in one's ability to successfully execute the behaviors required to produce desired outcomes (Bandura, 1977, p.79). This study will measure self-efficacy levels among participants through the use of an established measure, the Self-efficacy Scale (Sherer et al., 1982).

Social interest: Based on the work of Adler, social interest can be defined as a sense of social feeling toward all humankind, which is based on one's identification with others and a transcendence of self-interest that results in a genuine concern with and striving for community and human welfare (Leak & Leak, 2006). This study measured

social interest levels among participants through the use of an established measure, the Social Interest Scale (Crandall, 1975).

Assumptions

This study sought to further the current understanding of the role of social interest and self-efficacy levels among high school mentors, with the following assumptions in place. First, it is assumed that the theoretical foundations upon which the study rests are valid. Specifically, it is assumed that Bandura's Social Learning Theory and the construct of modeling found within that theory, and the construct of social interest as defined in Adler's Individual Psychology, are acceptable frameworks to utilize in an examination of mentor characteristics.

Secondly, this study assumed that the measures used to examine the constructs of social interest and self efficacy are sound and empirically valid methods for drawing accurate conclusions regarding the existence of each construct within and among study participants. Specifically, Crandall's Social Interest Scale (Crandall, 1975), and Sherer et al.'s (1982) Self-efficacy Scale are assumed to be acceptable and valid measures which are appropriate for use in this study with this sample.

Third, it is assumed that mentor and nonmentor participants voluntarily filled out all measures accurately and honestly, and that the data collected reflected their actual levels of social interest and self-efficacy. A final assumption is that nonmentor participants were not receiving or had not received any kind of training which may increase their social interest and self-efficacy levels, which is unknown to the investigator. It is assumed that data collection began before mentors received any training, and that nonmentors also have had no such experiences.

Limitations

The most obvious limitation of this study is in its level of generalizability. The study examined one mentoring program in one school district on Long Island. The majority of participants were White, middle class students, which is reflective of the larger community demographics. There was a lack of cultural diversity within the sample, and results could not be generalized in an effort to understand the same variables among students in more urban schools, or among students from different cultural backgrounds.

This study relied upon the cooperation of high school students and their parents. Students who volunteer for any kind of extra-curricular activities may have higher levels of self-efficacy in general, since they are willing to make the effort to gain admission to various programs. The self-efficacy levels of mentor volunteers may be a by-product of their willingness to involve themselves in positive and rewarding experiences in general, and have less to do with the nature of the activity itself. Nonmentor students who volunteer for participation, and go through the trouble of obtaining parental permission and handing in their surveys, may not be representative of the overall general nonmentor population. Instead, they may be higher in general in their social interest levels, as reflected in their willingness to participate.

Significance of the Study

The use of structured mentoring programs designed to foster positive relationships, in an effort to improve overall functioning of students, has become a widespread practice among schools. The pressure to educate students socially as well as academically, combined with the pressure to meet the varied needs of students with fewer

monetary resources, has caused schools to seek low cost alternative methods in which to incorporate character building curricula (Herrera et al., 2007).

School-based mentoring has been seen by many as being the answer to the problems of low levels of connectedness and poor social skills among students. A low cost and convenient alternative to community-based mentoring, school-based mentoring offers access to students who are traditionally underserved while allowing teachers to interject their observations and feedback into programs.

While many examinations of the effectiveness of school-based peer mentoring programs focused on mentee outcomes, less research has been conducted which examines the characteristics that define student mentors (Karcher & Lindwall, 2003). Schools will be better equipped to identify potential mentors, and to elicit their participation, if more is known about what makes a mentor persist and accept the challenges that can come with certain mentees. In addition, negative effects of early relationship termination on mentees can be avoided, if program leaders can increase their opportunities for identifying those students who are more likely to undertake a sustained and concerted effort to participate as mentors.

Chapter Summary

The purpose of this study was to expand the current understanding of the characteristics of social interest and self-efficacy among high school mentors. It is hoped that this study will contribute to the betterment of school-based mentoring practices. In doing so, mentoring program coordinators can create more opportunities for positive social change in school communities that implement structured site-based peer mentoring programs. Chapter 1 provided important information regarding theoretical foundations

and operational definitions of key concepts. The general design of the study, as well as related research questions with hypotheses, study assumptions, and limitations, are all included for better understanding.

Chapter 2 provides a comprehensive look at research which supports the notion that it is the process of social learning through abstract modeling which can account for the large number of reported successes among many school-based mentoring programs. A more in-depth look at the processes which underlie modeling, and the construct of social interest, provide a better understanding of the study's basis.

Chapter 3 explains the specific design of the study, including the participants, and a description of the community from which they are drawn. Information on the measures used and justification for their use in this investigation is also provided. Data collection techniques and analysis are also discussed.

Chapter 4 reviews the results of the data analysis. All statistical outcomes are reviewed and each previously outlined hypothesis is reviewed in light of those outcomes. Null and alternative hypotheses corresponding to each research question are discussed and support for either the null or the alternative is stated.

Chapter 5 concludes this study with a discussion on the interpretations of the related findings and suggestions for further research. Possible explanations for various results are reviewed. Implications for social change and the limitations of this study are also provided.

CHAPTER 2: LITERATURE REVIEW

Introduction of Chapter

The term *mentor* found its way into the literature thanks to Homer (Rouse, 1937).

In Homer's *The Odyssey,* Odysseus has been away, fighting battles in the far-off land of

the Trojans. Before departing from his home and family, Odysseus has asked his trusted

friend Mentor to care for his son Telemachus, and watch over Odysseus' home in his

absence. Today, one can define the term mentor in three important ways. A mentor is

someone who is not solely dedicated to the care of a younger, less experienced individual

(such as a parent may be), but is instead someone who attends to other duties in addition

to assuming the role of care-giver (McCluskey et al., 2004). A mentor is also someone

who serves to impart wisdom to another individual; and finally, a mentor is someone who

develops and maintains a long-term connection with another, less experienced, individual

(McCluskey et al.). Mentoring relationships often develop naturally, when one person

simply reaches out in order to support or guide another. In other situations, mentoring

relationships are carefully constructed within an organized setting designed to foster

some kind of positive influence upon mentored individuals (McCluskey et al.).

Mentoring programs have become an established method of influencing youth,

with reports of at least 4,500 different agencies involved in mentoring young people

(Karcher et al., 2006). The National Mentoring Partnership estimated in 2005 that

3,000,000 young people were engaged in formal, one-on-one mentoring relationships

with adult mentors. In 2002, this number was estimated to be at 2.5 million, showing a

steady increase over a 3 year period (MENTOR/The National Mentoring Partnership,

2006). Some programs have a specific focus, such as literacy improvement or reducing

the risk of teen pregnancy. Others take a comprehensive, youth development approach and attempt to improve social skills, increase positive interactions, and reduce negative behaviors (Karcher et al., 2006).

School-based mentoring programs typically have either an academic focus or a general youth development focus. Youth are often referred to school-based programs by teachers (Herrera, 2004). This review of the literature on youth mentoring will have as its focus those programs which involve school-aged children paired with either adults or older students in school-based, youth development mentoring programs. First, a closer look at the theoretical foundation which creates the underlying premise for the implementation of youth mentoring as both a prevention and intervention strategy will lend itself to an examination of Bandura's Social Learning Theory. The concept of social interest will then be examined, using the framework of Adler's Individual Psychology.

Current findings on mentoring and school climate and the potential for positive change as a result of mentoring will be discussed. An examination of the literature on relevant mentor characteristics and developmental mentoring will be provided. Finally, the relationship between successful mentoring and creating social change will be discussed.

<div align="center">Search Strategies Used</div>

A comprehensive search strategy was employed, using the following electronic EBSCO databases: Academic Search Premier, SocINDEX, and PsycARTICLES. The Walden University Library, through their partnership with the University of Indiana Library, assisted in the acquisition of books and related articles not available through the previously mentioned databases. The Suffolk County Community College library system

was also used in locating books. A search of national mentoring websites was

employed, including MENTOR/The National Mentoring Partnership, the National

Mentoring Center, Public/Private Ventures, and the Big Brothers Big Sisters of America

website. Search terms used were *developmental mentoring, school-based mentoring,*

youth mentoring, peer mentoring, mentor characteristics, social learning theory, social

interest, self-efficacy, and *modeling*. Boolean operators such as or, and, and not were also

employed in the search.

<div align="center">Theoretical Foundation in the Literature</div>

<div align="center">*Social Learning Theory*</div>

Bandura (1977) is credited with the creation of Social Learning Theory, a

sociobehavioral approach to learning. The sociobehavioral school of thought developed

in part as a response to the dissatisfaction with the traditional behaviorist input-output

model of behavior. Individuals were not always directly influenced by the environment in

a unidirectional manner. Instead, there exists the possibility for behavior, the

environment, and personal characteristics to all reciprocally influence one another

bidirectionally. This is the model posited by Bandura's Social Learning Theory, termed

"triadic reciprocal causation" (see Figure 1).
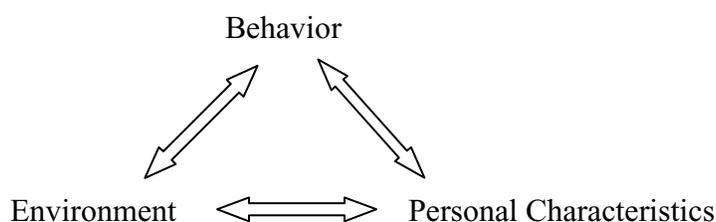
Figure 1. Bandura's triadic reciprocal causation.

Social learning theory also takes an agentic perspective. In Bandura's (1999) view, individuals are responsible for initiating their own behaviors in an attempt to accomplish goals which they deem meaningful. Individuals are neither completely autonomous, unaffected by their surroundings, nor are they at the mercy of environmental conditions. Instead, people have the capacity to both influence, and be influenced by, environmental factors (Bandura, 199). Individuals are capable of arranging and re-arranging their environment, generating cognitive responses to that environment, and producing consequences for their own behavior. This places a measure of control within the individual with regard to their own behavior.

Bandura (1977) stressed the importance of observational learning in human behavior. Modeling is a core concept within social learning theory, and provides the basis for much of what we learn and the ways in which we subsequently act. In terms of mentoring, modeling is the premise upon which mentoring programs are developed. It is the belief that mentees will adopt the same values, behaviors, or personal characteristics of their mentor models which lies at the heart of any mentoring program. Each aspect of the modeling process, as described by Bandura, can be directly related to mentoring situations and provide insight into the factors underlying the reported success of many mentoring programs.

Modeling

Learning by observing models is a functional adaptation of human behavior. Without this capacity, learning would be more laborious and fraught with many more errors (Bandura, 1977). The ability to learn through observation allows for the acquisition of large and integrated patterns of behavior, without having to engage in repeated trial

and error sessions (Bandura, 1977). Bandura proposed a specific process by which

observational learning through the use of models takes place among humans. Models

play an informative function through a process which has essentially four steps:

attention, retention, reproduction, and consequences (see Figure 2).

Attention to model behaviors	⇨	Retention of observed behaviors in memory	⇨	Reproduction of model behaviors	⇨	Examination of consequences

Figure 2. The stages of observational learning through modeling, as proposed by
Bandura.

Attention to Model Behaviors

Attention is the first step toward observational learning. In order to learn from a

model, the learner must first attend to and be aware of the model's presence. Certain

characteristics, however, will make the model more attractive to the learner, and thereby

increase the likelihood that the learner will extract information from their exposure to the

model (Bandura, 1977).

Within attention, Brewer and Wann (1998) identified a subprocess which

influences the likelihood of having modeled behavior be attended to by learners. In any

social setting, some individuals will attract more attention than others. Attention to model

behaviors depends to some extent on the perceived attractiveness of the model on the part

of the learner. By placing more value on the model itself as an attractive, engaging

individual, learners will attend more closely and possess a greater motivation to repeat

and incorporate the model's behavior into their own repertoire (Bandura, 1977). Brewer

and Wann noted that when learners assign characteristics such as attractiveness, trustworthiness, similarity, and perceived competence to models, the rate of attention paid to models increases.

In addition to these characteristics, Brewer and Wann (1998) identified social power as an influential characteristic within their examination of model influence on learner behavior. The authors first identified three different bases of social power, as established by previous research (French & Raven, 1959). The three types of power are legitimate (the learner perceives the model as being in a position of authority), expert (the learner perceives that the model is knowledgeable within a given area), and referent power (the learner feels some identification and/or liking for the model). If information regarding the social power of the model were conveyed to learners during the attention phase of observational learning, the effectiveness of the model could be influenced (Brewer & Wann, 1998).

In their examination of the effects of perceived social power on observational learning outcomes, Brewer and Wann (1998) utilized a design in which college students were asked to observe a model performing a puzzle task. Each group of participants was given information which would influence the social power assigned to the model by participants. One group was told the model was an expert in spatial tasks (the expert power group); the second group was told the model was an experienced teacher (the legitimate power group); the third group (the referent power group) had the model described to them as "warm and cautious", and an "intelligent, skillful, and industrious" individual (Brewer & Wann, p. 4); the fourth group was simply told they would be watching a model perform a puzzle task (the control group).

Each group watched the same video of the same individual completing the puzzle task, and was then asked to rate their impressions of the effectiveness of the model. Participants were then given the same puzzle task to complete. Those individuals who were in the power base groups completed the puzzle task in less time [t (56) = 1.58, $p < .05$], and had more correct pieces, [t (56) = 3.34, $p < .05$], than the control group. In addition, those in a power group were more likely to finish the puzzle than those in the control group, ($z = -2.81$, $p < .05$) (Brewer & Wann, 1998). There were, however, no significant differences found among the three different power groups and learner performance on any of the measured variables. The authors concluded that social power does indeed influence overall effectiveness of modeling in an observational learning task, by facilitating the subprocess of attention in observational learning.

Control group participants in Brewer and Wann's (1998) study did not, however, rate the effectiveness of the model as any less than those in any of the power groups, indicating the possibility that learners in the power groups were unaware of how effective the model had been in teaching the task. The finding that there were no significant differences among the three power groups on effectiveness rating or performance indicated that social power can enhance learning regardless of the type of power that is perceived by learners (Brewer & Wann, 1998).

Models, or mentors, may serve to influence mentee behaviors as long as the mentor is believed to have some sort of power in the mentee's perception. Mentors in an academic program, for example, do not have to be thought of as experts in any subject area in order to influence mentees' academic performance; simply being thought of as a likeable person by mentees may be enough to enact positive change.

Perceived power of the mentor may be derived from various factors in a developmental, peer mentoring relationship, where mentors are high school students. Elementary and middle school mentees may perceive high school mentors as having authority simply because they are older (legitimate power), because they are good students or good athletes who are socially successful (expert power), or because they are likable and have interests which are similar to their mentees' (referent power). In addition, middle and elementary school mentees may orient their future selves more readily to a high school mentor than an adult mentor, because they are likely to see themselves as future high school students more readily than as future adults. This may serve to increase attention to high school mentors and allow for more effective modeling to occur within developmental peer mentoring programs.

Retention of Model Behaviors

Retention is the second step in the modeling process, as described by Bandura (1977). In order to be influenced by an observation, the learner must remember it. This is especially crucial to the modeling process in order for behaviors to be reproduced once the model is no longer present. Since the overarching goal of any mentoring program is to effect long-term change which carries into the mentees' lives after the mentoring program is over, the process of retention is crucial.

Through repeated exposure to modeled behaviors, learners can retain information. This process is enhanced through the use of rehearsal (Bandura, 1977). During a mentoring situation, mentors continually model prosocial and positive behaviors in a naturally social setting. By encouraging informal and social exchanges between mentors and mentees, mentees are afforded the opportunity for repeated rehearsal of target

behaviors, such as appropriate responses to disappointment or frustration, techniques for making new friends, and interpersonal skills needed for activities like entering conversations or taking turns. All of these skills are important for future success of mentees in social situations, long after the mentoring program terminates.

Reproduction of Model Behaviors

Converting observations into actions is the goal in any observational learning situation. By organizing responses to be in accordance with modeled behaviors, reproduction of modeled behaviors takes place (Bandura, 1977). In order for this process to occur, learners must be both cognitively and physically capable of reproducing modeled behaviors. Developmental mentoring programs must therefore provide mentors with at least a basic understanding of the developmental stages through which children progress. Presentation of abstract concepts, for example, may not be appropriate with elementary school mentees. Modeled behavior must be within the range of capabilities of mentees in order to facilitate reproduction (Bandura, 1977).

Motivational Processes in Behavior Reproduction: Consequences of Reproduction

Bandura (1977) noted that individuals do not enact everything they learn; some behaviors, though learned, may never be repeated by the learner. Others may be repeated after a significant lapse in time. Modeled behavior is however, more likely to be reproduced if it can create a valued outcome. Observing the consequences of modeled behavior influences learner behaviors in much the same way. Behaviors which appear to be effective or advantageous for models are more likely to be repeated by learners than behaviors which appear to have unrewarding or punishing effects (Bandura, 1977).

Reinforcing positive interactions in mentoring programs is an essential component of facilitating observational learning. Mentors who are praised by program coordinators or other individuals whom mentees see as having valuable opinions (i.e. teachers or parents), can have a more powerful effect when modeling behaviors for their mentees than mentors who are not seen as receiving positive feedback in response to their behaviors. In addition, mentees must receive positive feedback in direct response to their use of modeled behaviors within the mentoring situation. In later situations where mentors are not present to model behavior, mentees will have the ability to recall response patterns which were rewarding for the mentors when observed and for the mentees when performed. They can then anticipate the same positive outcomes in novel situations. When these outcomes are experienced, learning is solidified. This can be expected, according to Bandura (1977), because when responses which correspond to the modeled behaviors are positive and rewarding, and divergent responses are punished or unrewarded, the behaviors of others will eventually function as a cue for those behaviors which have been modeled effectively.

The key to this ability to utilize responses learned in a controlled setting in a future, novel setting is essentially found within the concept of generalization. A core goal of mentoring is to promote generalization of learned, positive responses and skills to new situations where the mentee is on their own (Karcher, 2005).

Abstract Modeling

When considering the role of modeling in a developmental mentoring program, the specific type of modeling being discussed is abstract modeling. Bandura (1977) described abstract modeling as occurring when individuals observe behaviors and

responses of others which embody a certain rule or principle. Rather than a specific, discrete behavior, abstract modeling does not allow for learners to mimic or exactly reproduce the same responses they saw modeled. Instead, they must take what they have observed and apply it to new or unfamiliar situations.

Many mentoring programs have as their goal increased social skills or connectedness on the part of mentees. These abstract, general concepts can be facilitated through abstract modeling, where mentees observe mentors behavior and interact with mentors in socially appropriate ways. Responses to situations which the mentee has been in or is likely to encounter are modeled by mentors in an effort to provide mentees with a tool kit for future interactions. Abstract modeling has been shown to be a very effective method for establishing rule-governed behaviors, including standards of conduct (Bandura, 1977).

Self-efficacy

Self-efficacy refers to the extent that a person believes they are capable of handling difficult or challenging situations. According to Bandura (1977) the strength of a person's self-efficacy beliefs will determine whether or not a specific course of action should even be attempted. Efficacy expectations refer to the expectations of eventual success held by those who are attempting a challenging task (Bandura, 1977). Believing in one's own success has a direct influence on the likelihood of attempting a task. Low expectations for success lead to low levels of effort and shorter amounts of time spent in achieving a desired outcome; individuals with higher expectations will not only try harder, but persist longer in their efforts (Bandura, 1977). Changing social interaction patterns, or overcoming negative self-views with regard to social or academic

competence, can be a challenging task. Students who have low self-efficacy beliefs and efficacy expectations will be less inclined to undertake a concerted effort to change past behavior patterns than those who have stronger self-efficacy beliefs and more positive efficacy expectations. They are also less likely to try out new, previously modeled behaviors, if they have a low expectation of success by doing so.

In terms of mentors, students who see themselves as capable of making a difference and contributing positively to the development of a younger, less capable student are likely to possess higher self-efficacy beliefs than those who do not seek out such experiences. Efficacy expectations are strengthened through performance accomplishments; developmental mentoring programs which are designed to foster overall social development and increased prosocial behavior must therefore include a social interaction component, through which both mentors and mentees can experience successful execution of positive social interactions. In this way, self-efficacy beliefs and efficacy expectations will be bolstered, allowing for generalization to experiences outside of the program itself (Karcher, 2005).

<div align="center">Summary of Social Learning Theory</div>

Social learning theory provides a theoretical foundation on which to build an explanation for the success of many mentoring programs. Developmental mentoring programs often have as their goal the creation of more positive response patterns in students, along with increases in self-esteem and connectedness among mentees (Karcher, 2005). Reduction of risk-taking behaviors is also cited as a common goal of developmental mentoring programs (King et al., 2002).

Observational learning through modeling is a core concept within Social Learning Theory. Observational learning occurs within a series of stages: attention, retention, reproduction of behaviors, and the resulting effects of motivational processes on behavior performance. Mentoring programs are based upon the concept of abstract modeling; rather than modeling a specific task or concrete skill which mentees can mimic, mentors are instead providing mentees with general principles or rules for socialization. Mentees will then have opportunities to apply the principles they have observed being modeled to novel situations.

Within the process of attention, the importance or status of the model as perceived by the learner will determine the likelihood of the learner reproducing the modeled behavior (Brewer & Wann, 1998). If the learner feels an attraction or similarity to the model, the behaviors are more likely to be re-created. In addition to this general affinity for the model, the presence of a perceived social power held by the model will influence the learner's actions. If a learner perceives a model as having legitimate, expert, or referent social power, they will be more likely to reproduce the modeled behavior. The type of social power perceived, however, does not seem to matter (Brewer & Wann, 1998).

Mentored students are provided with models in the form of older mentors; repeated exposure to the positive interaction patterns and social responses of their mentors, as well as increased opportunities for rehearsal of positive and prosocial behaviors, can cause those behaviors to be repeated by mentees in future situations, when removed from the mentoring situation. Learners may endow their mentors with either legitimate power, because mentors are older; expert power, because they see mentors as

excelling or being highly capable in some area or activity; or referent power, because they feel a similarity to or a liking for their mentor.

Mentoring can also serve to increase the self-efficacy and efficacy expectations held by both mentors and mentees. By providing both with a template for and an opportunity to rehearse successful, positive interactions, and then publicly rewarding students for those interactions, mentoring programs can foster positive change across an entire school climate. Students who are consistently rewarded for prosocial or positive behaviors, and those who see their mentors as being rewarded or held in high regard by others because of such behaviors, are more likely to reproduce modeled behaviors.

Those mentors highest in self efficacy beliefs will be more likely to face the challenges of mentoring with both optimism and persistence. By selecting mentors who have stronger expectations for their own success in their role as mentors, program developers can create more effective relationships among mentoring pairs.

Adler's Concept of Social Interest

Adler (1964) is credited with the creation of Individual Psychology, a framework which views human behavior as overt efforts in striving for personal perfection. Adler viewed Individual Psychology as a "psychology of values" (Adler, 1964, p. 38). Individuals, according to Adler, will form for themselves a path to follow, leading them to their self-defined ideal future. One core concept within Individual Psychology is the construct of social interest.

The Adlerian concept of social interest has been described as difficult to define, because of its breadth and number of different definitions (Johnson, Smith, & Nelson, 2003). In general, social interest can be broadly defined as an active interest in the

welfare of mankind (Johnson et al., 2003). One important aspect of social interest, however, is that Adler saw the construct as a central measure, and an accurate barometer, of an individual's overall psychological health.

Adler (1964) stated that each person possesses, to some extent, a connection with the community. This connection is referred to as social interest. A person's feelings toward the community and concern for the community will naturally be reflected in their actions. Those individuals higher in social interest will have more knowledge and recognition of community problems, and will demonstrate a need to act in a way that contributes to solving those problems, instead of focusing primarily on their own personal conquests (Adler, 1964). A lack of social interest, for Adler, is manifested in a feeling of inferiority and an inability to connect with other people (Adler, 1964). As social interest develops, feelings of inferiority and isolation from others will decrease.

In addition, individuals high in social interest also recognize the stress that the demands of life can place on another individual, and will be more inclined to support others in their efforts to overcome those demands (Adler, 1964). This connection with the community will not only foster personal growth, but has evolved among humans as a necessity for survival. Only through identification of and union with the community, have humans been capable of evolving to their present state of being (Adler, 1964).

While social interest is seen by Adler (1964) as an innate characteristic, he stressed the need for social interest to be actively developed during childhood. The primary mechanism for this development is first the mother-child bond, and is then later developed through general family interactions. Parents are given the responsibility of modeling caring, close relationships which value and utilize cooperation. If not exposed

to modeled behaviors which promote these kinds of relationships, the development of social interest can be compromised (Johnson et al., 2003).

If social interest is an indicator of an individual's willingness to help others, in order to benefit the entire community, it has been assumed in the past that those high school students who possess higher levels of social interest are probably those who are more willing to volunteer as mentors to younger students (Karcher & Lindwall, 2003). With the goal of developmental mentoring being a general improvement in functioning and social skills among mentees, mentors high in social interest will be more likely to embark on this kind of mission, where the goal is less defined than, say, a mathematics tutoring program. Mentors feel as if they are creating a positive change in other's lives, and helping them to meet the challenges they will face. Social interest will serve as a key characteristic in determining which students will be willing to produce a sustained effort in their mentoring relationship.

<div align="center">Mentoring and School Climate</div>

While largely studied at the level of the individual, the effects of modeling have the ability to create wide-spread social change within any society, or from one society to another (Bandura, 1977). If new behavior is introduced by what Bandura called "prominent examples" (p. 50), it can be adopted at an accelerated pace. According to Bandura, modeling "serves as the major vehicle for transmitting new styles of behavior" (p.50). Within a school climate, students who have learned and are engaging in positive, prosocial interaction patterns may be rewarded by school personnel at a higher rate and in a more public manner. Other students, who value the rewards they observe being bestowed upon the model students, can then be expected to adopt similar behavior

patterns in an attempt to gain the same rewards. In this way, school climate can be improved through increased positive interactions and decreased negative behaviors. This forms the basis for social change as a result of positive mentoring experiences within school settings.

<div align="center">Related Findings</div>

Mentoring can serve to challenge negative self-views held by young people regarding social and academic competence by providing an opportunity for increased exposure to and rehearsal of positive, prosocial interactions. This experience could then be generalized to other significant relationships, such as teacher and parent interactions, leading to higher levels of overall functioning in mentored youth. In addition, mentors are provided with an outlet for their desire to form meaningful relationships with others. Support for the perceived potential of mentoring relationships can be found within the literature.

In a comprehensive review of literature on mentoring published between 1995 and 2000, Foster (2001) concluded that mentoring can help to produce positive behavior changes through the creation of improved interpersonal skills, increases in perceived self-efficacy, and better academic achievement. Along with fostering these positive changes, mentoring can also serve to reduce problem behaviors, such as drug use, aggression, and truancy (Foster, 2001).

<div align="center">School-based Mentoring and Positive Outcomes</div>

The traditional model for mentoring programs has historically been adults from the community volunteering to meet with youth outside of the school setting, at a chosen location in the community, for an average of three to five times a week. There are distinct

advantages of school-based mentoring over such traditional, community-based models.
Herrera (1999) reported that school-based programs have the advantage of attracting
volunteers who normally would not be able to make the 3 to 5 hours per week
commitment required in many community-based mentoring programs, since most school-
based programs meet for 1 hour each week within the school itself. In addition, school-
based programs afford volunteer mentors the security and structure of the school
environment, require less cost for case management since several matches take place in
the same location at the same time, and are able to involve higher risk students who may
not have the family support or investment needed to enroll them in a community-based
program (Herrera). Another significant benefit provided by school-based programs is the
involvement of teachers, who can provide mentors and program supervisors with regular
updates on academic and behavioral progress in mentees (Herrera). Using high school
students as mentors in a school-based program allows program coordinators to focus less
time, attention and resources on background checks of volunteers.

Big Brothers Big Sisters of American (BBBSA) sponsors the largest and oldest
mentoring program in the U.S. In an early look at the effectiveness of school-based
mentoring programs offered by BBBSA, Herrera (2004) found that teachers rated youth
who were mentored as having gained improvements in social networking ability, social
skills, classroom behavior, and academic engagement. School-based mentoring through
BBBSA appeared to have produced positive changes in both behavior and relationships
in school. Such positive changes may be the first step toward improved academic
performance and lowered levels of discipline issues (Herrera).

Rhodes, Grossman, and Resch (2000) found that mentored youth reported more improvement in parental relationships, higher levels of scholastic competence, and improved attendance rates when compared to a nonmentored control group. The authors concluded that by having the opportunity to observe role models, as well as receive tutoring and encouragement from mentors, mentored students improved in their overall approach to school; improved perception of parental relationships was cited as an important mediating factor in producing positive academic and behavioral outcomes. Guidance and support provided by mentors can create improvements in the overall quality of the parent-child relationship for students. Rhodes et al. linked improved parental relationships with improvements in the value that mentored students placed on school, and posit an increase in the value of prosocial values in general as a result of participation in the mentoring program they examined.

In their examination of one mentoring program which paired fourth grade students with high school and adult mentors, King et al. (2002) found significant increases in self-esteem, academic achievement, and school, family, and peer connectedness among those who were mentored compared with a nonmentored control group. Positive school connectedness is critical to student engagement in healthy behaviors and prevention of several risk behaviors (Karcher, 2005; King et al., 2002). Mentored students also demonstrated higher levels of family connectedness at post-test when compared to pre-test levels (King et al., 2002).

Important Factors in Mentoring Programs

The number of young people in mentoring programs in the US has grown rapidly (MENTOR/The National Mentoring Partnership, 2005). A concern for quality in

mentoring programs has accompanied the exponential growth in popularity and use of

mentoring programs as a tool for improving both academic and social functioning in

youth. DuBois (2002) conducted a comprehensive meta-analysis of 55 different studies

on mentoring, and found that significant gains were more likely to be measured within

programs that incorporated greater numbers of what are termed best practices. Not only

did youth fare better in programs engaged in such practices, but those in programs which

failed to adhere to a majority of the designated practices actually experienced negative or

harmful influences. Some examples of best practices within program structure include

setting clear program goals and identifying program focus for all participants; creating a

set schedule and adhering to it; providing ample and ongoing support and supervision for

mentors throughout the duration of the program; including role-playing and various

scenarios during training to help mentors address situations likely to arise; and providing

resources and materials for mentors to implement planned activities with mentees

(MENTOR/The National Mentoring Partnership, 2003).

Those students who were targeted because of their experience with an

environmental disadvantage (such as poverty) experienced more positive outcomes as a

result of mentoring than those exhibiting personal vulnerabilities, such as at-risk

behaviors, emotional problems, or academic difficulties. DuBois (2002) concluded that

simply pairing mentors with children is no guarantee for positive outcomes; program

quality, care with which mentors and youth are matched, and relationship characteristics

are all salient factors in creating positive outcomes.

The development of strong, close relationships seems to lie at the heart of

successful mentoring matches. Program structure and curriculum can have a direct and

significant influence over the likelihood that such relationships will indeed flourish.

Herrera, Sipe, and McClanahan (2000) linked program infrastructure and relationship

development in their survey of over 1,000 mentors involved in 98 different programs.

Factors that serve to strengthen the relationship between mentor and mentee include

engaging in social activities, allowing mentees to have decision-making powers when

choosing activities, and ongoing and consistent support for mentors while programs are

running.

Social activities are a particularly salient factor in promoting strong relationships

between mentors and mentees; even in programs which had a specific goal-orientation,

such as career education or academic improvement, social interaction was found to be the

strongest contributing factor for relationship quality in both school-based and

community-based programs over three separate measures: closeness, emotional support,

and instrumental support (Herrera et al., 2000). Allowing mentors and mentees to engage

in purely social interactions may serve to strengthen the effects of modeling on mentees.

Mentees who observe their mentors acting in a natural, social setting, without having a

scripted or forced agenda, may have an increased probability of incorporating their

mentor's behaviors into their own, naturally occurring social interactions. In addition,

mentors may have increased opportunities to discuss personal issues regarding

relationships with mentees, allowing for increased development of close relationships

(Herrera et al., 2000).

Duration of mentoring relationships

Several examinations of various mentoring programs have produced similar

findings which indicate that students who are paired in consistent mentoring relationships

for more than 12 months fare better than those whose relationships terminate prior to 1 year (Herrera 2004; Lee, 1999; Rhodes et al., 2000) In their study of nearly 1,000 mentored male adolescents, Grossman and Rhodes (2002) discovered that those mentored for at least 1year reported the largest improvements, with progressively fewer positive effects for those in relationships which ended earlier. Those whose relationship with their mentor lasted only 3months or less showed declines in both self-worth and perceived scholastic competence. The authors pointed to the increased sensitivity surrounding acceptance and rejection within social relationships that typically occurs during adolescence as a salient risk factor. Relationships which take hold and endure over time, however, expose youth to positive role models, and create better developmental outcomes (Grossman & Rhodes, 2002).

In examining predictive factors related to length of relationship, Grossman and Rhodes (2002) found that those youth who had experienced emotional or psychological difficulties (i.e., those who had sustained emotional, physical, or sexual abuse), were more likely to be in pairs which lasted less than 1 year. This finding is in concert with DuBois' (2002) examination of emotional vulnerabilities and relationship length. Pairs which involved youth aged 13-16 years were also less likely to endure over time than those involving 10-12 year olds (Grossman & Rhodes, 2002).

As a result of such findings, relationship duration has become a cause for concern among those promoting the use of school-based programs, since these programs can typically only last a maximum of ten months (the duration of the school year), and often run for an average of only seven months (Karcher, 2005). Despite the amount of evidence which suggests that the positive effects of mentoring are most often seen in pairs which

have lasted for at least 12 months, King et al. (2002) examined one school-based

program in which fourth grade students met with their mentors twice per week from

January to May, during one school year. The authors examined the effects of mentoring

on four separate components of student functioning: relationship building, self-esteem

enhancement, goal setting, and academic assistance. Their findings indicated that

mentored students showed significant improvement in school and peer connectedness

levels, student self-esteem, and academic achievement. These gains were observed

despite the 5 month duration of the program, significantly shorter than the recommended

12 month duration found among best practice recommendations (King et al., 2002).

One explanation of the success of this program is offered by Grossman and

Rhodes (2002), who posited that school-based programs may have explicit expectations

regarding relationship length which differ from other types of mentoring programs.

Perhaps, the authors speculated, knowing that the relationship is confined to the school

calendar creates an understanding among mentees, serving as a buffer against the

negative effects of shorter matches found in other programs. The expected earlier

termination of such relationships may not carry with it the negative effects found in

relationships which are expected to endure but terminate prematurely (Grossman &

Rhodes, 2002).

The National Mentoring Partnership incorporated relationship length into its

recommendations for adhering to established best practices in mentoring programs

(MENTOR/National Mentoring Partnership, 2005). It advised that school-based

programs which last only during the school calendar year, for 10 months or less, inform

and prepare students for closure and termination of all matches. Student expectations

should be monitored and checked against program restrictions and parameters in order to ensure expectations are realistic.

Those mentors highest in self efficacy are more likely to persist in the face of adversity in their mentoring relationships. If programs could identify those mentors who had higher levels of self efficacy, the negative effects of premature termination which have been observed could possibly be avoided, by allowing for better mentor screening methods.

<div align="center">Developmental Mentoring</div>

Approximately 30% of all mentoring programs are school-based, and that number is expanding (Rhodes, 2008)**.** Capitalizing on this captive audience may help to reach more underserved youth, who would otherwise not be referred to such programs, and who may also experience more barriers to participation (e.g., limited means of transportation to program sites, and lower parental motivation to enroll children in supportive programs) (Herrera, 2004). Many school-based programs have adopted a developmental approach to mentoring, utilizing other, older students as mentors instead of adult members of the community.

Karcher (2005) defined developmental mentoring as "a structured approach to cross-age, school-based peer mentoring in which high school students work after school one-on-one with elementary school mentees" (p. 65). Developmental mentoring has as a primary goal the promotion of school connectedness; when adolescents increase their involvement and affection for future-oriented people, places and activities, success in school increases and risk-taking behaviors decrease (Karcher, 2005). In addition,

increased connectedness to parents and school can improve self-esteem, social skills, and identity development (King et al., 2002; Rhodes et al., 2000).

The main mechanism by which the goals of developmental mentoring are achieved is the mentoring relationship itself. The relationship between mentor and mentee in developmental peer mentoring is the vehicle through which improvements in self-esteem, connectedness, identity, and academic attitudes are accomplished (Karcher, 2005).

The notion that increasing school connectedness results in more positive outcomes for youth is based on empirical findings. An inverse relationship between school connectedness and risk-taking behaviors has been observed (Bonny, Britto, Klostermann, Hornung, & Slap, 2000). Karcher et al. (2002) noted that promoting connectedness has become an important aspect of school-based intervention programs, and that increased connectedness can lead to higher levels of school achievement among at-risk students. Bonding to school has been identified as a central factor in developing prosocial interactions and inhibiting antisocial behaviors. Increased levels of school connectedness promote positive development (Catalano et al., 2004); school-based developmental mentoring can serve to increase school connectedness by providing students with positive social interactions which are situated in the school setting. By linking these experiences to the school setting, students can develop a more positive generalized attitude toward the school and toward their relationships with other individuals in the school. Further generalization can lead to better interactions with others beyond the school, such as at home with family members (Catalano et al.).

Serving as role models, high school mentors in developmental mentoring can increase connectedness in mentees by providing and sustaining a meaningful relationship for younger students. Mentors can facilitate discussions of values and encourage mentees to become involved with and care for other people, increasing connectedness to school and family life. Connectedness to school can be facilitated by structuring opportunities for mentees to interact with teachers in a more positive way; through generalization, gains can be translated to other important relationships, such as those with parents or caregivers (Karcher et al., 2002).

While program length has been a concern regarding school-based mentoring programs, Karcher (2005) noted that frequency of contact is a better predictor of positive outcomes than length of mentoring in those programs which have a developmental focus. In his study of a developmental peer mentoring program utilizing high school mentors paired with fourth and fifth grade mentees, Karcher found that mentor attendance was a valid predictor of changes in mentees' social skills and self-esteem. Inconsistent attendance by mentors served to produce a negative effect on mentees; mentees of inconsistent mentors rated themselves as less attractive, less socially skilled, and less well behaved after the program than prior to meeting their mentors. This finding supports the notion that mentees engage in self-appraisals based on their mentors' consistency and availability. Quality of relationship appeared to influence outcomes more than amount of exposure to program curricula (Karcher).

These findings also speak to the importance of mentor commitment and its effects on the mentoring relationship. Program developers have a vested interest in utilizing mentors who are truly motivated to create positive change in others lives, and who are

going to be able to provide a sustained effort over time in meeting program demands. Such demands also include friction in the mentor-mentee relationship. Those mentors who have high levels of social interest (who truly want to help others), and those high in self efficacy (who believe in their ability to meet their own goals of helping mentees and persist in their efforts) will be better prepared to create the most positive change in their mentees lives.

<div align="center">Mentor Characteristics</div>

Matching Pairs

Many mentoring programs attempt to match pairs based on varying factors. Some choose to match youth to mentors based on race, gender, or similar interests. In their community-based mentoring programs, BBBSA creates same-gender pairs only (Herrera, et al., 2007). Since their expansion into school-based mentoring, BBBSA has allowed cross-gender pairs, due in part to the increased supervision provided by school-based mentoring and to the larger number of male youth referred to programs that have significantly fewer male volunteer mentors (Herrera et al., 2007). In their survey of over 1,000 mentors across 98 different programs, Herrera, Sipe and McClanahan (2000) found that mentors in cross-gender pairs reported the same success as those in same-gender pairs; the same was found among cross-ethnic and same-ethnic pairs. In a later examination of three different BBBSA school-based programs during the 1999-2000 school year, Herrera (2004) again found that matching for race and gender was not as strong a predictor for relationship success than matching for similarity of interest was. Closely matching for similarity of interest was found to be a stronger predictor of student success than any other factor, aside from engaging in social activities (Herrera, Sipe, &

McClanahan, 2000). Mentees who can relate to their mentors and spend time socially interacting with them have a higher likelihood of being positively influenced by their mentoring experience.

Personal Characteristics

Grossman and Rhodes (2002) examined mentor characteristics in an attempt to identify factors which can be used to predict the length of time a mentoring match is likely to last. In their examination of 378 same-gender matches formed across eight different BBBSA community mentoring programs, the authors found that volunteer adult mentors with higher incomes tended to stay in their matches longer than lower income volunteers. In addition, volunteers aged 26-30 who were married had matches that terminated earlier than other volunteers (Grossman & Rhodes, 2002).

Karcher and Lindwall (2003) examined the characteristics of high school mentor volunteers; specifically, the authors measured social interest and connectedness levels of high school mentors and a nonmentor control group. The authors described connectedness as a reflection of the willingness to bond with and seek proximity with others in a larger social setting. Karcher and Lindwall pointed to research which has linked a lack of connectedness with psychological difficulties and risk taking behavior (Bonny et al., 2000). Those youth who report higher levels of connectedness are more likely to act as volunteers and become involved in after school activities; hence the goal of increasing connectedness which lies at the heart of developmental mentoring (Karcher, 2005).

Karcher and Lindwall (2003) found that high school mentors were significantly more connected to family, school, and reading than their nonmentor peers. Those mentors

who reported having higher levels of social interest were more likely to choose

mentees who were more academically and socially challenged. They were also more

likely to return for a second year of volunteerism in the mentoring program. Interestingly,

mentors highest in social interest showed more decline in connectedness to school over

the duration of the mentoring program. Possible explanations include a general decline in

interest in school among high school students as a whole in late spring, when the

assessments took place (Karcher & Lindwall, 2003). A second explanation put forth by

Karcher and Lindwall is that mentors may have felt frustrated in their attempts to increase

mentee's academic connectedness, and as a result discounted the importance of

connectedness to school in their own lives. A third possible explanation points to the

possibility of regression toward the mean occurring in the mentor sample with respect to

school connectedness (Karcher & Lindwall, 2003).

Regardless of the reasons why mentors declined in school connectedness,

research suggests that high school mentors are more likely to have a desire to reach out to

others and create meaningful interpersonal bonds than their nonmentor peers. Of key

importance in relation to this study is that mentors higher in social interest were more

likely to return for a second year of volunteerism as mentors; this directly supports the

proposed relationship between social interest and rate of return among mentors being

examined here.

In addition to school connectedness, social interest has also been correlated with

altruism (Crandall & Harris, 1991). In their later examination of social interest, Karcher

and Lindwall (2003) described social interest as a reflection of one's ability to identify

with humanity and one's sense of belonging to community. Individuals higher in social

interest should be more likely to volunteer for altruistic activities. Higher levels of social interest should also indicate a greater willingness to persist in altruistic activities despite facing significant challenges to success (Karcher & Lindwall, 2003).

Often, high school mentors are given the opportunity to return the following school year, provided they have not graduated. A return to the program could indicate a higher level of both self-efficacy and social interest than those who had the opportunity but elected not to return. Mentor characteristics that were of interest to this study are the relationship, if any, between social interest level and duration of volunteerism as mentors, and the difference in social interest between mentors who were mentees themselves and those who were never mentored. This could provide insight into whether or not social interest can be modeled, and subsequently incorporated into mentees' future activities. A third aspect of mentor characteristics examined in this study is the relationship between social interest and self-efficacy. Those higher in social interest could demonstrate higher levels of self-efficacy, indicating their belief in their ability to make a difference is in concert with their desire to do so.

In providing a better understanding of high school mentor characteristics, this study attempted to alleviate one apparent gap in the literature on mentoring: a closer examination of what makes a high school student an effective mentor. While much of the previous research on mentoring has focused on mentee outcomes (Dubois, 2002; Foster, 2001; Grossman & Rhodes, 2002; Herrera, 1999; Herrera, 2004; Herrera, Grossman, & Kaugh, 2007), this study instead focused on the mentors themselves. Specifically, this study examined two mentor characteristics that can be quantitatively measured, and asked whether these characteristics (social interest and self-efficacy) can be used to predict

higher levels of commitment and effort on the part of mentors. This can lead to a better

understanding of mentee outcomes, both positive and negative, going beyond a

description of those outcomes and proposing a partial explanation for them.

Mentoring and Social Change

Schools have already begun to accept the use of site-based, peer-mentoring

programs as one avenue of creating more opportunities for students who could benefit

from structured social skills building situations, as evidenced by the rapid growth in the

number of in-school mentoring programs. Mentoring is a low-cost alternative to

structured character education programs, and positive outcomes are being reported within

the framework of empirical studies.

Premature termination of the mentoring relationship has been known to create

negative outcomes for mentees (Grossman & Rhodes, 2002). By identifying mentors who

are more likely to persist in their mentoring efforts, program coordinators can protect an

already vulnerable population (mentees) from experiencing the negative effects of

premature termination.

Providing high school mentors who may already be higher in social interest and

self-efficacy with an outlet for their tendencies toward helping behaviors, and a means to

reinforce their positive expectancies, can allow schools and programs to nurture the

development of high school mentors beyond what could normally be expected without

such opportunities. In addition, identifying students who volunteer as mentors but who

may not be particularly high in social interest or self efficacy can allow schools and

facilitators to create more in-depth training opportunities, or simply provide such students

with alternative programs in order to avoid the negative outcomes that result from

premature termination. Mentors who are lower in self-efficacy and go on to be

assigned mentees, then quit the program, will have their negative expectancies reinforced,

perpetuating the self-fulfilling prophecy of unsuccessful efforts that such students may

already have.

Helping schools and program developers identify which students are best suited to

serve as mentors is a valuable outcome of any research endeavor. More positive

outcomes for mentees may lead to higher numbers of students who are willing to

volunteer as mentors in their future, thereby increasing exponentially the benefits of

school-based mentoring.

Chapter Summary

Social learning theory provides the primary basis for the theoretical foundation of

the rationale behind the use of mentoring in schools as a method of both preventing risk

behaviors and as an intervention for those students identified as having demonstrated a

need for increased social support. Modeling, and more specifically, abstract modeling, is

the process upon which mentoring programs are banking on. Mentors in developmental

mentoring programs are trained to model positive, prosocial interaction patterns, which

mentees can not only practice utilizing within the program, but ideally generalize to other

interactions outside of the program.

The reported success of many mentoring programs can be traced to social learning

theory, by attributing mentee improvements to the effects of positive modeling by

mentors. Mentor characteristics will play a role in the likelihood of mentee's

reproduction of modeled behaviors. Models or mentors who are perceived as likeable,

competent, or trustworthy are more likely to effect change in learner's behaviors. In

addition to likeability, those students who endow their mentor with any kind of social power (expert, legitimate, or referent) are more apt to incorporate mentor behaviors into their own repertoire.

Developmental mentoring is an approach to school-based mentoring which utilizes high school students as mentors, and has as a primary focus increasing school connectedness among mentees. Approximately 70% of all site-based mentoring programs are school-based (Karcher et al., 2006) and a closer look at best practices has yielded some insight into what makes for a successful program (DuBois, 2002). Despite the recommended 12 month duration for mentoring programs set forth by MENTOR/The National Mentoring Partnership (2003), success in school-based programs lasting less than 10 months has been documented (Herrera et al., 2007; Karcher, 2005; King et al., 2002). It has been suggested that clear expectations regarding program length and relationship parameters are instrumental in protecting against the negative effects found in shorter, community-based programs.

Self-efficacy and social interest are two measures which may correlate with involvement in mentoring programs. Those high school students who volunteer, and elect to return to mentoring programs, may show higher levels of both self-efficacy (their belief in their ability to make a difference), and social interest (their desire to engage in altruistic behaviors and belong to a larger community). In terms of program development, these could serve as predictive factors which may be useful in mentor selection.

This review of the literature on youth mentoring has revealed a relationship between specific program attributes and rate of improvement among mentees across several areas (perceived academic competence, school connectedness, attendance, and

self-esteem) (Dubois, 2002; Parra et al., 2002). If mentoring can contribute to improvement in these areas, then it behooves program developers and school personnel to pursue a better understanding of the factors that can lead to recruitment of highly motivated and successful mentors.

Specifically, self-efficacy and social interest as they relate to high school mentor motivations and willingness to persist have undergone limited examination in the literature. Previous research has established the negative effects of premature relationship termination in various mentoring programs (Grossman & Rhodes, 2002; Karcher, 2005; Parra et al., 2002); if program developers could better identify those mentor candidates who would be more likely to persist in their mentoring role, and those who are truly interested in making a difference, the result would be better outcomes for mentees.

Also at issue is the likelihood of former mentees becoming mentors themselves, and the question of whether or not these students have overall higher levels of self efficacy and social interest than those mentors who were not mentored. This study examined these factors as they relate to high school mentors in one mentoring program on Long Island, NY.

Chapter 3 describes the quasi-experimental research method used in this study. It explores the validity and reliability of the measures used and describes the overall population from which the samples were drawn. Chapter 4 reviews the statistical results obtained as a result of analyzing mentor and nonmentor scores on the measures used. Each research question that has been formulated in this study is reviewed in terms of whether or not the findings statistically support the alternative or the null hypothesis.

Chapter 5 provides further discussion and interpretation of the results, and offers

suggestions for future research.

CHAPTER 3: RESEARCH METHOD

Introduction of Chapter

Chapter 3 describes the quasi-experimental design of this study, identifies the

dependent and independent variables of interest, and outlines the approach taken. A

description of participants, including school and community demographics, is included.

The instruments used are described and justified in terms of their use in this particular

study; reliability and validity data are included for both measures. An overview of data

collection techniques and analyses performed on data is provided. Finally, a review of the

research questions in this investigation and their related hypotheses is provided.

Research Design and Approach

This investigation was designed to provide useful and relevant information on an

important aspect of mentoring: the mentors themselves. The data collected was

quantitative in nature, in order to add to the growing body of empirical, research-based

findings related to peer mentoring.

This was a self-report study, where participants were asked to complete two

separate measures relating to self-efficacy and social interest. There was also a short

demographic form, where participants indicated their gender and grade level, former

experience as a mentor, and whether or not they had been mentored as elementary or

middle school students.

The design was quasi-experimental in nature, as it examined students who placed

themselves within a mentoring group, eliminating the possibility for random assignment.

This was an acceptable framework for this particular study, which was designed to

examine the preexisting differences between mentor volunteers and their nonmentor

peers. It was a comparison study of the two groups, and did not seek to examine the effectiveness of any treatment method.

Program coordinators who recruit high school volunteer mentors are not in a position to administer structured treatment conditions to students and then measure their effects. Typically, the time that is allotted to training mentor volunteers is limited, since the school year is limited in its time frame. Program coordinators often do not have the luxury of providing pre- and post-training measures to volunteers and in many cases recruitment and training takes place early in the school year. This means that coordinators may not have had ample time to work with or establish relationships with potential volunteers before placing them in long-term mentor relationships with mentees. This was a factor in choosing the design of this study; it was desirable to work under similar conditions that would normally be found in a school-based mentoring program that was seeking high school volunteer mentors. These conditions include limited time to recruit and train mentors, and limited personal knowledge of mentors themselves. The measures used are brief and appropriate to the level of reading comprehension expected among high school students, and they allow for an accurate representation of two personal characteristics which are very likely to impact important elements of a high school student's performance as a mentor. These are the time spent in a committed mentoring relationship, and willingness to persist with their volunteer mentoring over time.

This study did not seek to provide an evaluation of program training or effectiveness. These factors are outside the realm of what was being examined; for this reason, an experimental design was not necessary. Instead, a cross-sectional survey of mentor and nonmentor characteristics was appropriate. This study was quasi-

experimental and nature, and for the purposes of data analysis, mentor status was

coded as the independent variable under examination.

Setting and Sample Characteristics

All participants were high school students in one Long Island, NY, school district.

The number of residents living in the larger community within the school district at the

time this study was conducted was approximately 12,000. In 2005, median household

annual income was reported at $95,000.00. In 2007, the average home selling price was

$425,000.00. Ninety percent of homes were owner-occupied, with a rental rate of 10%

(City-data.com, 2008).

The area in which the district is located is primarily a residential community, with

little industrial development, and some shopping centers. There were 3,200 students

enrolled in the district; there is a portion of the student body that is drawn from a smaller

neighboring community, which is split between two larger districts. The median

household income in this community in 2005 was reported at $71,900.00, with an

average home selling price in 2007 of $300,000.00 (City-data.com, 2008).

The district has a 96% graduation rate. Sixty-eight percent of graduates go on to

attend 4-year colleges, while 30% enter 2-year programs. The drop-out rate is reported at

.4% (New York State Education Department, 2006).

Culturally, there is little diversity within the school district, with 94% of residents

being White. In 2006, the district reported a student body which was 95% White, 2%

Hispanic, 2% Asian/Pacific Islander, and 1% Black/Non-Hispanic. The percentage of

students receiving free or reduced lunch in the district was reported at 2%. For the 2005-

06 school year, the district reported an enrollment at the high school of 946 students, and a total of 117 student suspensions for the year (Long Island Schools.com, 2008).

The community prides itself on its schools; the district did not appear to be plagued with discipline issues. Several clubs and other activities were offered to high school students, with the mentoring program used in this study being one of them. Students were not offered any school credits for participation in the program; however, many students fulfilled community service/volunteerism requirements through their participation.

Procedures

Sample Selection

Recruitment for mentors in the Big Buddy/Little Buddy mentoring program began in the high school in September, with announcements being made on the school's public address system during normal morning announcements, and posters being placed around the school. A brief open meeting for anyone who wishes to volunteer was held after school, where a description of the program and the weekly time commitment was described. A second meeting was then held, where those students who were still interested begin their three week training during the month of October. At the start of the second meeting, prior to the commencement of actual training, students who had volunteered to be mentors were asked to fill out the demographic form, the Self –efficacy Scale, and the Social Interest Scale, and return these items along with a signed parental consent form and a signed student assent form. Students' self-efficacy and social interest levels were assessed prior to any formal training, to assure that self-efficacy and social interest were not bolstered as a result of receiving mentor training, and the true

differences between the two groups were more evident. All mentor packets were collected prior to attending any training sessions.

Nonmentors were those students who had not volunteered as mentors in the structured mentoring program offered by the school. These participants were asked to complete the same packets as the volunteer mentors, beginning the same week that the volunteers were completing their questionnaires. Nonmentor packets were collected until an acceptable number of participants were attained; the time-sensitivity found in the mentor sample was not present with the nonmentor sample, since it was assumed they were not receiving any other outside training that may enhance social interest and self-efficacy levels. Nonmentors were asked to complete the packet during a morning study-hall period.

Sample Size

To determine the required sample size for this study, the desired statistical power was established at the generally acceptable value of .80. An alpha level was set at .01 to address the possibility of making a Type II error. This study employed the use of independent samples *t* tests and correlational tests. To detect an effect size of .20 with a power of at least .80, a sample of at least 25 students from each group (mentor and nonmentor) was desired (Jaccard & Becker, 2002). In order to increase the value of any potential findings, a sample size of at least 40 mentors and 40 nonmentors was sought.

Informed Consent/Student Assent

A preliminary meeting with both the school superintendent and the building principal was held, wherein a detailed description of the study and the methods used was

provided. Both administrators signed a consent form authorizing the investigation (see Appendix A).

Information introducing and explaining the purpose of the study and informed consent forms were disseminated during morning study hall periods and during the second mentor volunteer meeting. There was a consent form for parents and an assent form for students. Those students who were 18 years of age or older needed only one assent form (see Appendixes B and C).

A specified return date was established in order to identify those who would and those would not participate in the study. Student Assistance Counselors, who coordinate the mentor training, assisted with the collection of the completed packets. Only the principal investigator determined who the final participants were; only those students who had handed in all necessary consent forms and completed all items on the demographic form, the Self-efficacy Scale and the Social Interest Scale had their results included for analysis. The investigator's email address and telephone number were provided in the event that additional questions regarding participation arose. Students could withdraw at any time without penalty. Any student who provided signed consent forms and completed all or part of the surveys had their names entered into a raffle drawing for a $25.00 gift card to Starbucks. There was one name drawn from the mentor sample and one name drawn from the nonmentor sample. Any student who withdrew their participation after submitting consent forms and surveys was still eligible to have their name entered in the drawing; no students withdrew. Participation in the study had no effect on whether or not students who wished to be mentors were assigned a mentee at

the conclusion of the training. Only those individuals who directly oversee the

mentoring program for the sponsoring agency made final determinations on mentor-

mentee pairings.

Administration of Measures

All participants were provided with a complete packet, which included

consent/assent forms, a demographic form, the Self-efficacy Scale, and the Social Interest

Scale. They were also provided with a pen or a pencil. Mentor volunteers completed the

packet prior to their first training session; nonmentors were provided with the packet

during selected morning study hall periods on all days that information was being

collected. Not all participants completed and handed in consent forms and packets at the

same time. Collection took place until the necessary number of participants was reached

or the specified deadline has passed. All packets were distributed beginning the same

week.

Packets were collected by facilitators during the mentor training, and by study

hall monitors of the nonmentor students. Nonmentor packets were returned to the

program facilitators, who then forwarded all completed packets to the principal

investigator. Only those students who had completed consent and assent forms on file

with the investigator had their packets reviewed for analysis in this study.

The Social Interest Scale

Crandall (1975) developed the Social Interest Scale (SIS) in response to Adler's

(1964) emphasis on the importance of social interest to overall well-being among

individuals. The SIS uses a value-oriented approach, asking participants to choose

between two different values by indicating the one that is considered more important to them (see Appendix D).

The scale was developed by first identifying desirable personality traits with varying degrees of relevance for social interest (i.e., wise, considerate). A 24-item scale was created, with 15 specific keyed items that relate to social interest and 9 additional buffer items. Participants are scored on those 15 social interest items, and receive a point for each choice that corresponds to the "social" choice, as designated by Crandall (1975). Some items appear more than once, but are always paired with a different item. Range of possible scores is from 0 to 15. The SIS uses a forced-choice format and an ordinal scale; the higher the score on the scale, the higher the level of social interest.

The SIS was normed using four separate subject samples; Group I consisted of introductory psychology students (45 males, 40 females). Group II were also introductory psychology students (31 males, 15 females). Group III group consisted of high school psychology students (18 males, 27 females), and Group IV were higher level psychology undergraduate students (17 males, 20 females). The mean score for all subjects in Crandall's original use of the SIS was 8.43, with a standard deviation of 3.57. Females scored higher on average than males (8.91 vs. 8.00) (Crandall, 1975). The use of the SIS in this investigation was appropriate and students did not have difficulty in reading or understanding test items.

Reliability and Validity of the SIS

The split-half reliability for the first three of the four subject groups, using the Spearman-Brown formula, was reported to be .77. Test-retest reliability over a five week period with the fourth subject group was .82 (Crandall, 1975).

Validity of the SIS was investigated by first examining peer ratings. Crandall (1975) investigated peer ratings on the SIS within members of Group III. Those identified as being in a high criterion group for the SIS were consistently rated by their peers as showing the greatest interest, liking, and concern for other people, while those identified in the low criterion group were rated as having the least interest, liking and concern for other people. Peer rating results were highly significant (t = 3.60, *p* < .001).

Further investigations of validity by Crandall (1975) utilized comparisons to other established measures, believed to be related to social interest. These findings were in the direction predicted by Crandall and served to increase the original validity of the SIS (See Table 1).

Crandall (1975) predicted a positive correlation between social interest and placing value on things like peace, equality, and family security, while pleasure and having an exciting life were thought to correlate less positively with social interest. Through the use of Rokeach's (1973) Value Survey, these predictions were confirmed, as was the prediction that higher levels of social interest would correlate with higher levels of purpose in life.

The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964) was used in order to measure the tendency of participants to respond in a socially desirable manner. Despite a significant correlation, Crandall stated that the correlation was small enough to conclude that responses on the SIS were not seriously influenced by a social desirability response set. The correlation between social interest and the Purpose in Life Test (Crumbaugh & Maholick, 1964), when the effects of social desirability were partialled out, was reduced only from .32 to .27 (Crandall, 1975).

Table 1

Correlations between Social Interest and Other Variables

Measure Used	Related Variables	r	p*
Rokeach's Value Survey	Peace	.32	.005
(Group I)	Equality	.30	.01
	Family Security	.43	.001
	Pleasure	-.41	.001
	Exciting Life	-.40	.001
Purpose in Life Test			
(Group I)		.32	.005
Marlowe-Crowne Scale			
(Group I)		.23	.05
Multiple Affect Adjective			
Checklist (Group II)	Hostility	-.50	.001
	Anxiety	-.09	ns
Depression		-.38	.02
Philosophy of Human Nature			
(Group II)	Altruism and		
	Trustworthiness	.32	.05

* All significance levels involved two-tailed tests.

As a measure of social adjustment, social interest was expected to correlate negatively with hostility, anxiety, and depression on the Multiple Affect Adjective Checklist (Zuckerman & Lubin, 1965). The results indicated that this was the case for both hostility and depression, but no significant relationship to anxiety was established (Crandall, 1975).

Designed to measure attitudes toward other people, the subscales of altruism and trustworthiness were taken from the Philosophy of Human Nature test (Wrightsman, 1964). Results indicated a correlation between social interest and having a favorable opinion of the altruism and trustworthiness of people in general (Crandall, 1975).

These preliminary findings indicated reasonable reliability and validity characteristics of the SIS. Further validation of the SIS was established by Crandall (1977), with a study which investigated the relationship between peer ratings on the SIS and the tendencies to both like and be liked by others. Crandall posited a connection between these factors, based upon Adler's (1964) contention that low social interest is often accompanied by hostility, envy, and depreciation of others. In addition, those with high social interest would be expected to be well-liked by others (Crandall, 1977). Using pairs of participants who were administered the SIS and then asked to interact with one another for 5 minutes, correlation between peer ratings and SIS scores was established at .25, $p < .05$. In addition, a positive correlation between SIS scores and liking for the other person was found at .39, $p < .02$; the correlation between SIS scores and being liked was .30, $p < .05$. Crandall interpreted these findings as a further source of validation of the SIS.

In a later investigation, Crandall and Harris (1991) examined the value of the SIS as a valid and reliable measure of social interest using the Prisoner's Dilemma game. Their study focused on the specific attributes of cooperation and altruistic or helping behaviors. The results indicated a correlation between SIS scores and the number of cooperative responses given during the game ($r = .32$, $p < .005$). During the game, cooperative responses by participants were designed to result in lower levels of success. Overall, participants made fewer cooperative responses during the second half of the game than during the first; however, those participants with the lowest scores on the SIS made fewer cooperative responses during the second half of the game than those with higher scores on the SIS. The conclusion made by Crandall and Harris was that those students with the highest levels of social interest were most resistant to lowering their cooperative behaviors, even in the face of adversity. This investigation provided a measure of behavioral validation for the SIS, or a measure of how well SIS scores correlate to actual behaviors.

In a meta-analytic review of research using the SIS, Watkins (1994) reported that Crandall's SIS had been found to be positively correlated with altruism, trustworthiness, religious belief, increasing age, and volunteerism. Groups scoring high on the SIS showed higher levels of concern for others, while those scoring low showed more self-centered values. Watkins reported one possible weakness of the SIS: most of Crandall's research had been drawn from non-clinical samples. The SIS failed to correlate negatively with other maladjustment scales, when used with male alcoholic participants (see Watkins). Overall, Watkins found the SIS to be a reliable and valid measure among non-clinical participant groups.

The SIS was an appropriate measure for use in this investigation of social interest among high school mentors. It is brief in nature, and its uncomplicated format allowed for a valid and a convenient assessment of social interest levels among prospective mentors and their nonmentor peers.

<div align="center">The Self-efficacy Scale</div>

First formulated by Sherer et al. (1982), the Self-efficacy Scale (SES) was developed as a measure of an individual's generalized self-efficacy expectations. Based on the belief that past successes and mastery experiences are thought to contribute to efficacy expectancies which generalize to other actions, the SES is intended to measure self-efficacy that is not tied to any specific situation or behavior (Sherer et al., 1982). Utilizing undergraduate psychology students, the authors created a 23-item self-report scale, with 17 of the items composing the General Self-Efficacy (GSE) subscale and six items representing the Social Self-Efficacy (SSE) subscale (see Appendix E). The two sub-scales are not combined to provide one overall score; instead, each is seen as a separate measure (Sherer et al., 1982). Later revision of the SES included the use of seven filler items (Sherer & Adams, 1983). The SES is an interval measure, and participants were asked to select their responses using a five point Likert scale ranging from *strongly disagree* to *strongly agree*.

Reliability and Validity of the SES

Cronbach's alpha reliability coefficients were obtained at .86 for the GSE subscale and .71 for the SSE subscale. To assess construct validity, several other measures of personality characteristics were utilized for comparison. See Table 2 for results of these comparisons.

Table 2

Correlations of SES Subscale Scores and Other Measures of Personality Characteristics

Measure Used	r, General Self-Efficacy	r, Social Self-Efficacy
Internal-External Control Scale	-.287, $p < .0001$	-.173, $p < .01$
Personal Control Subscale of I-E		
Control Scale	-.355, $p < .0001$	-.132, $p < .01$
Marlowe-Crowne Social		
Desirability Scale	.431, $p < .0001$	.278, $p < .0001$
Ego Strength Scale	.290, $p < .0001$	.061 (no p value given)
Interpersonal Competency Scale	.451, $p < .0001$	.432, $p < .0001$
Self-esteem Scale	-.510, $p < .0001$	-.279, $p < .0001$

All of the correlations obtained were in the predicted direction, providing initial validation data for Sherer et al. (1982). The Internal-External (I-E) Control Scale was predicted to correlate negatively with the SES, since low scores on the I-E Scale indicated an internal locus of control, or a tendency to attribute success to one's skill and not to luck or chance. The Personal Control Subscale of the I-E Control Scale was particularly relevant for Sherer et al.'s (1982) study, since it is purported to measure the degree to which an individual believed they control their own life. Again, lower scores on the Personal Control Subscale indicated higher levels of control beliefs, and were predicted to correlate negatively with SES scores.

Since a belief in one's ability to perform a variety of tasks is likely to be viewed by others as a positive trait, a positive correlation with the SES and the Marlowe-Crowne Social Desirability Scale was predicted, and was shown. The Ego Strength Scale is intended to measure determination, persistence, social effectiveness, and psychological well-adjustment; higher scores on this measure mean higher levels of all of the preceding traits. A positive correlation with the SES was observed. The Interpersonal Competency Scale is a measure of an individual's ability to deal with others as well as overall positive mental health; again, a positive correlation was observed. Finally, high self esteem is indicated by low scores on the Self-esteem Scale; a negative correlation was predicted and found to exist (Sherer et al., 1982).

Further investigation of the validity of the SES was undertaken by Sherer et al. (1982), with an attempt to establish criterion validity for the measure. This second study was based upon the assumption that individuals with a history of successful experiences in life, especially in the areas of employment, education, and military experience, should show higher levels of self-efficacy than individuals who lack successful experiences in these areas. The results were as predicted; individuals who were more likely to be employed, have quit fewer jobs, and been fired fewer times scored higher on the GSE subscale of the SES than other individual with less successful past histories in these particular areas (Sherer et al., 1982).

A later investigation of the SES revealed the measure to have demonstrated acceptable levels of both reliability and validity (Imam, 2007). In an effort to promote recognition of the importance of general self-efficacy as a dimension of psychological well being, Imam utilized the GSE subscale of the SES to determine its applicability to

Malaysian participants. Previously, the SES had been used primarily on Western and Israeli samples (Imam, 2007).

Participants completed the 17 items of Sherer et al.'s (1982) GSE Scale. Test-retest reliability, over a 6-week period, was $r = .60$, $p < .01$. Overall Cronbach's alpha was .85, $p < .0001$. A Pearson correlation to determine convergent validity was done by correlating scores on each SES item with total SES scores when the corresponding item score was deleted. The corrected item-total correlations demonstrated low to moderate convergent validity ($r = .23$ to .66, $p < .001$, mean $r = .47$, $p < .001$). Overall, Imam (2007) concluded that the SES was a reliable and valid measure of general self-efficacy, but cautioned that participants should be given the SES only in their native language, and urged that future use of the SES should involve more diverse and heterogeneous samples.

The SES was an appropriate measure for use in this study. It is a brief self-administered measure with items written at a level that high school students in this sample could be expected to understand. The SES has been shown to be both a reliable and valid measure of general and social self-efficacy, both of which are relevant to this investigation of the self-efficacy levels of high school mentor volunteers.

<center>Data Collection and Analysis</center>

Raw scores on the SIS and the SES were collected. A series of independent sample *t* tests was performed first, in order to identify any significant differences in social interest and self-efficacy levels among mentor volunteers and their nonmentor peers. In addition, the relationship between social interest and self-efficacy within each mentor participant was examined, using a Pearson correlation procedure.

Additional independent samples *t* test analyses were performed to determine the effects prior experience as a mentor. The effects of gender on test scores were examined through the use of an independent sample *t* test. Though not outlined in a specific hypothesis in this study, the information regarding gender was of particular interest to the sponsoring agency which had oversight of the mentoring program, and may be used in their literature promoting the program. Participant scores were coded and entered into a statistical analysis software program; specifically, SPSS Graduate Pack 13.0 for Windows was utilized for all analyses.

All completed survey packets were collected by the mentoring program facilitators and study hall monitors. Those packets collected by study hall monitors were passed on to program coordinators, who handed all mentor and nonmentor packets to the principal investigator. Prior to being handed to the investigator, all materials were kept in secure, locked filing cabinets within the facilitator's offices, and once handed to the investigator, all materials were transferred to a secure, locked file cabinet in the investigator's home for storage. Confidentiality agreements were signed by those individuals who were collecting packets and by the program facilitators in order to protect student privacy.

<div align="center">Hypotheses Related to Research Questions</div>

Research Question (1)

Are social interest levels higher in those students who volunteer as mentors than in those students who do not?

Null hypothesis (1): There is no significant difference in social interest levels between high school students who volunteer as mentors and those who do not.

Alternate hypothesis (1): Those high school students who volunteer as mentors will have significantly higher levels of social interest as measured by their scores on the SIS (Crandall, 1975) than those students who do not volunteer for the same program.

Research Question (2)

Are self-efficacy levels higher in those students who volunteer as mentors than in those students who do not?

Null hypothesis (2): There is no significant difference in self-efficacy levels between high school students who volunteer as mentors and those who do not.

Alternate hypothesis (2): Those high school students who volunteer as mentors will have significantly higher levels of self-efficacy as measured by their scores on the GSE and SSE subscales of the SES (Sherer et al., 1982) than those students who do not volunteer for the same program.

Research Question (3)

Do those high school mentors who have higher levels of social interest also have higher levels of self-efficacy?

Null hypothesis (3): There is no relationship between social interest and self-efficacy among high school mentors.

Alternate hypothesis (3): Those high school mentors who have higher levels of social interest will also have higher levels of self-efficacy, indicating a correlation between the two constructs.

Research Question (4)

Are those students who were mentored as middle and elementary school students more likely to become mentors themselves during high school?

Null hypothesis (4): There will be no difference between mentors and nonmentors

with regard to the number of participants who were mentored and those who were not.

Alternate hypothesis (4): A higher number of participants in the mentor group will report

having been mentored themselves than participants in the nonmentor group.

Research Question (5)

Among the mentor group, are those students who have been mentors before and are

returning for a subsequent year higher in social interest and self-efficacy levels?

Null hypothesis (5): There will be no difference in social interest and self-efficacy levels

among those students who are first-time mentors and those who are returning to the

program.

Alternate hypothesis (5): Those students who are returning to the program for a

subsequent year of mentoring will have higher levels of social interest and self-efficacy

among mentors.

Chapter Summary

This study utilized a self-report method where participants were asked to

complete the SIS and the SES, as well as a demographic sheet indicating their grade,

gender, previous experience as a mentor and previous experience as a mentee. All

participants required parental consent (if under the age of 18) as well as a signed student

assent form. As an incentive, participating students were offered the chance to win a

raffle prize. Attempts were made to recruit at least 40 mentor and 40 nonmentor students

for participation in the study.

Data were analyzed using standard parametric statistical measures to determine

the differences in social interest and self-efficacy among mentor volunteers and their

nonmentor peers. In addition, the levels of both social interest and self-efficacy within the mentor participants were examined, to determine if the two showed a positive correlation, as predicted. Statistical t test analyses were used to determine any significant effects of former participation as a mentor and the effects of gender on test scores. Finally, the number of students who had been mentored was examined within both samples, to determine if a greater number of previously mentored students were found within the mentor group, as predicted.

The SIS and SES have both been shown to be valid and reliable measures for examining their related constructs; their use in this investigation was both appropriate and convenient. All data were collected with the assistance of school-based staff, and were analyzed using a standardized statistical software package.

The approach described in this study has been designed in the hope that the data will allow for further understanding of the characteristics of high school mentors which may play a significant role in predicting their success as potential mentors. Avoiding premature termination of mentoring relationships, and identifying mentors who will serve as the most productive and positive role models for mentees, will allow for more positive program outcomes for both mentors and mentees in the future. This research will also form the basis for future and more in-depth investigations of mentor characteristics, a topic which has received less attention in the established literature than other aspects of mentoring programs, such as mentee outcomes with regard to specific goals.

Chapter 4 provides the statistical results of all analyses performed on data collected and reviews each research question in terms of whether results supported the null or alternative hypothesis for each question. Chapter 5 offers a discussion and

interpretation of the findings described in Chapter 4, and explores potential areas of

interest for future study.

CHAPTER 4: RESULTS

Introduction of Chapter

This study sought to determine if differences in social interest and self-efficacy levels exist between high school volunteer mentors and their nonmentor peers. It also sought to determine the relationship between these two variables within each high school mentor participant. In addition, this study was designed to examine the effects of prior experience as a mentee, and the differences between new and returning mentors. The effects of gender were also examined.

Sample Description

During the month of October, and prior to the start of any mentor training, students in one high school were invited to participate in this study. Mentor volunteer and nonmentor students were given identical packets, which included the SIS, the SES, a parent consent form, a student assent form, and a student demographic form (see Appendixes B, C, D, E, & F). All packets were distributed prior to the start of any formal mentor training.

One hundred-twenty three packets were distributed to mentor volunteers; a total of 41 packets were returned. Only those which were completed successfully and were accompanied by a signed parent permission form were included for analysis. A total of 37 (90%) were completed and considered viable for use ($N = 37$). Seventeen (46%) of the mentors who completed the packets successfully were returning mentors who had prior mentoring experience in the same program; 20 (54%) of those who completed the packets successfully were new mentors. Thirty (81%) of the mentors who responded had never been formally mentored while in elementary school, while 7 mentor participants (19%)

had participated as mentees while in elementary school. Thirty-three out of 37 mentor participants (89%) were female; 4 (11%) were male. This imbalance is representative of the overall mentor population of 123 students from which the mentor sample was drawn, with 98 being female and 25 being male.

Ten (27%) of the mentor participants were in 10th grade, 17 (46%) were in 11th grade, and 10 (27%) were in 12th grade. There were no 9th grade mentor participant surveys returned.

One hundred-forty packets were distributed to nonmentor students; only those which indicated no prior experience as a mentor and were completed successfully were included for analysis. Of the 47 packets which were returned, 32 (68%) were considered viable for use in this investigation ($N = 32$). Those packets which were returned but excluded were either incomplete (items not answered), incorrectly completed, or missing signed parent permission forms. Thirty-one (97%) of nonmentor participants had never been formally mentored while in elementary school; 1 person (3%) had participated as a mentee while in elementary school. Nineteen of the 32 (59%) nonmentor respondents were female; 13 (41%) were male.

Six (19%) of the nonmentor participants were in 10th grade, 5 (16%) were in 11th grade, and 21 (65%) were in 12th grade. There were no 9th grade nonmentor surveys returned. See Table 3 for a description of participants.

Table 3

Descriptive Characteristics of Mentor and Nonmentor Participants

	N	Male	Female	Returning Mentors	New Mentors	Mentored in Elementary	10th	11th grade	12th
Mentors	37	4	33	17	20	7	10	17	10
Non-Mentors	32	13	19	N/A	N/A	1	6	5	21

Results of Analysis

The mean SSE, GSE, and SIS scores for all participants are listed in Table 4. Mentors did score higher than nonmentors across all measures; the mean mentor SIS score ($m = 9.89$, $SD = 2.37$) was higher than the mean nonmentor SIS score ($m = 8.38$, $SD = 3.14$). The mean mentor SSE score was ($m = 22.62$, $SD = 3.86$), while the mean nonmentor SSE score was ($m = 19.87$, $SD, = 3.77$). The mean mentor GSE score was ($m = 63.92$, $SD = 8.69$), while the mean nonmentor GSE score was ($m= 61.03$, $SD = 8.31$).

Table 4

Descriptive Statistics of Mentors and Nonmentors for Mean Scores on SSE Subscale, GSE Subscale, and SIS.

		N	Mean	SD	Standard Error of Mean
SIS Score	Mentor	37	9.89	2.37	.389
	Nonmentor	32	8.38	3.14	.555
SSE Score	Mentor	37	22.62	3.86	.635
	Nonmentor	32	19.87	3.77	.667
GSE Score	Mentor	37	63.92	8.69	1.42
	Nonmentor	32	61.03	8.31	1.47

Hypothesis 1

Hypothesis 1 predicted that students who volunteer as mentors will have significantly higher levels of social interest, as measured by their scores on the SIS (Crandall, 1975), than those who do not volunteer as mentors. Independent samples *t* tests were executed in order to determine significant differences in mean scores between mentors and nonmentors with respect to the three separate test scores obtained for each participant. Significance levels were lowered to *p* < .006 for the *t* test analyses, as a result of performing a Bonferroni Correction procedure. This was done in order to reduce the probability of making a Type I error. Levene's Test for Equality of Variances indicated that there were no significant differences in variance among the mentor and nonmentor samples. Results for the SIS score independent samples *t* test analyses can be found in Table 5.

Table 5

Independent Samples t-test Results for Comparison of Mentor and Nonmentor SIS Scores.

	F	Sig.	*t*	*df*	Sig (one tailed)	Mean Diff.	Std. Error Diff.	99.99% Confidence Interval
SIS score	2.50	.119	2.28	67	.013	1.52	.664	-1.23 – 4.26

No significant difference was found between mentors and nonmentors on the SIS, *t* (67) = 2.284, *p* = 013 (one-tailed) when a directional comparison was made. Students in the mentor volunteer group did not score significantly higher when compared to

nonmentor students, indicating no significant differences in levels of social interest

among mentors and nonmentors. These results did not allow for a rejection of the null

hypothesis for Hypothesis 1, which predicted that mentors would demonstrate

significantly higher levels of social interest, as measured by their scores on the SIS.

Hypothesis 2

Hypothesis 2 predicted that students who volunteer as mentors would have

significantly higher levels of self-efficacy than their nonmentor peers, as measured by the

SSE and GSE subscales of the SES (Sherer & Adams, 1983). Results indicated a

statistically significant difference in SSE scores between mentors and nonmentors, t (67)

= 2.98, p = .002 (one-tailed), when a directional comparison was made, with mentors

obtaining higher scores. In examining the GSE scores, no significant difference was

found between mentor and nonmentor scores, t (67) = 1.37, p = .087 (one-tailed). Table 6

lists the independent samples t test results comparing mentor and nonmentor test scores

on the GSE and SSE subscales of the SES.

Table 6

Independent Samples t test Results for Comparison of Mentor and Nonmentor GSE and SSE Subscale Scores.

	F	Sig.	t	df	Sig (one tailed)	Mean Diff.	Std. Error Diff.	99.99% Confidence Interval
SSE score	.300	.586	2.98	67	.002*	2.75	.922	-1.07. - 6.56
GSE score	.062	.804	1.37	67	.087	2.83	2.06	-5.68 –11.33

Indicates significance at p < .006 level.

The null hypothesis could then be rejected with respect to SSE subscale scores between mentors and nonmentors, but the null could not be rejected with respect to GSE subscale scores. This finding supported the notion of the difference between social and general self-efficacy constructs as outlined by Sherer et al. (1982), and indicated that students who volunteer for mentoring programs may have higher levels of SSE, but do not necessarily differ from their nonmentor peers with respect to GSE.

Hypothesis 3

Hypothesis 3 predicted that those high school volunteer mentors who demonstrated higher levels of social interest would also demonstrate higher levels GSE and SSE, indicating a correlation existed between the constructs. A Pearson correlation between SSE scores for mentors ($M = 22.62$, $SD = 3.86$) and SIS scores for mentors ($M = 9.89$, $SD = 2.36$), using a one-tailed significance level of $p < .05$, was not found to be statistically significant, r (37) $= .175$, $p = .150$.

A Pearson correlation between GSE scores for mentors ($M = 63.91$, $SD = 1.43$), and SIS scores using a one-tailed significance level of $p < .05$, was not found to be statistically significant, r (37) $= -.246$, $p = .071$. A Pearson correlation between GSE scores for mentors and SSE scores for mentors, using a one-tailed significance level of $p < .05$, did yield a significant relationship, r (37) $= .293$, $p = .039$. Since the SSE score and the GSE score are subscale measures of the SES (Sherer et al., 1982) it is not surprising that the two did correlate. The finding that there were no significant correlations between SSE and SIS, and GSE and SIS scores, resulted in an inability to reject the null hypothesis for Hypothesis 3, which anticipated a positive correlation between social interest and self-efficacy among mentors. There was no significant finding which

indicated a positive correlation existed between social interest and self-efficacy among

mentors. Table 7 provides a correlation matrix for the results pertaining to Hypothesis 3.

Table 7

Correlation Matrix for SSE, GSE, and SIS Scores among Mentors.

		SSE score	GSE score	SIS score
SSE score	Pearson Correlation	---	.293*	.175
GSE score	Pearson Correlation	---	---	-.246

* Correlation is significant at the p < .05 level.

Hypothesis 4

Hypothesis 4 predicted that a significantly higher number of students in the

mentor group would report having been mentored while in elementary school. Among the

mentors ($N = 37$), seven students reported that they had participated as mentees in a

formal mentoring program during elementary school; among the nonmentors ($N = 32$),

one student had reported participating in a formal mentoring program as a mentee while

in elementary school. The relationship between being mentored and becoming a mentor

was examined using a chi-square analysis, and was found to be statistically significant at

an alpha level of $p < .05$, χ^2 $(1, N = 69) = 4.18$, $p = .041$. As indicated by Cramer's V, the

strength of the relationship was .246. This reflected the fact that a higher number of

students who were mentored in elementary school were found within the high school

mentor group than within the nonmentor group. Table 8 shows the observed and expected

frequency counts associated with the chi-square analysis. These findings made it possible

to reject the null hypothesis for Hypothesis 4 and state that a significantly higher number

of students who reported being mentored were volunteering as mentors when compared with the nonmentor group.

Table 8

Observed and Expected Frequency Counts of the Number of Previously Mentored Students among the Mentor and Nonmentor Groups.

		Were Mentored	Were Never Mentored
Mentors	Observed Count	7	30
	Expected Count	4.3	32.7
Mentors	Observed Count	1	31
	Expected Count	3.7	28.3

Hypothesis 5

Hypothesis 5 predicted that among mentor volunteers, those who were returning as mentors for a subsequent year of mentoring would demonstrate higher levels of social interest and self-efficacy than first-year mentors, as indicated by their scores on the measures being used. Mean SSE, GSE, and SIS scores for new mentors ($N = 20$) and returning mentors ($N = 17$) are shown in Table 9. New mentors had a mean score of 22.2 on the SSE, 62.75 on the GSE, and 9.85 on the SIS. Returning mentors had a mean score of 22.29 on the SSE, 65.29 on the GSE, and 9.94 on the SIS.

Table 9

Mean SSE, GSE, and SIS Scores for New and Returning Mentors.

	SSE mean score	GSE mean score	SIS mean score
New Mentors	22.20	62.75	9.85
Returning Mentors	22.29	65.29	9.94

A series of independent samples *t* tests were used to compare the mean SIS, GSE, and SSE scores among those mentors who were new to the program with those who were returning for a second or higher year of mentoring. Once again, the alpha level was set at *p* < .006, based on the Bonferroni Correction procedure. Results indicated that there were no significant differences in mean SIS, SSE, and GSE scores between new and returning mentors. The results of the *t* tests comparing new and returning mentor test scores are found in Table 10. The null hypothesis for Hypothesis 5, which stated that there would be no difference in test scores between new and returning mentors, could not be rejected as a result of this study.

Table 10

Independent Samples t tests Results for Comparison of New and Returning Mentor Mean Test Scores

	F	Sig.	*t*	*df*	Sig. (one-tailed)	Mean Diff.	Std. Error Diff.	99.99% Confidence Interval
SSE Score	.116	.736	-.471	35	.321	-.606	1.29	-6.26 – 5.04
GSE Score	4.20	.048	.885	35	.191	2.54	2.88	-10.07 – 15.16
SIS Score	.000	.990	.115	35	.454	.091	.792	-3.38 – 3.56

Effects of Gender on SIS, SSE, and GSE Scores

Though not specifically outlined in a formal hypothesis, this study also examined the effects of gender on social interest and self-efficacy levels. Table 11 shows mean SSE, GSE, and SIS scores for females (*N* = 51) and males (*N* = 18). Males obtained a mean score of 21.12 on the SSE, 60.44 on the GSE, and 7.67 on the SIS. Females obtained a mean score of 21.41 on the SSE, 63.37 on the GSE, and 9.73 on the SIS.

Table 11

Mean SSE, GSE, and SIS Scores for Males and Females

		N	Mean	SD	Std. Error Mean
SSE Score	males	18	21.12	4.27	1.01
	females	51	21.41	3.99	.559
GSE Score	males	18	60.44	9.31	2.19
	females	51	63.37	8.26	1.16
SIS Score	males	18	7.67	3.29	.775
	females	51	9.73	2.47	.347

An independent samples *t* test indicated that there were significant differences between males and females only with respect to SIS scores, $t(67) = 2.78$, $p = .004$ (one-tailed). There were no significant differences in SSE or GSE scores between male and female participants. These results indicated that females in this study demonstrated higher levels of social interest than male participants. See Table 12 for a complete review of the *t* test analyses on gender and test scores

Table 12

Independent Samples t test Results for Comparison of Male and Female Mean Test Scores

	F	Sig.	t	df	Sig. (one-tailed)	Mean Diff.	Std. Error Diff.	99.99% Confidence Interval
SSE Score	.207	.650	.220	67	.414	.245	1.11	-4.37 – 4.86
GSE Score	1.44	.235	1.25	67	.108	2.93	2.34	-6.76 –12.61
SIS Score	1.83	.181	2.78	67	.004*	2.06	.742	-1.01 – 5.13

* *Indicates significance at p < .006 level.*

Chapter Summary

Chapter 4 provided the results of statistical testing as they related to each stated hypothesis. All statistical analyses were done using SPSS Graduate Pack 13.0 for Windows. Each hypothesis was reviewed and the statistical results which allowed for either an acceptance or a rejection of the null associated with each hypothesis were stated.

In examining SIS, SSE, and GSE test scores among mentors and nonmentors, independent samples *t* test results indicated that SSE scores differed significantly between mentors and nonmentors, with mentors obtaining higher scores for the SSE subscale measure of the SES. Scores on the SIS, and the GSE subscale of the SES, did not differ between the two groups. The null hypothesis for Hypothesis 1, which anticipated differences in social interest levels, could not be rejected as a result of finding no significant differences in SIS scores among mentors and nonmentors. The null hypothesis for Hypothesis 2 could be partially rejected, when considering the mean SSE scores among mentors and nonmentors. Mentors scored significantly higher on the SSE subscale measure of the SES than their nonmentor peers, but no significant differences were found with respect to GSE subscale scores between the two groups.

With respect to the relationship between social interest and self-efficacy scores within mentor participants, Pearson correlation results indicated no significant relationship between social interest and either GSE or SSE scores among mentor volunteers. The only significant correlation found was that between SSE and GSE; this was not surprising since the two measures are subscales of the SES. Hypothesis 3 addressed the potential for a significant positive correlation to exist between SIS and SES

scores. The null hypothesis for Hypothesis 3 could not be rejected as a result of this study.

When examining the question of whether or not mentored students are more likely to become mentors than their nonmentored peers, a chi-square analysis did yield a significant relationship between being mentored and becoming a mentor, with a significantly higher number of students who were mentored appearing in the mentor group. This relationship was predicted in Hypothesis 4, and the results of this study allowed the null to be rejected in this case.

The differences between new and returning mentors, with respect to SI, SSE, and GSE scores were examined through the use of an independent samples t test analysis, and results indicated no significant differences existed. Returning mentors did not score significantly higher on any of the administered measures than new mentors, despite what had been predicted. This led to an inability to reject the null hypothesis for Hypothesis 5, which predicted that returning mentors would obtain significantly higher scores on the measures used.

The effects of gender were examined through the use of a final independent samples t test analysis, and results indicated that only SIS scores differed significantly between males and females. Mean SSE and GSE scores between males and females did not show any significant differences, but females did score significantly higher on the SIS than their male cohorts across all participants. The effects of gender were not outlined in any formal hypothesis in this study, but represented a variable of interest to the researcher. The results indicating that females scored higher on social interest were not

surprising to the researcher, but similar differences were expected (though not

supported) for both subscales of the SES.

In conclusion, only some of the predicted outcomes occurred as a result of the

various analyses performed on mentor and nonmentor test scores in this study. These

findings allow for some insight into the characteristics of mentors and nonmentors within

the sample used for this study. Chapter 5 will discuss the findings outlined above and will

provide further interpretation of those findings. Chapter 5 will also discuss implications

for social change that are realized as a result of this study, as well as the limitations

present in interpreting and generalizing these results, and will review any conclusions and

recommendations that can be made as a result of this study.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

This research study sought to examine the preexisting differences among high school mentor volunteers and their nonmentor peers, with respect to social interest and self-efficacy levels. Social interest and self-efficacy have been identified as being relevant constructs for consideration within the study of mentor characteristics.

Social interest relates to an individual's recognition of their own efforts toward promoting the greater good that exists in society, while putting aside purely individualistic pursuits (Adler, 1964). In addition, social interest is what allows individuals to recognize when someone else is struggling with life's stressors, and will prompt that person to offer assistance (Adler). With regard to mentoring, social interest will be a necessary component within those students who decide to commit to a volunteer program which places upon them the responsibility for helping younger students develop in a more positive fashion.

Self-efficacy has been recognized as providing individuals with an ability to persist in their efforts, despite being met with adversity, and also allowing for a belief in the probability of obtaining a successful outcome as a result of one's efforts (Bandura, 1977). Students who are low in self-efficacy are less likely to attempt tasks, because they do not believe they will be successful. In addition, students low in self-efficacy will not persist over time in their efforts toward obtaining specific goals, especially when obstacles appear. With regard to mentoring, those students who are higher in self-efficacy should be more willing to commit to a relatively long-term (the duration of the school

year) effort to work as mentors, even when met with challenges (difficult mentees or mentees who are frequently absent from the program).

Research which examined the effectiveness of mentoring on school-aged students established that premature termination of the mentoring relationship clearly results in less positive outcomes for mentees (Grossman & Rhodes, 2002; Karcher, 2005; Rhodes, Grossman, & Resch, 2000). Reducing the potential for this particular outcome is in the best interest of those who are invested in providing quality mentoring experiences for students. To this end, knowing more about the characteristics of potential mentors can be a valuable tool. The process of screening and training for high school mentor volunteers within school-based peer mentoring programs may not allow for an in-depth examination of mentor characteristics or a lengthy training period. The nature of such programs automatically places time restraints on program duration, since the school year itself is limited and provides for several weeks of vacation time when mentoring programs will typically not meet. Program coordinators may be pressed to make determinations of which students will make the best mentors within a limited amount of time, and with limited personal knowledge of the mentors themselves.

The use of brief survey tools which target specific personal characteristics of mentors may allow for better decisions when creating mentoring programs and pairing students; this study sought to employ such a technique using one developmental peer mentoring program and targeting high school volunteer mentors and nonmentor students. Several hypotheses were developed, and the results of this research study as it relates to each hypothesis are outlined below.

Results and Interpretations

The first two questions that this study sought to answer were: (a) Do high school mentor volunteers possess higher levels of social interest than their nonmentor peers, and (b) Do high school mentors possess higher levels of self-efficacy than their nonmentor peers? In order to answer these questions, 37 high school volunteer mentors and 32 mentors completed both the SIS (Crandall, 1975), and the SES (Sherer & Adams, 1983). Their responses were coded and each student received an overall score representing their social interest level, their SSE level, and their GSE level. Statistical *t* test analyses allowed for comparison of means among the two groups of students.

Differences in Social Interest and Self-efficacy Levels between Mentors and Mentors

Results of this analysis showed that SSE levels differed significantly between mentors and nonmentors, with mentors scoring significantly higher on the SSE subscale of the SES. This finding indicates that while students may possess similar levels of general self-efficacy and social interest, those with a higher level of social self-efficacy were more likely to volunteer as mentors. Perhaps most students surveyed felt similarly competent in their own problem-solving abilities in general, but when it came to social interactions, only those higher in SSE were willing to seek out volunteer opportunities which were social in nature.

Volunteering to mentor a younger student for an extended period of time does seem to fit the description of social interest. Students who have been chosen as mentees are often chosen due to identification with some risk factor, such as poor attendance or poor social skills. Mentors may expect their mentees to have lower levels of social or academic skills, and may volunteer with the idea of specifically helping at-risk students.

Social interest, therefore, would appear to play a role in the decision and ability to commit oneself as a mentor; the results of this study did not support this predicted outcome.

Students who volunteered for the mentoring program associated with this investigation were typically not involved in organized sports activities or in theater activities offered by the school. This is due to the potential for conflicting schedules which would not allow mentors to keep their commitment to the mentoring program throughout the school year, a requirement for acceptance in the program. This fact may account for the comparable levels of general self-efficacy and social interest found among mentor and nonmentor samples; nonmentor students may have simply found other outlets for expressing their self-efficacy and social interest beliefs that do not include volunteering in the mentoring program.

The Expected Relationship between Social Interest and Self-efficacy

This study sought to examine the relationship between social interest and self-efficacy among high school mentors. Specifically, this study expected to find that those mentors who were higher in social interest were also higher in self-efficacy, indicating a positive relationship between the two constructs. Pearson correlations did not, however, confirm this prediction.

Among the existing literature, there was little to support the notion of the relationship between social interest and self-efficacy. Perhaps students who participated in this study and who were high in self-efficacy were given various opportunities throughout the school year that do not focus on social interest, such as sports, music, or academic programs. Such examples allowed for an expression of self-efficacy through

rewards for positive performances, but focused more on individual achievement than on promoting the larger goals of society. When accomplished, the notion of success through individual effort is reinforced, leading students to seek out additional, similar experiences. The lack of support for the notion that mentors who were higher in self-efficacy were also higher in social interest could be reflective of the individualistic nature of achievement found in Western culture, which tends to value individual achievement and working alone over cooperation and collectivism (Earley, 1993). This could also in part explain the comparable levels of general self-efficacy found among mentors and nonmentors.

Another possibility is the fact that the students who participated in this study also had available to them the opportunity to participate in other extra-curricular activities which had as their focus a potential outlet for expressing social interest. The school offered students other opportunities to engage in activities promoting community development, such as food drives and various fund raisers (Miller Place Schools, 2008). In addition, in the recent past, students in the district had been given the opportunity to participate in a Habitat for Humanity project in their area. It is possible that those students higher in social interest were pursuing an outlet for their desire to contribute to society in ways that did not include being a mentor, and those students who were volunteering as mentors were not characteristically different from students who did not volunteer as mentors, but did volunteer to fill out surveys. Other opportunities for social activism offered by the school included activities that involved shorter time commitments; students who were busily engaged in various activities may have chosen shorter commitments than that required by the mentoring program.

The Relationship between Being Mentored and Becoming a Mentor Later On

This study examined the issue of whether or not students who were mentored in elementary school were more likely to volunteer as mentors when they got to high school. Through the use of a chi-square analysis, the link between being mentored and becoming a mentor was established, with a significantly higher number of former mentees appearing in the mentor sample than in the nonmentor sample. This piece of information is particularly useful to program coordinators, who can identify former mentees as a potential pool of candidates from which they can recruit mentors. It is possible that mentees will later be naturally drawn to the mentoring program, because of their familiarity with the structure and nature of the program. It is also possible that their own positive experiences with being mentored will act as a catalyst for their willingness to become volunteers, or give back to the program that helped them.

The finding that a higher number of former mentees appeared in the mentor group was not surprising, but again can allow program coordinators to pull information directly from the experiences of volunteers and allow their very relevant feedback to help shape programs to better fit the needs of all students. Gaining the perspective of former mentees can allow program coordinators to address issues they may not have been aware of, had it not been for the return of these students to the program later on.

The Differences between New and Returning Mentors

Within the mentor sample, this study sought to examine the differences in social interest and self-efficacy between new and returning mentors. Students in the program under study could potentially spend three years as mentors, beginning in 10th grade and continuing on through 12th grade. This study predicted that those students who were

volunteering as mentors for a second or third year of mentoring would be higher in both social interest and self-efficacy than students who were new mentors. This, it was thought, could be due to the additional training given to returning mentors, or could be due to the fact that only those students who were very high in both constructs would be willing to spend more than one year committed to a mentoring program. An independent samples *t* test was used to compare the social interest and self-efficacy scores of new and returning mentors, and the results indicated that there were no significant differences between new and returning mentors within the mentor sample. This finding did not support the predicted outcome that those who were returning would be higher in social interest and self-efficacy.

This result could be due to the fact that there is a limited group of students who are willing and able to commit to the mentoring program. Once a student makes any necessary adjustments to join the program, they are then perhaps willing to maintain that commitment over time and will return the following year. It may not necessarily become increasingly more difficult to stay in the program for a subsequent year once students familiarize themselves with the time commitment, so it may not be necessary to have exceptionally higher levels of social interest or self-efficacy in order to be a returning mentor. Those students who do not return may, as mentioned earlier, find other outlets for expressing their social interest or self-efficacy, and may not differ significantly from those students who stay in the program, or who are new to the program.

The Effects of Gender on Social Interest and Self-efficacy Scores

This study did not outline the effects of gender in a formal hypothesis, but it became clear during data analysis that there were differences between males and females

with respect to test scores, with females scoring higher than males across all three measures (SIS, SSE subscale, and GSE subscale). An independent samples *t* test analysis found a statistically significant difference between males and females with respect only to social interest scores. Females in general demonstrated higher levels of social interest than males. This finding was supported by Crandall's (1975) original work in formulating the SIS, which reported higher test scores among female participants when the measure was first being developed. In general, Western society has traditionally promoted the notion that females nurture and are more inclined to support others, while competition and individual achievement is promoted among males. The larger representation of females within the mentor sample also supports the idea that mentoring may provide females with an outlet for a desire to support others that may not be as common in males.

<div align="center">Implications for Social Change</div>

School-based peer mentoring has become an attractive alternative for schools seeking more opportunities for social skills building programs. After-school mentoring programs can also be used as an alternative to structured character education programs, which do not take away from classroom instruction time. Schools are also attracted by the use of other students as volunteers, which allows for less intense training and supervision than a program which utilizes adult members of the community as volunteers (Herrera, 1999). In short, school-based peer mentoring is here and it is here to stay, at least for the foreseeable future. Finding ways to improve the overall quality of such programs has implications for social change as the number of students involved in formal mentoring continues to grow at an exponential rate.

Decreasing the Likelihood of Premature Termination

Since premature termination of the mentoring relationship has been identified as one of the most important factors in predicting mentee outcomes (Grossman & Rhodes, 2002; Karcher, 2005; Rhodes, Grossman, & Resch, 2000), finding ways to avoid this situation will provide program facilitators with the tools to create more effective programs. This study proposed that examining mentor characteristics is one way to buffer against the possibility of mentors leaving programs prematurely. This study found statistically significant differences between mentors and nonmentors with respect to social self-efficacy, supporting the idea that personal characteristics can play a role in the decision to become a mentor. For individuals seeking to improve the effectiveness of any mentoring program, this study may provide a starting point for launching more extensive investigations of mentor characteristics. This particular aspect of mentoring has not been examined in the literature as thoroughly as the topic of mentee outcomes.

Increasing the Number of Male Volunteer Mentors

This study utilized a mentor sample that had a higher number of female volunteer mentors than males (33 out of 37 were females). This appears to be reflective of other school-based peer mentoring programs which have been examined (Herrera et al., 2007). Also worthy of note is the tendency for school-based programs to have higher numbers of male students referred to programs as mentees, with a far fewer number of male mentor volunteers available (Herrera et al., 2007). While matching for gender alone does not appear to improve mentee outcomes, matching for similarity of interests does (Herrera, 2004; Herrera, Sipe, & McClanahan, 2000). Increasing the number of male volunteer mentors can increase the chances that pairs are matched based on high similarity of

interests; examining the characteristics of male mentor volunteers can assist in this endeavor.

Providing Opportunities for Reinforcing Self-efficacy Beliefs and Expression of Social Interest

Efficacy expectations are reinforced by experiences; this holds true for both positive and negative expectations and experiences. Positive outcomes and accomplishments will bolster positive self-efficacy beliefs, while negative outcomes will serve to reinforce negative self-efficacy beliefs (Bandura, 1977). Providing students with any opportunity to improve their efficacy expectations is a worthwhile effort. Students who volunteer as mentors and come away with a sense that they have fulfilled an obligation and created positive change in another individual will have their self-efficacy beliefs reinforced, which may lead to a generalization to other situations outside of their mentoring experience.

While social interest is seen as an innate characteristic, Adler (1964) also recognized the need to foster the development of social interest in individuals. Providing opportunities to mentor younger students is certainly in line with allowing for an expression of social interest among high school mentor volunteers. This study did find significant differences in SSE among mentors and mentors, and provides some initial insight into this particular aspect of mentoring. These characteristics within mentors have not been extensively studied within the body of literature on mentoring, and are certainly worthy of further examination.

Creating a Larger Pool of Potential Mentors

This examination did find that a significantly larger number of students within the mentor sample had been mentored while in elementary school. This has obvious implications for program coordinators who are seeking to recruit mentor volunteers. If coordinators are seeking to increase the number of male volunteer mentors, they may have at their disposal a pool of potential male volunteers within their former mentee population. Increasing the number of male volunteers could lead to stronger mentor-mentee pairs, thereby increasing the quality of mentee outcomes.

Limitations

The most obvious limitation of this investigation was the lack of ability to generalize the results found to any larger population of mentors. The mentor and nonmentor samples were similar to one another in many respects, due to the lack of diversity within the overall population from which they were drawn.

Opportunities for expression of social interest and for developing positive efficacy expectations are numerous within the school from which the samples were drawn. It is entirely possible that students high in both self-efficacy and social interest were actively volunteering in other programs. Had the mentoring program been unique in its ability to allow for an expression of social interest, greater differences among mentor and nonmentor students may have been found.

What were not investigated in this study were the motivations which led certain students to volunteer as mentors. It is possible that student motivation to be a mentor had less to do with a belief in their ability to help others and a desire to bring about positive change in younger students, and more to do with what their friends and peer groups were

doing. Students may volunteer because their friends are volunteering or because they have Tuesday afternoons free, or because they are trying to seek out more volunteer activities to put on their college applications.

While the limitations listed above are valid concerns in interpreting the results of this study, they do not detract from the overall value of studying mentor characteristics. This is an area which is worthy of further investigation.

<div align="center">Conclusions and Recommendations for Further Study</div>

This examination found significant differences in SSE among high school mentors and nonmentors. No differences in GSE or social interest were found. No differences between new and returning mentors were found with respect to SSE, GSE, or social interest. No relationships between social interest and either GSE or SSE were found within the mentor sample. A significant number of students in the mentor sample, however, had reported that they were mentored themselves in elementary school. Female participants in this study scored significantly higher in social interest than males.

An examination of social interest and self-efficacy among mentors and nonmentors from another, more diverse student population could provide further information on the differences between the two groups. The homogeneity within the sample used in this study does not allow for an understanding of these factors among students from more urban, culturally diverse schools. In addition, mentees referred for programs in more urban schools may face different challenges than the mentees attending the program used in this study. Characteristics of mentors within more urban programs may take on a new significance, given the issues their mentees face. Perhaps more

significant differences in social interest and self-efficacy would be found between mentors and nonmentors given a different sample and setting.

Motivations for volunteering as a high school mentor are worth examination, as the possibility for various motivations exists. Further study of other characteristics or factors involved is certainly worthwhile. The significantly larger percentage of female volunteer mentors in this study seems to mirror the general trend found within various mentor samples; further studies may wish to investigate the reasons behind this apparent discrepancy between males and females.

Finding ways to increase the number of male volunteers is a subject that does not appear to have been addressed within the literature on school-based mentoring. This is especially important, since there tends to be higher numbers of male students who are recommended for participation as mentees. Years later, however, it appears that these males are not volunteering as mentors, despite their larger numbers as mentees. This study found a significantly larger number of former mentees within the mentor sample, but the mentor sample was overwhelmingly female. Perhaps examining the reasons behind this finding could shed light on the different perceptions of male and female mentees at the conclusion of their formal mentoring experience, and the ways in which those perceptions change as they age.

Further study of mentor characteristics in general is recommended, as this is a subject that has received little attention within the body of literature on school-based mentoring. Much remains to be seen in terms of program effectiveness and long-term outcomes for mentees and mentors alike. The benefits of having a skilled and competent mentor can change a child's life forever; so can the effects of having a negative

mentoring experience. Our understanding of the potential impact of this kind of relationship was first outlined in ancient Greek times; this theme has survived and reappeared throughout the world's literature for centuries, indicating our enduring identification with its importance. Surely something so powerful is deserving of a comprehensive examination designed to increase our understanding of the dynamics involved.

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APPENDIX A: PERMISSION TO CONDUCT STUDY

Description of Study:

My name is Courtney Brewer and I am a doctoral student at Walden University. I am in the dissertation phase of my studies, and I have decided to make the focus of my investigation the characteristics of high school students who volunteer as mentors in the North Shore Youth Council's Big Buddy Little Buddy Program, which your district has hosted for the past 10 years. Social interest and self-efficacy are two constructs related to helping behaviors and willingness to persist in various endeavors. It is my theory that those students who volunteer as mentors will be higher in both self-efficacy and social interest than those who have not volunteered as mentors. The reason this study is meaningful is because it would be advantageous for schools and program developers to be able to identify which students would be more likely to be successful in their mentoring efforts, and which ones would be more likely to persist in their efforts over time. Research has shown that mentees not only do not benefit from premature termination of mentoring relationships when the mentor drops out, but the potential is there for them to experience lowered levels of self-esteem. If this situation could be avoided, by having more precise and valid measures of mentor characteristics, the outcome for all students involved could be improved.

Administration of Measures:

I would like to administer two different measures to two groups of students: those who have volunteered as mentors and those who have not. I would like to ask both groups of students to complete the Social Interest Scale (SIS) (Crandall, 1975), and the Self-Efficacy Scale (SES) (Sherer et al., 1982). The SIS contains 24 items and the SES

contains 23 items. Both have been found to be reliable and valid measures. Students

should take approximately 15 minutes to complete both. They will also be asked to

complete a cover sheet asking them to indicate their grade level, their gender, whether or

not they have volunteered as mentors and if so, for how many years, and whether or not

they have been mentored in the past. Volunteer mentors will complete their packet during

the Big Buddy training after school; nonmentor students will complete their packet

during their homeroom period at the start of the day. I would like to collect this

information during the first quarter of the school year. I will need at least 50 students to

participate in the study for the results to be meaningful. All results will be collected with

the assistance of building based Student Assistance Counselors, and all data will be

analyzed. All students whose data is used in the investigation will need to have both a

parental consent (if they are under the age of 18) and a student assent form on file with

me. Students who are 18 years of age or older will not require a parental consent form.

I have made arrangements to obtain confidentiality agreements from all individuals who

have any access to completed student packets. All packets will be stored in a secure

location in order to ensure student privacy.

The Internal Review Board of Walden University has reviewed and approved of the

proposed methods in this study. They have determined the risks associated with

participation are minimal and acceptable. My doctoral committee has also reviewed this

proposed study and has found it to be acceptable.

Your consent for this investigation in your district and in your high school is a

necessary component of this study. Please indicate your approval by signing and dating

this form. If you have any questions or concerns regarding this study, please do not

hesitate to contact me.

I have reviewed and approved the proposed study of the characteristics of high school
mentor volunteers. This study may proceed as described using students enrolled in the
Miller Place High School.

Superintendent of Schools: (Print name) _____

Signature: _____   Date: _____

Miller Place High School Principal: (Print name) _____

Signature: _____   Date: _____

Thank you for your support of my proposed study. Once all of the results have been
collected and analyzed, you will be provided with a description of any and all findings
associated with this study.

Investigator Contact Information

Courtney Brewer * courtney.brewer@waldenu.edu
Alternate email: nsyc2003@aol.com

APPENDIX B: PARENTAL CONSENT FORM

My name is Courtney Brewer and I am a doctoral student at Walden University. I will be receiving my PhD in Psychology, once I complete my dissertation. I have decided to study select characteristics of high school students.

Those students who have parental permission to participate in this study will fill out a cover sheet, asking them to provide information about themselves, such as their gender, grade level, and whether or not they have ever participated in the Big Buddy Little Buddy program. Then, they will fill out two separate survey measures, the Social Interest Scale (Crandall, 1975) and the Self-Efficacy Scale (Sherer et al., 1982).

The entire procedure should take approximately 15 minutes, and students will not be pulled out of any academic classes to participate.

The only risk associated with your child's participation in this study is if they feel nervous or anxious while they are filling in their answers. Any student who begins to fill the surveys out may choose not to continue. Students who participate will have their names entered in raffle to win a $25.00 Starbucks gift card; those who decide not to participate once they have started the surveys will not be punished in any way, and they will still be eligible for the raffle drawing. Participation is completely optional, and both students and parents can withdraw their consent at any time, even after they have completed the surveys.

Any research involving students under the age of 18 requires approval and parental consent. I have obtained approval for my research from the Internal Review Board of Walden University, my doctoral committee who is overseeing my research, the Superintendent of the Miller Place School district, and the Principal of the Miller Place

High School. Your consent, and your child's agreement to participate, are both necessary components to my research.

If you would like your child to participate in this research study, and your child agrees to participate, please fill out the consent form below and have your child return it, with their assent form, to school.

If you have any questions or concerns regarding your child's participation in this study, please do not hesitate to contact me.

Courtney Brewer
courtney.brewer@waldenu.edu

I understand that my child's participation in the research study being conducted by Courtney Brewer, utilizing Miller Place High School students as participants, is completely voluntary. My child has a chance to win a Starbucks gift card in a raffle as a result of their participation, and my child may withdraw from the study at any time without any consequences.

Parent's Name (print): _____

Child's Name(s):

_____

Parent's signature: _____ Date: _____

APPENDIX C: STUDENT ASSENT FORM

I understand that I have been invited to participate in a research study which examines

selected characteristics of high school students.. I know that I am being asked to complete

two different surveys, and a cover sheet.

I understand that I may decide not to participate at any point in time during this research

project, even after I have filled out my surveys and handed them in. If I decide to

withdraw my participation, I can contact the researcher and that person will remove my

surveys from the data set.

I understand that if I am less than 18 years of age at the time I am filling out the surveys,

I will need a signed consent form from my parent or guardian to be on file with the

researcher in order for my surveys to be used in this study

I realize that participation in this study is totally voluntary, and that as a result of agreeing

to participate, I will receive a chance to win a $25.00 Starbucks gift card in a raffle

drawing. I cannot be punished in any way for not participating or withdrawing my

participation at a later date. If I withdraw my participation after starting or filling out the

surveys, I will still be entered in the drawing for the gift card. I will contact the

investigator listed at the bottom of this page if I have any questions or concerns regarding

my participation in this study.

I agree to these terms and I provide my assent to be a participant in this research study.

Student's name (print): _____

Student's signature: _____

Student's Age: _____Today's date: _____

Investigator: Courtney Brewer * courtney.brewer@waldenu.edu

APPENDIX D: THE SOCIAL INTEREST SCALE

Below are a number of pairs of personal characteristics or traits. For each pair, underline the trait which you value more highly. In making each choice, ask yourself which of the traits in that pair you would rather possess as one of *your own* characteristics. For example, the first pair is "imaginative-rational". If you had to make a choice, which would you rather be? Draw a line under your choice in each of the pairs.

Some of the traits will appear twice, but always in combination with a different other trait. No pairs will be repeated.

"I would rather be…"

imaginative – rational	neat – logical
helpful – quick-witted	forgiving – gentle
neat – sympathetic	efficient – respectful
level-headed – efficient	practical – self-confident
intelligent – considerate	capable – independent
self-reliant – ambitious	alert – cooperative
respectful – original	imaginative – helpful
creative – sensible	realistic – moral
generous – individualistic	considerate – wise
responsible – original	sympathetic – individualistic
capable – tolerant	ambitious – patient
trustworthy – wise	reasonable – quick-witted

Thank you for completing the Social Interest Scale.

*Directions are replicated without alteration from Crandall (1975).

APPENDIX E: THE SELF-EFFICACY SCALE

Please indicate the degree to which you agree with each statement as they relate to you by using the following scale:

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Write your response on the line following each statement.

I like to grow house plants. _____

When I make plans, I am certain I can make them work. _____

One of my problems is that I cannot get down to work when I should. _____

If I can't do a job the first time, I keep trying until I can. _____

Heredity plays a major role in determining one's personality. _____

It is difficult for me to make new friends. _____

When I set important goals for myself, I rarely achieve them. _____

I give up on things before completing them. _____

I like to cook. _____

If I see someone I would like to meet, I go to that person instead of waiting

for him or her to come to me. _____

I avoid facing difficulties. _____

If something looks too complicated, I will not even bother to try it. _____

There is some good in everybody. _____

If I meet someone interesting who is hard to make friends with, I'll soon

stop trying to make friends with that person. _____

When I have something unpleasant to do, I stick to it until I finish it. _____

When I decide to do something, I go right to work on it.   _____

I like science.   _____

When trying to learn something new, I soon give up if I am not initially

successful.   _____

When I'm trying to become friends with someone who seems uninterested

at first, I don't give up easily.   _____

When unexpected problems occur, I don't handle them well.   _____

If I were an artist, I would like to draw children.   _____

I avoid trying to learn new things when they look too difficult for me.   _____

Failure just makes me try harder.   _____

I do not handle myself well in social gatherings.   _____

I very much like to ride horses.   _____

I feel insecure about my ability to do things.   _____

I am a self-reliant person.   _____

I have acquired my friends through my personal abilities at making friends. _____

I give up easily.   _____

I do not seem capable of dealing with most problems that come up in life.   _____

Thank you for completing the Self-efficacy Scale.

Replicated without alteration from:

Sherer, M., & Adams, C.H. (1983). Construct validation of the Self-efficacy Scale.
    Psychological Reports, 53, 899-902

APPENDIX F: INFORMATIONAL COVER SHEET

Thank you for volunteering to be a participant in this research study. Your willingness to be a participant is greatly appreciated. Please take a moment to fill out this informational cover sheet before you begin the surveys. You will also need to sign the attached assent form, and if you are under 18, you will need a parent or guardian consent form. You may use pencil or pen.

It is important that you provide the most honest answers in your surveys. This study is designed to help other researchers have a better understanding of the characteristics of high school students who volunteer as peer mentors, in order to improve upon future mentoring programs. Mentoring has become very popular in the last decade, and this information will help schools and program developers ensure better outcomes for both mentors and mentees. Thank you again for your participation.

Student name: _____

Student age: _____

Grade level: _____

Are you volunteering as a Big Buddy mentor? _____

Have you ever volunteered as a Big Buddy, or been a mentor in a formal mentoring program before? _____

If yes, in what grade(s) were you a mentor? _____

Have you ever been a Little Buddy, or been mentored in a formal mentoring program before? _____

APPENDIX G: CONFIDENTIALITY AGREEMENT

Name of signer: _____

During the course of my activity in collecting data for this research, "The Characteristics of High School Volunteer Mentors and their Nonmentor Peers", I will have access to information which is confidential and should not be disclosed. I acknowledge that the information must remain confidential, and that improper disclosure of confidential information can be damaging to the participant (in this case, student).

By signing this confidentiality agreement, I acknowledge and agree that:

1.   I will not disclose or discuss any confidential information with others, including friends or family.

2.   I will not in any way divulge, copy, release, sell, loan, alter, or destroy any confidential information except as properly authorized.

3.   I will not discuss confidential information where others can overhear the conversation. I understand that it is not acceptable to discuss confidential information even if the student's name is not used.

4.   I will not make any unauthorized transmissions, inquiries, modification, or purging of confidential information.

5.   I agree that my obligations under this agreement will continue after termination of the job that I will perform.

6.   I understand that violation of this agreement will have legal implications.

By signing this document, I acknowledge that I have read the agreement and I agree to comply with all the terms and conditions stated above.

Signature: _____

Date: _____

APPENDIX H: SUPPORT OF SPONSORING AGENCY

The North Shore Youth Council is a registered 501 (C) 3 charitable organization which sponsors the Big Buddy Little Buddy Mentoring Program as part of its contract with three neighboring school districts. The North Shore Youth Council and its staff are solely responsible for the organization and facilitation of the mentoring program.

By signing this document, I indicate my support of the research regarding the characteristics of high school volunteer mentors and their nonmentor peers. I agree to allow the researcher access to the volunteer student mentors for the purpose of gathering research data. I understand that this agency and its employees will not receive any compensation for entering into this agreement, nor will the agency compensate the researcher for conducting this study. I understand that any and all research findings regarding this study will be made available to this agency and its employees upon completion of this study.

Janene Gentile, MA, CASAC
Executive Director, North Shore Youth Council

_____   _____

Signature   Date

CURRICULUM VITAE

Courtney Brewer
courtney.brewer@waldenu.edu

Education
Rutgers University
New Brunswick, NJ
September 1988-December 1990

SUNY Stony Brook
Stony Brook, NY
January 1991-December 1992   BA, Psychology

Long Island University, CW Post Graduate School of Education
Brookville, NY
January 1993-May 1995   MS, Counseling

Walden University
PhD Candidate, College of Social and Behavioral Sciences
School of Psychology
Anticipated Date of Completion: February, 2009

Licensure and Certification
New York State Education Department
Permanent Certification in School Counseling
September, 2000

New York State Education Department
Mental Health Counselor License
March 2006-Present

Employment History
School Counselor, Shoreham-Wading River Middle School (part time)
September, 1995-June, 1999

- Scheduling for all students, grades 6-8
- Organize transition for incoming fifth graders and outgoing eighth graders
- Group and individual counseling for both mandated and non-mandated students
- Formulation of IEP goals for all mandated students
- Participation in all CSE and team meetings to assess student needs

- Coordination of services with school social worker and building psychologist
- Faculty advisor for literary magazine

Program Coordinator, North Shore Youth Council
September, 2000- December, 2001

- Coordinate and perform intake evaluations for clients in family counseling program
- Restructure and implement comprehensive after school program
- Coordinate youth development programs, including mentoring and character building activities

Assistant Director, North Shore Youth Council
January, 2002- Present

- Provide direct supervision, evaluations, and trainings for school-based student assistance counselors in three school districts
- Provide direct supervision and trainings for youth worker staff in after school program
- Obtained grant for mentoring programs from Long Island Mentoring Partnership
- Create and implement character building opportunities for participants, including social skills groups
- Create and implement curriculum for social skills group geared toward students with Autism and Asperger Syndrome disorders
- Create and maintain statistical information for all school-based counseling activities as well as family counseling program
- Oversee and case manage for evening counseling program
- Provide crisis intervention services and appropriate referrals to clients in need
- Collaborate with and provide supportive services for Executive Director in administration of agency
- Coordinate and supervise summer recreation programs for 400 students
- Supervise graduate student interns placed at agency

Academic Positions
Adjunct Instructor, Suffolk County Community College
Ammerman Campus
January, 2008-present

- Prepare and implement course curriculum for Educational Psychology course

- Prepare and implement course curriculum for Introduction to Psychology course

Online Course Facilitator, University of Phoenix
Axia College
July 2008-present

- Facilitate online course curriculum for Theories of Personality course

Grant Awarded
Long Island Mentoring Partnership
Mentoring 101 Grant
June, 2006

Professional Affiliations
Member, American Counseling Association
Member, New York Mental Health Counselors Association
Member, Western Suffolk Counselor's Association