2023

An Evaluation of a School-Based School Connectedness Program

John G. Emmerich
Walden University

Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

John G. Emmerich

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Randy Heinrich, Committee Chairperson, Human Services Faculty
Dr. Gregory Hickman, Committee Member, Human Services Faculty
Dr. Veronica Carey, University Reviewer, Human Services Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2023

Abstract

An Evaluation of a School-Based School Connectedness Program

by

John G Emmerich

MPHIL, Walden University, 2019

MSW, The Ohio State University, 1994

BA, University of Dayton, 1986

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services: Clinical Social Work

Walden University

May 2023

Abstract

In the United States, approximately 45% of high school students are either not engaged (28%) or actively disengaged (17%) in the academic process. Increasing a school's average student engagement yields an increase in reading and math achievement. This study evaluates a school connectedness program, Promoting Positive School Engagement (PPSE) program using a convergent mixed methods model to determine the degree of effectiveness measured by the Hemingway measure of adolescent connectedness instrument in an Urban, Midwest public middle school. Quantitative data were collected from 20 students who participated in the program and 20 students who did not (control group). Analyzed using ANCOVA, the results showed that participation in PPSE significantly increased student connectedness. Qualitative data were collected from six student program participants and five program staff through interviews. Content analysis of interview data showed that a youth's connectedness is a response to relatedness and belonging, a reflection of adolescents' perceptions of their involvement in events, organizations, and activities. Additionally, participants reported a greater connectedness to school through the development of positive mentor/mentee relationships. The results of this study may assist others in developing similar programs at their schools to enhance students' school connectedness.

An Evaluation of a School-Based School Connectedness Program

by

John G Emmerich

MPhil, Walden University, 2019

MSW, The Ohio State University, 1994

BA, University of Dayton, 1986

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services: Clinical Social Work

Walden University

May 2023

Dedication

Very simply, I would like to dedicate this to my parents, who are not here to see this completed, but without whom, I would not be here.

Acknowledgments

To begin with, I would like to express my deepest gratitude to Dr. Randy Heinrich for his support, thoughtful comments, and timely recommendations throughout this long and winding journey. Your assistance during this process is immeasurable. I would also like to thank Dr. Gregory Hickman for his insight and assistance along the way. I would also like to thank Dr. Veronica Carey for her assistance with all content and methodological issues.

On a personal level, I would like to thank my wife for her unwavering encouragement and support. I cannot thank you enough. I would also like to thank my children, who put up with me throughout, as well as teased and prodded me to do better. Of course, I would like to thank my parents (who passed away during this journey), who impressed upon me the importance of education and always taught me to learn and grow. And last but not least, I would like to thank my in-laws, my father-in-law (now deceased), who always encouraged me to strive for my goals, and my mother-in-law, who has been there every step of the way, offering motivation and taking a keen interest in my study.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

In this convergent mixed methods program evaluation, I addressed to what degree a program initiated by school social workers increased school connectedness for at-risk students in a public urban middle school in the Midwest United States is accomplishing the program goals and tested the theory of adolescent connectedness. Based on concepts from the Wingspread Declaration on School Connectedness (2004), that increasing students' school connectedness increases students' success in schools, the primary goal of Promoting Positive School Engagement is to increase the positive staff-student relationships and increase the students' connectedness to schools. I evaluated the degree of effectiveness of the Promoting Positive School Engagement program by determining whether there has been a significant increase in school connectedness scores on the Hemingway measure of adolescent connectedness instrument (Karcher, 2018). In addition, I tested the theory of adolescent connectedness that a youths' connectedness is a response to relatedness and belonging, a reflection of adolescents' perceptions of their involvement in events, organizations, and activities (Karcher, 2004; Karcher, 2018) through interviews of the students and staff participating in the Promoting Positive School Engagement program. This chapter of the study presents the research problem, provides a rationale for exploring the problem, and contains the significance of the problem. Furthermore, this chapter includes the theoretical frameworks related to the problem and includes the implications that might arise from the findings from the research.

Background

Approximately 1.3 million students in the United States leave high school each year without a diploma (McFarland et al., 2019; National Center for Education Statistics (NCES), 2018a; Washor & Mojkowski, 2014). Additionally, 45% of students in the United States report disengagement and disinterest in school by the time they enter high school (Collier, 2015; Gallup, 2014; Klem & Connell, 2004, Moeller et al., 2020). Disconnected, disengaged students can have a variety of behavioral problems, such as decreased discipline, self-destructive activities, and rebellious habits (Millings et al., 2012; Steiner et al., 2019). Other consequences include academic and emotional problems (Allen & Bowles, 2012; Centers for Disease Control and Prevention [CDC], 2009; Gunnarsdóttir et al., 2021). Poor connectedness to schools increases the risk of delinquency, students dropping out of school, academic failure, and risky behavior (Bryan et al., 2012; Collier, 2015; Henry et al., 2011; Steiner et al., 2019). Students with poor connections to schools' dislike going to school and or are apathetic towards school attendance (Allen et al., 2018; Hendron & Kearney, 2016; O'Malley et al., 2015) and are not interested in engaging with their teachers and fellow students (Joyce, 2015; Steiner et al., 2019). Disconnected students have a higher rate of conduct problems, depression, and academic failure than connected students (Gerard & Booth, 2015; Gunnarsdóttir et al., 2021; Joyce & Early, 2014). Students who identified as disconnected from school report increased cases of emotional distress and less capacity to deal with adversity (Allen et al., 2018; Gerard & Booth, 2015; Herrenkohl et al, 2019; Libbey, 2004).

Healthy engagement between teachers and students should increase school connectedness (Allen & Bowles, 2012; Allen et al., 2018; CDC, 2009; Libbey, 2004). Connected students enjoy interacting with other students and their teachers (Appleton et al., 2008; Joyce, 2015; Korpershoek et al., 2020), as well as like attending school and, as a result, have an easier time learning (Allen et al., 2018; Joyce, 2015). School connectedness encourages increased discipline and improved behavior in students by creating a relationship between students and teachers that provides mentorship and nurturing (Allen et al., 2018; Blum et al., 2004; Joyce, 2015). Students who show connectedness to school not only have access to guidance from their teachers but are cooperative and receptive to counsel and nurture (Hurd et al, 2015; Korpershoek et al., 2020). Increased levels of school connectedness lower the levels of aggression and bullying behaviors in schools (Allen et al., 2018; Duggin et al., 2016). There is a reduction in internalized behavioral problems when students have increased connectedness to their schools (Allen et al., 2018; Hendron & Kearney, 2016; O'Malley et al., 2015). Stakeholders in the school community, including teachers, school staffs, parents, students, and administrators, need to collaborate to address and alleviate the problems associated with low school connectedness (Bryan et al., 2020; CDC, 2009; Chapman et al., 2013).

Even with the research that links students' higher levels of school connectedness with students' improved performance, there are few studies that include assessments and evaluations of school-wide initiatives and programs designed to increase school connectedness in at-risk students (Bowers et al., 2015; Chapman et al., 2013; Klem &

Connell, 2004; Steiner et al., 2019). As part of Positive Behavioral Interventions and Supports (PBIS), school social workers may provide school-wide programs to increase students' social behavior and academic performance (PBIS, 2018). One such program initiated by school social workers is the Promoting Positive School Engagement program, designed to increase school connectedness between at-risk students and middle school staff. Promoting Positive School Engagement links specific students to school staff and includes mentoring to assist in developing positive school connections between staff and students. Evaluating programs such as Promoting Positive School Engagement to ascertain the degree the program achieves goals may assist school social workers and schools by providing evidence-based interventions to meet students' needs. Additionally, testing the theory of adolescent connectedness may assist school social workers and school administrators in the identification of interpersonal and organizational aspects of a school environment in order to improve outcomes for at-risk adolescents within those schools.

Problem Statement

In the United States, approximately 45% of high school students are either not engaged (28%) or actively disengaged (17%) in the academic process (Collier, 2015; Gallup, 2014; Moeller et al., 2020). Increasing a school's average student engagement yields an increase in reading and math achievement (Bryan et al., 2012; Gallup, 2014; Moeller et al., 2020). Middle and elementary school students with high levels of school engagement were more likely to do well academically than students less engaged in school (Allen et al., 2018; Hendron & Kearney, 2016; O'Malley et al., 2015). Students

without a sense of connectedness to the school have an increased risk of emotional distress (Allen et al., 2018; Gerard & Booth, 2015), suicidal ideation and attempts (Jetten et al., 2009; Joyce & Early, 2014; Steiner et al., 2019), delinquency, academic failure, and dropping out of school (Bae, 2020; Bryan et al., 2012; Gunnarsdóttir et al., 2021; Henry et al., 2011).

School connectedness has a substantial positive effect on the measures of students achievement, which schools are accountable for (Aldridge et al., 2016; Appleton et al., 2008; CDC, 2009; Korpershoek et al., 2020; Lawson & Lawson, 2013), and the significance of increased school connectedness is important to school boards, superintendents, parents and families, taxpayers and legislators, and future employers (Allen et al., 2018; Brand et al., 2008; Wang & Degol, 2015). Although there are a few programs available to schools and districts, such as Project GRAD and Positive Action, targeting at-risk youths that increase school connectedness and academic achievement, these programs can be expensive ($500 per student for Project GRAD and around $10,000 for Positive Action) and problematic to administer (Espelage et al., 2019; Snipes et al., 2006; Snyder et al., 2010). A gap in the literature exists regarding inexpensive, and easy-to-administer programs designed to increase school connectedness for at-risk students, especially at the middle school level (Aguilar, 2019; Bowers et al., 2015; Chapman et al., 2013; Loukas et al., 2016).

Part of a school social worker's role is to promote a positive school culture characterized by positive relationships among faculty, staff, and students (School Social Work Association of America (SSWAA), 2020). To assist with school connectedness

some school social workers have initiated a program, Promoting Positive School Engagement, to increase connectedness between students, particularly at-risk students, and middle school staffs; however, program outcomes and how participants relate and experience the staff-student relationship building and the effects on school connectedness and students' achievement are mostly unknown (Parr et al., 2020; Shochet et al., 2006.; Szucs, 2014). Promoting Positive School Engagement uses the existing school staff to identify and target the students not connected to the school and provide relationship building with the targeted students to assist in developing positive school connections between the staff and students. Thus, conducting a program evaluation of the Promoting Positive School Engagement at the middle school to determine the effect the relationship building employed by the staff has on the targeted students school connectedness and school achievement is the focus of this study. Further, in this study, I tested the theory of adolescent connectedness as part of students' movements toward others through affection and activity (Karcher, 2004; Karcher, 2018). Findings from this program evaluation benefit social workers working in schools looking to enhance at-risk students school engagement and academic achievements.

Purpose of the Study

With this convergent mixed method program evaluation, I evaluated the Promoting Positive School Engagement program in a middle school (grades 6-8), in an urban, Midwest United States school setting and determined the effect of the program on the school connectedness/sense of belonging of the students engaged in the Promoting Positive School Engagement program. In conducting the mixed methods convergent

study program evaluation, I tested in use the theory of adolescent connectedness (Karcher, 2004; Karcher, 2018). The purpose of the quantitative phase of the program evaluation is to measure the sense of belonging/school connectedness of the students participating in the Promoting Positive School Engagement Program. The purpose of the qualitative phase of the study is to test the adolescent theory of connectedness through in-depth individual interviews of students and staff participating in the Promoting Positive School Engagement Program. Benefactors of the results of the convergent mixed methods program evaluation include school social workers, school staff in need of evidence-based programs to increase positive school connectedness, and at-risk students.

Significance

This convergent mixed methods program evaluation is relevant for several reasons. Using programs, such as the Promoting Positive Student Engagement program evaluated with this study, could see an increase in school connectedness as well as an increase in overall academic success and a decrease in students engaging in risky behaviors (Allen et al., 2018; CDC, 2009; Hendron & Kearney, 2016). Additionally, the results of this program evaluation may assist in informing school social workers, principals, building administrators, district administrators, counselors as well as interested stakeholders of a program, which may promote a positive school environment anchored by positive relationships among the staff and at-risk students.

Research Questions

RQ1: To what degree does the student's sense of belonging/school connectedness change after participating in the Promoting Positive School Connectedness program, while controlling for pretest scores (covariate).

RQ2: How do research participatory characterizations of the Promoting Positive School Engagement Program align with the adolescent theory of connectedness?

Theoretical Framework

The theoretical framework adopted for this convergent mixed methods program evaluation encompasses systems theory to ground the use of mixed methods design, adolescent theory of connectedness (Karcher, 2003) as the underlying framework for the Hemingway measure of adolescent connectedness instrument (Karcher, 2018), as well as Maslow's (1943/2013) theory of human motivation.

Systems Theory

The core concept of systems theory is that of a system as an adaptive whole; each functioning part linked to others (Checkland, 2012). The concept is to study the interaction between the parts to increase the understanding of the whole (Bridgen, 2017; Checkland, 2000; Lalande & Baumeister, 2013). I will use a systems-focused research approach to assist in integrating quantitative and qualitative results to interpret study results and draw implications for policy or practice (Alexander & Hearld, 2012). Systems theory enables the ability to see the big picture, and the interrelationship between the elements studied in this convergent mixed method study (Checkland, 2000).

Theory of Adolescent Connectedness

Within the theory of adolescent connectedness, connectedness is the movement toward others through affection and activity (Karcher, 2003; Karcher, 2004; Karcher, 2018). In adolescents, connectedness is a response to relatedness and belonging, a reflection of adolescents' perception of their involvement in events, organizations, and activities (Karcher, 2004). In this convergent mixed methods program evaluation, I will use the Hemingway measure of adolescent connectedness instrument (Karcher, 2018) to measure students' perceptions of their connectedness to self, family, school, and friends (Gordon et al., 2013). Karcher (2001, 2004, 2005, 2011) developed the Hemingway measure of adolescent connectedness from the theory of adolescent connectedness to measure the individual's connectedness to school (school and teachers), family, friends, as well as to self (Karcher, 2003, 2004, 2005). As part of the qualitative portion of this program evaluation, I will be testing the theory of adolescent connectedness.

Theory of Human Motivation

Maslow's (1943/2013) theory of human motivation adopts a holistic approach to education and learning, looking at the complete physical, emotional, social, and intellectual attributes of an individual and how these attributes impact learning (Maslow, 1970). Maslow (1962/2014) suggests students should be valued and respected in the classroom and teachers should create a supportive environment. Even though Maslow (1943/2013) suggested humans physiological and safety needs had to be reasonably satisfied before a person's motivation by the need to belong emerged, Maslow (1943/2013; 1962/2014) noted the hierarchy of needs is not a rigidly fixed order and,

behavior tends to be determined by several or even all the needs simultaneously. Tay and Diener (2011) discovered Maslow's needs are universal regardless of cultural differences, with people reported the need to belong as a foundational need, emphasizing the significance of connectedness to others (Pillow et al., 2015). As the ontology of the sole-researcher-as-analyst, Maslow's (1943/2013; 1962/2014) theory of human motivation will be the lens through which I will interpret the qualitative data in this convergent mixed methods program evaluation.

Nature of the Study

The nature of this study is a convergent mixed methods program evaluation (Creswell & Plano Clark, 2018). Using a convergent mixed method design enables me to determine quantitative results with an in-depth qualitative exploration of students' sense of belonging/school connectedness (Creswell & Plano Clark, 2018; Johnson et al., 2007; Teddlie & Tashakkori, 2003).

For the quantitative portion of this convergent mixed methods program evaluation, I used the Hemingway Measure of Adolescent Connectedness instrument as the pre and posttest to measure sense of belonging/school connectedness of the students (dependent variable) involved in the Promoting Positive School Engagement Program (independent variable) (Karcher, 2011). I used the Hemingway Measure of Adolescent Connectedness to measure pre- and post-intervention changes for about 50 students who were paired with teachers and staff and participated in the Promoting Positive School Engagement Program. The Hemingway Measure of Adolescent Connectedness uses a five-point Likert-type scale (Karcher, 2003) with higher scores indicating increases in

connectedness. Students were chosen to participate in the Promoting Positive School Engagement Program by surveying the school staff after the first month of school. The participants took the pretest at the end of the first quarter of the school year, and the post-test during the fourth quarter of the school year. I analyzed the data using an analysis of covariance with the pretest scores as the covariate as this method of analysis is preferable to simple gain-score comparisons (Campbell & Stanley, 1963)

In the qualitative portion of this convergent mixed methods program evaluation, I tested the adolescent theory of connectedness through in-depth individual interviews of students and staff participating in the Promoting Positive School Engagement Program. The purpose of the interviews was to provide phenomenologically rich information (Opdenakker, 2006; Potter & Hepburn, 2005) and additional insight into the participants' perceptions of involvement in the Promoting Positive School Engagement Program. Interviews were one-on-one, in-person, semi-structured interviews for six students and five staff participants about program experiences for purposes of testing the adolescent theory of connectedness.

Assumptions

This study includes several suppositions critical to the study. First, a convergent mixed methods program evaluation design is the appropriate design to answer the studies research questions. Second, the students and staff will be willing participants in the study. Third, the participants will understand the interview questions as well as answer the interview questions honestly. Fourth, the selected instrument, Hemingway measure of

adolescent connectedness, is a generally appropriate instrument to use to measure connectedness to school.

Scope and Delimitations

The purview of this convergent mixed methods program evaluation was to determine if there is a significant difference in students' connectedness to schools after the students participate in the Promoting Positive School Engagement program along with testing the theory of adolescent connectedness. Participants in the study included students and school staff (administration, teachers, support staff, itinerant staff) who participated in the Promoting Positive School Engagement program in an urban, Midwest United States school setting with an enrollment of around 250 students. The student body is about 48% female and 52% male, with an ethnic breakdown of 53% White, 27% Black, 12% Hispanic, and 8% two or more races, and 100% of the students receiving free or reduced lunch (Public School Review, 2018). Students participating in the study took a pre and posttest to measure changes in school connectedness using the Hemingway measure of adolescent connectedness (Karcher, 2011). There were 20 students and 20 staff participating in the Promoting Positive School Engagement program, with an equal number of students in the control group. Additionally, the study included phenomenological interviews with a representative group of students and staff participating in the Promoting Positive School Engagement program.

Limitations

As is often the case in mixed method design, conducting the quantitative and qualitative aspects of this convergent mixed method program evaluation was time-

consuming (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2003). Another impediment concerning the length of time for this mixed methods design was the practicality of collecting and analyzing the quantitative and qualitative data (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2003). The number of participants in the Promoting Positive School Engagement program provided a small sample size, and although it adequately represented the population of the school, the sample size does not adequately represent the population of students in the district. Also, the interactions the mentors provided within the Promoting Positive School Engagement program were not equivalent, as some of the staff were more invested in the program's success than other staff involved in the program. An additional limitation of this study is that the results are not generalizable outside of the participant sample (Johnson et al., 2007; Stratton, 2021; Teddlie & Tashakkori, 2003).

Summary

Chapter 1 contained an introduction and background to the problems associated with students' lack of connectedness to schools, along with the potential benefits of increasing school connectedness in students. The purpose of this study is to evaluate the degree of effectiveness of the Promoting Positive School Engagement program and to test the theory of adolescent connectedness that youths' connectedness is a response to relatedness and belonging (Karcher, 2004). Chapter 1 also contained the theoretical frameworks related to the problem, the nature of the study, along with the limitations and scope of the study. A fundamental assumption for this study is a convergent mixed methods program evaluation is the appropriate design to test the adolescent theory of

connectedness and to measure the effect of the Promoting Positive School Engagement program on the participants.

Chapter 2 includes a review of literature on school engagement and connectedness to schools, and mentoring school-aged youth. Additionally, Chapter 2 contains an in-depth description and definition of school connectedness in relation to this study.

Chapter 2: Literature Review

Background

Across the United States, 40-60% of students entering high school are disengaged from school (Collier, 2015; Gallup, 2015; Klem & Connell, 2004, Moeller et al., 2020). As many as half of the students in high school believe that the adults in the schools do not care for the student body or the pupils' learning (Blum, 2005; CDC, 2009; Collier, 2015; Grover et al., 2015; Gunnarsdóttir et al., 2021; Klem & Connell, 2004; McKee & Caldarella, 2016). Connectedness to school is a significant protective factor in decreasing school absenteeism, substance abuse, violence, and risky behaviors (Allen et al., 2018; Appleton et al., 2008; CDC, 2009; Gubbels et al., 2019; Lawson & Lawson, 2013; Loukas et al., 2016). School connectedness is the second strongest protective factor for school-age youths, behind family connectedness, against suicidal ideation and emotional distress (CDC, 2009; Farley & Kim-Spoon, 2014; Gerard & Booth, 2015; Joyce & Early, 2014; Ivey-Stephenson et al., 2020).

In this convergent mixed method study, I evaluated the Promoting Positive School Engagement program in a middle school in an urban Midwest United States school setting. The purpose of this convergent mixed methods study was to evaluate the Promoting Positive School Engagement program as well as to test, in use, the theory of adolescent connectedness (Karcher, 2004; Karcher, 2018). This literature review includes a historical overview of belonging, a definition of school connectedness, a review of school engagement and connectedness to schools, a discussion of mentoring and mentoring school-age youth, and a description of the literature search strategy.

Literature Search Strategy

I conducted a systematic review of the literature to increase the understanding of the major variables (school connectedness, mentoring, engagement) in this convergent mixed methods program evaluation resulting in approximately 150 articles read. Exploration of the literature included seeking information about school connectedness, mentoring, mentoring school-age children/youth, and measuring school connectedness utilizing search terms that include: *school attachment, school bonding, school climate, school culture, teacher support, student engagement, belonging to school,* and *school commitment* as well as *mentoring, school mentoring,* and *mentoring school-age youth*. I used the following search engines, literature databases, and sites: EBSCO, ERIC-Education Resources Information Center, ProQuest, Google, and Google Scholar, SAGE, Walden University Library, Walden Library services, Ohio State University Libraries, and the University of Dayton Library to access peer-reviewed journal articles and scholarly textbooks. I also used reference listings for additional research and statistics available on websites of professional organizations such as National Association of Social Workers, SSWAA, National Institute of Mental Health, and National Education Association in the review of the literature.

Historical Overview

The desire for relationships and connectedness to others has a long history in psychological research (DuBois et al., 2011; Karcher, 2008). In Maslow's (1943/2013) theory of human motivation, the social needs involve feelings of belongingness. The need for interpersonal relationships and belonging motivates humans' behaviors (Maslow,

1962/2014). Teachers should create a supportive environment, showing respect and value of the students in the classroom to foster the need to belong (Allen et al., 2018; Libbey, 2007; Maslow, 1962/2014). A sense of belonging or psychological membership within a school reflects how students feel accepted, respected, and included by others within the school environment (Goodenow, 1993; Karcher, 2004; Libbey, 2004). Moreover, humans meet the need to belong from regular contact and the feeling that the relationships have stability (Baumeister & Leary, 1995; Millings et al., 2012; Roser et al., 2000). Failure to have the need to belong met may lead to feelings of isolation, loneliness, and alienation (Baumeister & Leary, 1995; Samdal et al., 1998; Waters et al., 2009).

Hagerty et al. (1992), a group of psychiatric nurses, noticed their patients who were depressed, anxious, psychotic, and or suicidal made statements which sounded similar. Hagerty et al. felt the patients' statements represented a sense of belonging and sought to empirically define this concept. Hagerty et al. defined a sense of belonging as "the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (p.173). After the publication of Sense of Belonging: A Vital Mental Health Concept, linkages between sense of belonging with students and schools emerged (Goodenow & Grady, 1993; Joyce, 2015; Klem & Connell, 2004; Libbey, 2004; Loukas et al., 2016; Millings et al., 2012).

Resnick et al. (1997) identified risk and protective factors at the family, school, and individual levels in relation to four domains of adolescent health, including emotional distress and suicidality, involvement in violence, substance abuse, and sexual behaviors. Parent-family connectedness and perceived school connectedness are

protective against emotional distress, suicidality, violence, the age of sexual debut, and use of cigarettes, alcohol, and marijuana but not for a history of pregnancy (Resnick et al., 1997). The protective factor of perceived school connectedness became the foundation for the school connectedness construct (Catalano et al., 2004; Libbey, 2004; McNeely & Falci, 2004).

The Wingspread Declaration on School Connectedness (2004) opens with the sentence: "Students are more likely to succeed when they feel connected to school" (p.1). The Wingspread Conference, held in June 2003, brought together researchers, representatives from the United States government and educational, mental health, and health sectors to address school connectedness (Blum & Libbey, 2004; CDC, 2009). The goal of the participants of the conference was to summarize the research on school connectedness, as well as to synthesize a set of principles to guide schools across America (Blum & Libbey, 2004). Requirements for feeling connected to schools include students experiencing high academic expectations with support for learning, emotional and physical safety, and positive adult-student relationships (Blum, 2005; CDC, 2009; Wingspread Declaration on School Connectedness, 2004). A fundamental factor to increase the likelihood students will connect to schools is creating trusting and caring relationships among students, school administrators, teachers, staff, and families (Aldridge et al., 2016; CDC, 2009; Fredricks et al., 2004; O'Malley et al., 2015; Wingspread Declaration on School Connectedness, 2004).

Definition

Prior to the Wingspread Conference of 2003, researchers described the concept of school using a range of terminology such as school climate, school attachment, orientation to school, connectedness, school bonding, students' sense of belonging, and notions of territory (Allen & Bowles, 2012; CDC, 2009; Goodenow, 1993; Libbey, 2004; Wingspread Declaration, 2004). The variety of terminology and definitions for school connectedness used in research before 2004 diluted the research on school connectedness (Allen & Bowles, 2012; Libbey, 2004). The publication of the Wingspread Declaration on School Connections (Wingspread Declaration, 2004) includes a consensus definition of school connectedness, the belief by students that adults in the schools care about the students learning as well as the students as individuals (Allen & Bowles, 2012; CDC, 2009; Libbey, 2007; Rose et al., 2022).

Connectedness to School

Students who feel connected to school are more likely to succeed than those students who do not feel connected to school (Blum, & Libbey, 2004; CDC, 2009; Duggins et al., 2016; Fong Lam et al., 2015; Henry et al., 2012; Korpershoek et al., 2020). In a study by Lessard et al. (2008) focusing on why students drop out of school, students reported feeling like ghosts in the school. These students who felt like ghosts stated that no one noticed whether they were in school (Lessard et al., 2008). Students' failure of connecting to the school and belonging to school led to disengagement and dropping out of school (Bryan et al., 2012; Henry et al., 2011; Lessard et al., 2008; Tian et al., 2016; Steiner et al., 2019). Interventions to increase school connectedness should

be targeting youth while they are still in school with students in the middle school years being prime candidates for interventions that enhance school connectedness (Allen et al., 2018; Chiu et al., 2016; Henry et al., 2012; Hughes et al., 2019; Lessard et al., 2008).

There is a positive relationship between student connectedness to schools and academic outcomes (Allen et al., 2018; Appleton et al., 2008; Curran & Wexler, 2017; Klem & Connell, 2004; Schochet et al., 2006; Tian et al., 2016) as well as school connectedness being an important factor in school completion or leaving school early (Henry et al., 2012; McFarland et al., 2019; Niehaus et al., 2016; Wehlage & Rutter, 1985). School connectedness has a significant protective factor for several health and social outcomes that can contribute to students' development and emotional well-being (CDC, 2009; Gerard & Booth, 2015; Ivey-Stephenson et al., 2020; Joyce & Early, 2014; Klem & Connell, 2004; Libbey, 2007; Tian et al., 2016).

Students who experience a sense of belonging in schools are more motivated, engaged in academics and school activities, and dedicated to school than students who do not experience a sense of belonging in schools (Fong Lam et al., 2015; Lawson & Lawson, 2013; Libbey, 2004; Moeller et al., 2020; Osterman, 2000; Shochet et al., 2006). Moreover, students who feel a sense of belonging to learning environments report higher enjoyment, happiness, and more confidence in engaging in learning activities than students who do not feel a sense of belongingness to school (Aldridge et al., 2016; Allen et al., 2018; Appleton et al., 2008; Joyce & Early, 2014; Lessard et al., 2008; Millings et al., 2012). In addition, students who feel isolated report greater anxiety, frustration, and sadness during the academic engagement that directly affects academic performance than

students who feel a sense of belonging to the school (Aldridge et al., 2016; Appleton et al., 2008; Furrer & Skinner, 2003; Gubbels et al., 2019; Joyce & Early, 2014; Lessard et al., 2008; Millings et al., 2012). Satisfying the need for belongingness in educational environments is significant during early adolescence as students within that developmental period begin looking to peers and adults outside their family for guidance (Chiu et al., 2016; Fong Lam et al., 2015; García-Carrión et al., 2019; Hughes et al., 2019; Roeser et al., 2000). Adolescent students' sense of personal place is malleable and susceptible to influence in positive and negative directions (Goodenow, 1992; Goodenow & Grady, 1993; Longaretti, 2020). If the need to belong is not adequately satisfied in educational environments, students will look for other ways and people to obtain that satisfaction such as through delinquency or even substance use (Allen et al., 2018; Baumeister & Leary, 1995; Becker & Luthar, 2002; Fredricks et al., 2004; Gerard & Booth, 2015; Henry et al., 2012; Leary & Baumeister, 2017).

Schools are important and influential environments as well as where school-age children spend the majority of their time (Allen et al., 2018; CDC, 2009; Gerard & Booth, 2015; Lewallen et al., 2015; Roeser et al., 2000). There is a general decline in respect for authority and institutions among students, and consequently, students can no longer be seen to automatically respect and adhere to the behavior and academic expectations of teachers and school administrators (Curren, 2020; Fredricks et al., 2004; Gerard & Booth, 2015; Priess et al., 2016). Even though school attendance is compulsory in the United States (NCES, 2018b), committing to education is a significant factor for students to benefit from what schools have to offer and to amass the skills the students

will need to succeed (Darling-Hammond & Cook-Harvey, 2018; Fredricks et al., 2004; Henry et al., 2012; Lawson & Lawson, 2013). Through increasing the student's positive connectedness to schools, staff, teachers, and school administrators are able to increase the student's adherence to academic and behavior expectations within the schools as well as increase attendance (Allen et al., 2018; Appleton et al., 2008; CDC, 2009; Fredricks et al., 2004; Gallup, 2014; Karcher, 2004; Loukas et al., 2016; O'Malley et al., 2015). Students begin to achieve connectedness to the school when they are in a safe and comfortable educational environment (CDC, 2009; Darling-Hammond et al., 2020; Joyce & Early, 2014; Loukas et al., 2016; Resnick et al., 1997; Roser et al., 2000; Shochet et al., 2006). This quality of connectedness occurs when students are in an environment where the adults are sympathetic and aware of the various challenges affecting the students in the environments within which their students spend a significant portion of their time (Allen et al., 2018; Fong Lam et al., 2016; Lawson & Lawson, 2013; Libbey, 2007; Resnick et al., 1997; Samdal et al., 1998).

Students who feel connected to their school are less likely to engage in smoking and drinking than students who do not feel connected to their school (Steiner et al., 2019; Waters et al., 2009; Joyce & Early, 2014). There is lower drug use and later onset of sexual activity when students have positive connections to their school when compared with students with negative connections to schools (Blum et al., 2004; Chapman et al., 2013; Darling-Hammond, et al., 2018; Joyce & Early; 2014; O'Malley et al., 2015; Waters & Cross, 2010). Students with high feelings of connectedness also are more likely to attend school regularly and achieve higher academically when compared to students

with low feelings of school connectedness (Gubbels et al., 2019; Henry et al., 2012; Klem & Connell, 2004; Loukas et al., 2016; Waters et al., 2009). There has been an emphasis on whether school connectedness is a risk factor for mental health issues in students (Bond et al., 2007; Curran & Wexler, 2016; Korpershoek et al., 2020; McNeely et al., 2002; Millings et al., 2012).

When comparing students who feel connected to schools to those who are not connected to schools, the students who feel connected report higher levels of emotional well-being (Gunnarsdóttir et al., 2021; McNeely et al., 2002) and higher individual levels of connectedness are related to increased optimism and lower levels of depression (Anderman, 2002; Ivey-Stevenson et al., 2020; Millings et al., 2012). There is a positive correlation between school connectedness and emotional well-being, which led to the finding of negative correlations as well: as mental illness increases, school connectedness decreases (Anderman, 2002; Jose et al., 2012; Joyce & Early, 2014; Korpershoek et al., 2020; Millings et al., 2012). Depression and anxiety have an inverse association with children who have positive connections to schools (Ivey-Stevenson et al., 2020; Jose et al., 2012; Waters & Cross, 2010). School connectedness has a negative correlation with emotional distress (Joyce & Early, 2014; Resnick et al., 1997; Sampasa-Kanyinga et al., 2019).

School connectedness comprises two components; attachment, and commitment (Karcher, 2018; Monahan et al., 2010). The first component, attachment, is the development of affective relationships with others at school (Karcher, 2004; Karcher, 2018; Monahan et al., 2010). Adolescents rely less on the family as part of the

individuation process and as a result depend more on relationships with friends and others at school (Klem, & Connell, 2004; Miljkovitch et al., 2021; Millings et al., 2012; Shochet et al., 2006). The second component, commitment, is investing in and doing well in school (Monahan et al., 2010). Through attachment and commitment, a student is able to form positive connections to the school (Karcher, 2018; Loukas et al., 2016; Monahan et al., 2010). A method in assisting the development of positive attachments to others is mentoring (Erdam et al., 2016; Poteat et al., 2015; Raposa et al., 2019).

History of Mentoring

Mentoring, as an intervention for youth with problems, is not a new idea (Miller, 2004; Smith & Storemont, 2011). The idea of a more experienced individual helping a less experienced individual is a familiar idea that has been around for a long time (Aseltine et al., 2000; Bauldry & Hartmann, 2004; Coller & Kuo, 2014; Erdem et al., 2016). The term mentor dates back to 800 B.C. from Homer's The Odyssey, which describes how Odysseus (Ulysses), King of Ithaca, entrusted Mentor to care for Telemachus (Odysseus' infant son) when Odysseus went off to fight the Trojan War (Crisp & Cruz, 2009; DuBois & Karcher, 2005; McCluskey et al., 2004). Mentor took on the roles of friend, advisor, and supporter to Telemachus in Odysseus' absence to prepare and educate Telemachus to become king (DuBois & Karcher, 2005; McCluskey et al., 2004; Miller, 2004. To a significant degree Mentor was responsible not only for Telemachus' education, but for the shaping of his character, the wisdom of his decisions, and the clarity and steadfastness of his purpose (Barondess, 1995; O'Donnell, 2017).

The Trojan War was a ten-year conflict, and after the war, Odysseus wanders vainly for an additional ten years in his attempt to return home (Homer, 1997). Telemachus began a search for his father after growing into young adulthood, accompanied by Mentor (Homer, 1997). Athena, the supreme goddess of the Greeks, recurrently assumes the form of Mentor during Telemachus' quest, especially when things looked particularly bleak or confusing for Telemachus (Barondess, 1995; McCluskey et al., 2004; O'Donnell, 2017; Shea, 1997). Athena's presence, in the form of Mentor, meant that in a certain sense the help Telemachus received was a gift of the gods (Barondess, 1995; O'Donnell, 2017). The mentoring by Mentor/Athena was a gift relationship recognizing that Telemachus, like all young men, had to leave the shelter of the parents' house in order to undergo the maturation that would allow him to become a man, and Mentor guided him in this critical transition (Barondess, 1995; McCluskey et al., 2004; Murray, 2002; O'Donnell, 2017). Telemachus' growth and maturation through the mentorship of Mentor/Athena during the journey enables Telemachus to function independently (Barondess, 1995; DuBois & Karcher, 2005). The mentoring relationship between Mentor/Athena and Telemachus concludes when Telemachus and Odysseus reunite in Ithaca and defeat the suitors of Penelope, Odysseus' wife, and would-be usurpers of Odysseus' throne and Telemachus' birthright (Barondess, 1995; McCluskey et al., 2004; Shea, 1997).

Over time the word mentor evolved to mean trusted advisor, friend, teacher, and wise person (Barondess, 1995; DuBois & Karcher, 2005; Murray, 2002; O'Donnell, 2017). Mentoring is a form of human development where one individual invests time,

energy, and personal ability in aiding the development and skills of another individual (Crisp & Cruz, 2009; DuBois & Karcher, 2005; Miller, 2004; Murray, 2002). Since Mentor and Telemachus, there have been many examples of mentoring relationships, such as Socrates and Plato, Hayden and Beethoven, Freud and Jung, Mother Teresa and Father Michael van der Peet, as well as Maya Angelou and Oprah Winfrey (Peris, 2017; Rhodes, 2015).

The oldest and largest youth mentoring program in the United States, Big Brothers Big Sisters of America, officially began in 1904 (Big Brothers Big Sisters of America (BBBS), 2016). A New York City court clerk, Ernest Coulter, frequently saw boys coming through the courts which might be able to stay out of trouble with the assistance and help of a caring adult (Baker & Maguire, 2005; BBBS, 2016; Freedman, 1991). In seeking and finding 39 volunteers to be mentors to the at-risk youth at a men's club of a local church the Big Brother movement in New York began (Baker & Maguire, 2005; BBBS, 2016; Freedman, 1991). At around the same time, members of the Ladies of Charity, later to become Catholic Big Sisters, were befriending and mentoring girls who had come through the New York Children's Court (Baker & Maguire, 2005; BBBS, 2016; Freedman, 1991). In 1977 Big Brothers Association and Big Sisters International merge, becoming Big Brothers Big Sisters of America, and continues to provide one-to-one mentoring relationships to at-risk youth (BBBS, 2016).

Mentoring and Mentoring School-Age Youth

Mentoring is an intervention in which an older individual provides a younger person support, advice, friendship, role modeling, and opportunities for social and

academic development (Curran & Wexler, 2017; Collier & Kuo, 2014; Herrera et al., 2000; Raposa et al., 2019). Although the typical vision of mentoring is of a formal, structured mentoring program, informal mentoring is much more common (Bynum, 2015; Raposa et al., 2019). Natural or informal mentoring occurs within existing, caring relationships, often within extended families or youths' existing support networks, with a caring adult reaching out to give support or offer direction to the youth (Bynum, 2015; Collins et al., 2010; Pryce et al., 2021). Informal mentoring tends to be more authoritarian because of the relationship of the mentor to the mentee (Bynum, 2015; Desimone et al., 2014; Pryce et al., 2021).

Formal mentoring is intentional, planned, and supported and occurs by formalizing the relationships through matching a youth with a mentor (Collins et al., 2010; Desimone et al., 2014; Pryce eta al., 2021). Volunteerism is a central component of formal mentoring, and the role of the mentor is more egalitarian. (Haggard et al., 2011; Sosik et al., 2005). The mentor and mentee agree to meet regularly over a period to participate in recreational, social, cultural, educational, or career-related activities with the intent of the relationships is to grow and learn through the mentor’s example, support, and assistance (Coller & Kuo, 2014; Desimone et al., 2014; Sosik et al., 2005). Formal mentoring tends to be more broadly based and systematic by helping at-risk youth develop skills (Collins et al., 2010; McCluskey et al., 2005).

The aim of mentoring is enhancing personal development through the provision of knowledge and life skills coupled with educational attributes (Curran & Wexler, 2017; Karcher, 2008; Pryce et al., 2021). Mentoring is a popular prevention approach for

working with students who are at risk for developmental and academic problems (Curran & Wexler, 2017; Karcher, 2008; Pryce et al., 2021). In school environments, mentoring plays a significant role in improving youth grades, family relationships, and school attendance (Bond et al., 2007; Bryan et al., 2012; Coller & Kuo, 2014; Erdem et al., 2016; Herrera et al., 2000; Raposa et al., 2019).

The primary focus in mentoring programs is on developing and fostering a positive relationship between mentor and mentee (Karcher et al., 2005). Meaningful relationships are an influential factor in promoting resilience, specifically for at-risk students (Aldridge et al., 2015; Laursen, 2002). Of particular importance with school-age youth, positive social relationships with adults regulate development, specifically competence (Blair & Raver, 2015; Hartley, 2004; Farley & Kim-Spoon, 2014; Pianta & Walsh, 1998). Students who have developed positive relationships with a caring, supportive nonparental adult through mentoring have demonstrated improvements in social, emotional, and behavioral domains (DuBois et al., 2011; Erdem et al., 2016; Gordon et al., 2013; Hamre & Pianta, 2001; Lindt & Blair, 2017). The importance of relationships between at-risk youth and a positive, caring adult in promoting resilience comes from general systems theory in which the surrounding systems and how systems affect each other influence the child (Checkland, 2012; Lalande & Baumeister, 2013; Pianta & Walsh, 1998).

School-Based Mentoring

School-based mentoring programs have many advantages, such as the knowledge and support of adults already involved with the youth, a larger range of volunteers

(including high school and college students), and a sense of safety (McQuillin et al., 2018; McQuillin et al., 2015; Smith & Stormont, 2012; Woods & Mayo-Wilson, 2012). A school-based programs is often shorter in duration and less intense compared to community-based programs, which may be a limitation (Gordon et al., 2013; McQuillen et al., 2015; Pryce et al., 2021; Smith & Stormont, 2011). School-based programs occur during the school year and the benefits associated with school-based mentoring may not extend past the end of the school year (Aseltine et al., 2000; Gordon et al., 2013; McQuillen et al., 2015). Mentors within school-based mentoring programs spend half as much time with their mentees as those in community-based programs (Herrera et al., 2000; McQuillin, Lyons et al., 2018; Woods & Mayo-Wilson, 2012).

Strengths of Mentoring Programs

Characteristically at-risk youth have few positive attachments to the community or family, so there is little or no compulsion to value or respect themselves or others (Farley & Kim-Spoon, 2014; Lessard et al., 2008; Libbey, 2007; Masten, 2014; Raposa et al., 2019). At-risk youth have few healthy relationships with adults, which are a significant factor in a successful transition to adulthood (Farley & Kim-Spoon, 2014; Gerard & Booth, 2015). Disengaged youth tend not to participate in productive social activities, which minimizes their contact with positive adults (Bauldry & Hartman, 2004; Gerard & Booth, 2015; Masten, 2014; McQuillen et al., 2015). Support from caring adults is critical to assisting at-risk youth in overcoming challenges (Duggins et al., 2016; Erdem et al., 2016). Mentoring can be a primary intervention to address delinquency and a way to provide assistance, promote school achievement, and help youth to avoid

violence and abstain from drugs and alcohol (Erdem et al., 2016; Gordon et al., 2013; Henry, Knight, & Thornberry, 2012; Schwartz & Rhodes, 2016).

Mentored youth have fewer school absences, more positive attitudes toward school, better relations with parents, and greater expectations for success than students who have not been involved in mentoring programs (Erdem et al., 2016; Lindt & Blair, 2017; MacCallum et al., 2005; Raposa eta l., 2019). School and family connectedness improve through mentoring (DuBois et al., 2011; Lindt & Blair, 2017; McQuillin et al., 2018). Mentoring promotes positive relationships between mentees and mentors which in turn builds community capacity (Erdem et al., 2016; Raposa eta l., 2019; Wood & Mayo-Wilson, 2012).

Mentoring programs can improve the overall self-esteem and peer connectedness of youth participants (King et al., 2002; McQuillen et al., 2018). Youth who have experience in mentoring programs are likely to have fewer absences from school, better attitudes towards school, fewer incidences of hitting others, less drug and alcohol use, more positive attitudes toward their elders and toward helping in general and improved relationships with their parents than youth who have no mentoring experiences (Jekielek et al., 2002; Lindt & Blair, 2017; McQuillen et al., 2018; Raposa eta l., 2019; Woods & Mayo-Wilson, 2012). School connectedness and family connectedness occur at higher levels in participants of a mentoring program when compared to non-mentored students (Erdem et al., 2016; King et al., 2002; McQuillen et al., 2018).

Limitations of Mentoring Programs

Despite the potential gains, there are barriers to implementing a mentoring program (Gordon et al., 2013; Karcher, 2008; Lindt & Blair, 2017; McQuillen et al., 2018). Role confusion and differing expectations from involved adults such as parents, program coordinators, teachers may be a barrier to a positive mentor-mentee relationship (Jucovy, 2007; Colley, 2003). In addition, mentoring at-risk youth is challenging and requires a significant commitment (Lindt & Blair, 2017; McCluskey et al., 2004; Pryce et al., 2021; Schwartz & Rhodes, 2016; Smith & Stormont, 2011). Youth who are difficult to engage with or who present with challenging behaviors can be seen as problematic for mentors (Bath, 2008; Kupersmidt et al., 2017; McCluskey et al., 2004; Wood & Mayo-Wilson, 2012). Further, children who have experienced trauma will often view personal connections as risky and may react by pushing the potential support figure away (Bath, 2008; Lindt & Blair, 2017; McQuillin et al., 2018). The duration of a mentor-mentee relationship is a significant factor in determining the success of a student (Herrera et al., 2013; Jucovy, 2007; Karcher, 2008; Lindt & Blair, 2017; Pryce et al., 2021). Youth in one-on-one mentoring relationships of shorter duration (3-6 months) experienced no significant improvements in academic, social, and substance use outcomes (Erdem et al., 2016; Gordon et al., 2013; Pryce et al., 2021; Woods & Mayo-Wilson, 2012). Those involved in relationships of even briefer duration felt less confident about doing their schoolwork and had a substantially lower sense of self-worth (Jucovy, 2007; McQuillin et al., 2018; Smith & Stormont, 2011). When the duration of mentoring programs increases, the occurrence of positive, lasting connections increases as well as the positive

outcomes of the mentoring program (Erdem et al., 2016; Herrera et al., 2013). As the duration of the mentor/mentee relationship can be a factor in positive outcomes for students involved, inconsistent contacts with a youth can be damaging to the relationship between mentor and mentee and is another possible barrier to a successful mentor program (Gordon et al., 2013; Jucovy, 2007; Raposa et al., 2019; Wood & Mayo-Wilson, 2012).

Core to mentoring programs is promoting to the youth in the program that there is someone who cares, and that the youth involved in the mentoring programs matter (Lindt & Blair, 2017; Poteat et al., 2015; Smith & Stormont, 2011). Programs that aim to develop caring and trusting relationships between teachers and students, as well as a sense of school connectedness, have positive affect concerning reductions in problem behaviors (Borkar, 2016; Freiberg & Lapointe, 2006; Jackson et al., 2012; Raposa et al., 2019). When individuals feel a sense of connectedness to others, such as in mentoring programs (Coller & Kuo, 2014; Curran & Wexler, 2017; Raposa et al., 2019), those connections, as well as the social institutions in which the individual experience the connections, are valued. (Finn, 2020; Karcher, 2004, Lakeland et al., 2015; Libbey, 2007).

Summary

Chapter 2 included a literature search strategy utilizing diverse educational and scholarly internet sites, along with websites of professional organizations to gather information, research, and develop an understanding of the relationship between school connectedness, student engagement, mentoring, and mentoring school-aged youth.

Chapter 3 contains the methodology of this convergent mixed methods program evaluation. Chapter 3 also includes the research design and rationale, methodology, threats to validity, issues of trustworthiness, and summary.

Chapter 3: Research Methodology

Background

The purpose of this convergent mixed methods study was to evaluate the Promoting Positive School Engagement program and to test the theory of adolescent connectedness (Karcher, 2004; Karcher, 2018). With this program evaluation, I evaluated the Promoting Positive School Engagement program in a middle school (Grades 6-8), in an urban, Midwest United States school setting and determine the effect of the program on the school connectedness/sense of belonging of the students engaged in the program. This study was a convergent mixed method design, a procedure for collecting, analyzing, and "mixing" quantitative and qualitative data within a single study (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). The rationale for mixed method is that neither quantitative nor qualitative methods are sufficient to capture the complexity of the school connectedness of students' issue (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). When used in combination, quantitative and qualitative methods complement each other and allow for a thorough analysis (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). Chapter 3 contains the methodology of this convergent mixed methods program evaluation, including the research design and rationale, quantitative and qualitative components of the study, threats to validity, and issues of trustworthiness.

Research Design and Rationale

In a mixed methods approach, researchers build knowledge on pragmatic grounds (Creswell & Creswell, 2017). The selection of the approach, as well as the variables and units of analysis, is to find an answer to the research question of the mixed methods study

(Tashakkori & Teddlie, 2010). A tenet of pragmatism is quantitative and qualitative methods are compatible, therefore, numerical and text data, collected sequentially or concurrently, can help better understand the research problem than a quantitative or qualitative method alone (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018).

Within a mixed methods design, some issues need consideration such as priority, implementation, and integration (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). Priority refers to which method, either quantitative or qualitative, has more emphasis in the study (Creswell & Plano Clark, 2018). Implementation refers to whether the quantitative and qualitative data collection and analysis are in sequence or chronological stages or are concurrent (Creswell & Plano Clark, 2018). Integration refers to the phase in the research process where the mixing or connecting of quantitative and qualitative data occurs (Creswell & Creswell, 2017; Tashakkori & Teddlie, 2010).

In this study, I used a core mixed methods design: convergent design, consisting of two phases that take place separately (Creswell, 2015). In the first phase, the quantitative phase, I collected data using the Hemingway measure of adolescent connectedness, and the data underwent analysis using SPSS (Karcher, 2005; Karcher, 2018). In the second qualitative phase, I collected reflections from the staff and students participating in the Promoting Positive School Engagement program through individual semi-structured interviews to test the theory of adolescent connectedness (Karcher, 2004; Karcher, 2018). In using a convergent mixed methods approach, I gathered a general picture of the research problem from the quantitative data and results, and with the qualitative data and analysis, I refined and explained those statistical results by exploring

participants' views in depth (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010).

Research Questions

RQ1: To what degree does the student's sense of belonging/school connectedness change after participating in the Promoting Positive School Connectedness program, while controlling for pretest scores (covariate).

RQ2: How do research participatory characterizations of the Promoting Positive School Engagement Program align with the adolescent theory of connectedness?

Convergent Mixed Methods Program Evaluation

In this study, I employed a convergent mixed methods design to address to what degree a program (Promoting Positive School Engagement) initiated by school social workers to increase school connectedness in at-risk students in a public urban middle school in the Midwest United States has outcomes associated with program goals as well as tested the theory of adolescent connectedness. The mixed methods design traces back to the 1800s in studies such as LePlay's 1855 study on poverty in European families and W.E. B. DuBois's 1899 sociological study on African Americans in Philadelphia (Hesse-Biber, 2010; Mertens, 2017). A convergent mixed method design begins with collecting and analyzing the quantitative data and qualitative data separately (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). The basis of the convergent mixed method design is using quantitative and qualitative approaches together, provides a better understanding of a research problem than either approach alone (Creswell et al., 2011; Tashakkori & Teddlie, 2010). At the same time, the convergent mixed method design can

be challenging due to the time needed to conduct the two phases of the design (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). Using a convergent mixed method design for a program evaluation provides quantitative results with an in-depth qualitative exploration of students' sense of belonging/school connectedness within the same study (Creswell & Plano Clark, 2018; Johnson et al., 2007; Teddlie & Tashakkori, 2010).

The beginnings of program evaluation in the United States trace back to the 1800s when the U.S. government required inspectors to evaluate publicly funded programs (Mertens, 2018; Stufflebeam et al., 2006). Using multiple methods of evaluation, combining the use of quantitative and qualitative techniques, enhances the assessment of complex social programs (Bamberger et al., 2010; Gotz & Carlson, 2014; Mertens, 2018; Rychetnik et al., 2002). The focus of this study is conducting a program evaluation of the Promoting Positive School Engagement at the middle school to determine the outcome the mentoring/relationship building employed by the staff has on the targeted students' school connectedness and school achievement. In addition, testing the theory of adolescent connectedness as part of students' movements toward others through affection and activity (Karcher, 2004; Karcher, 2011; Karcher, 2018).

As this is a convergent mixed methods program evaluation, there were two separate phases of the study. In the first quantitative phase, the Promoting Positive School Engagement program participants took pre-and post-tests using the Hemingway measure of adolescent connectedness to provide statistical data on the outcome of the program (Karcher, 2005). In the second qualitative phase, I collected the reflections of

the staff and students participating in the Promoting Positive School Engagement program through individual semi-structured interviews to test the theory of adolescent connectedness (Karcher, 2004, Karcher, 2018). Prior to either phase is the selection of participants for the study.

Participant Selection

Researchers commonly examine traits or characteristics of populations in studies (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018; Trochim et al., 2016). Collecting data from the population for any study may be impossible but using a subset or sampling of the population from which to collect the data is manageable for research purposes (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018; Trochim et al., 2016). Typically, in quantitative research, the selection of participants is random to assist in removing the potential influence of external variables and allow for the generalizability of results (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018; Trochim et al., 2016). In contrast, selection of participants in qualitative research is purposeful, selecting who can appropriately inform the research questions and enhance understanding of the phenomenon under study (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2010; Trochim et al., 2016).

Sampling

A sample is a selection of units (people, objects, or items) taken from a population of interest for a study (Creswell & Creswell, 2017; Trochim et al., 2016). There are two main types of sampling: probability and non-probability sampling (Creswell & Creswell, 2017; Trochim et al., 2016). In probability sampling, there is some form of random

selection, and non-probability sampling does not involve random selection (Creswell, 2015; Trochim et al., 2016). In this study, I used several sampling methods in the selection of participants: purposive sampling, criterion sampling, and stratified random sampling.

Quantitative Phase

For the quantitative phase of this convergent mixed method program evaluation, recruiting two separate groups of students was necessary to evaluate the effect of the Promoting Positive School Engagement program (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). The first group was all the students participating in the Promoting Positive School Engagement program at a selected school site. The quantitative phase was a nonequivalent control group design (Campbell & Stanley, 1963) using the collective students in the Promoting Positive School Engagement as the experimental group. The control group came from the same urban, Midwest middle school (Grades 6-8) and contained a like number of subjects as those students participating in the Promoting Positive School Engagement program (Creswell & Creswell, 2017). The selection of the control group was a stratified random sampling of students ($n \leq 50$) from the population of the school ($N \geq 250$) (Rahi, 2017; Warner, 2013). Stratified random sampling involves the division of the population into smaller groups, or strata, and then drawing a sample from each group separately (Rahi, 2017; Warner, 2013). In this study, the strata are grade level to form a control group comparable to the student participants in the Promoting Positive School Engagement program, the experimental group (Creswell & Creswell, 2017).

Qualitative Phase

Selection of participants for the qualitative phase of the study was purposive sampling from the population of those students (N = 20) and staff/mentors (N = 20) participating in the Promoting Positive School Engagement program (Palinkas et al., 2015; Mertens, 2017). In purposive sampling, the selection is based on characteristics of the population and the objective of the study (Palinkas et al., 2015). I randomly invited six students, or to the point of theoretical saturation, out of the total number (N=20) of student participants in the Promoting Positive School Engagement program from the quantitative phase (three with highest scores and three with lower scores) to participate in semi-structured interviews (see Appendix A). Additionally, I randomly invited five staff/mentors, or to the point of theoretical saturation, from the total number (N=20) of mentors in the Promoting Positive School Engagement program to participate in semi-structured interviews (see Appendix B). The students and staff participated in the interviews to provide their perceptions about involvement in the Promoting Positive School Engagement Program (Gentles et al., 2015).

Informed Consent

Informed consent is a voluntary, legal, and ethical agreement to participate in research involving human participants (Banks et al., 2013; Nijhawan et al., 2013). Informed consent is necessary prior to enrolling a participant in a study (Banks et al., 2013; Creswell & Creswell, 2017). Obtaining consent involves informing the subject about their rights, the purpose of the study, the procedures, and the potential risks and benefits of participation (Nijhawan et al., 2013; Trochim et al., 2016). Before

participation in this convergent mixed methods program evaluation, I provided informed consent forms for participants (see Appendix C, D), which contained pertinent information about the research study. The informed consent forms include student informed assent for taking the pre-and post-tests in the quantitative portion on the study (see Appendix C), student informed assent for the semi-structured interviews (see Appendix D), a parent consent for students taking part in the quantitative or qualitative portion of the study and an informed consent for staff participating in the qualitative portion of the study. Student participants in the quantitative aspect of the study and student and staff participants in the qualitative aspect of the study were issued informed consent forms prior to data collection. No student participated in this study without written parental/guardian consent.

Instrumentation

Instrumentation refers to the tools or means by which a researcher may attempt to measure variables or items of interest in the data collection process of a study (Creswell, 2015; Salkind, 2010). Instrumentation is not only the instrument design but also the conditions under which the instruments are used (Mertens; 2017; Salkind, 2010). Simply put, the instrument is the tool used by researchers for collecting data within a study (Salkind, 2010).

Quantitative Phase

For the quantitative portion of this convergent mixed methods program evaluation, I used the Hemingway measure of adolescent connectedness (Karcher, 2018) to measure students' perceptions of connectedness to self, school, family, and friends,

focusing on the perceptions of connectedness to school, the dependent variable (Gordon et al., 2013). The Hemingway measure of adolescent connectedness (see Appendix E) was the pre-and post-test instrument for students participating in the Promoting Positive School Engagement program (the independent variable) as well as the control group. The Hemingway measure of adolescent connectedness uses a five-point Likert-type scale (Karcher, 2003) with higher scores indicating increases in connectedness. The Hemingway measure of adolescent connectedness sprung from the theory of adolescent connectedness in order to measure the individual's connectedness to school (school and teachers), family, friends, and self (Karcher, 2003, 2004, 2011, 2018). Permission and conditions to use the Hemingway measure of adolescent connectedness are in Appendix F.

Qualitative Phase

In the qualitative portion of the study, I used semi-structured interviews (see Appendix A & B) to learn about program experiences to test the adolescent theory of connectedness (Opdenakker, 2006; Zorn, 2008). The interviews provided information and insight into the participants' perceptions about involvement in the Promoting Positive School Engagement program (Creswell & Creswell, 2017; Trochim et al., 2016).

Data Collection

Data collection is a process of gathering and measuring information on variables of interest in a study, in a systematic, designed method that allows one to answer research questions, test hypotheses, and evaluate outcomes (Johnson et al., 2007; Prabha & Kabadi, 2016). While data collection methods vary, the priority is to promote accurate

and honest data collection (Trochim et al., 2016). In this convergent mixed method program evaluation, the collection and analysis of the quantitative data occurred first, with the collection and analysis of the qualitative data second, prior to merging the databases (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010).

Quantitative Phase

The quantitative phase of the study is a nonequivalent control group design (Campbell & Stanley, 1963), utilizing the Hemingway measure of adolescent connectedness instrument (see Appendix E) as the pre and posttest for the participants in the Promoting Positive School Engagement program and the control group (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). Each participant was given a unique ID number or code in order to pair each person's pretest responses and posttest responses for analysis (Creswell & Creswell, 2017; Trochim et al., 2016). The participants in the study self-administer the pretest and posttest online utilizing computers at the school and the responses were kept in encrypted data files.

Qualitative Phase

In the qualitative phase of the study, the data collection will be through semi-structured interviews utilizing interview protocols (see Appendix A & B). The interview protocol is an instrument that guides the researcher through the interview process (Creswell & Plano Clark, 2018; Mertens, 2017). The interview protocol describes the procedure for the interview, contains scripts, provides prompts to help out the interviewer with regard to essential elements, and is a guide to conducting qualitative research study (Rahi, 2017; Tashakkori & Teddlie, 2010; Zorn, 2008). Data collection consists of

audiotaped, face-to-face interviews of the student and staff participants, and interviewer notes.

The interviewees will be staff and students who took part in the Promoting Positive School Engagement program. Of those participants, five staff and six students, the point of theoretical saturation, participated in the interviews providing their experiences and perceptions of involvement in the Promoting Positive School Engagement program. The individual, face-to-face interviews took place in an office at the school to help maintain confidentiality during the regular school day.

Transcription of the interviews occurred after the interviews and was maintained in password-encrypted data files. In addition, I used member checking to assist in ensuring the transcripts matched the intended response of the interview participants (Birt et al., 2016; Creswell & Creswell, 2017). The process of analyzing the data occurred after the completion of the interviews of staff and participants. I removed, redacted, or converted to code as appropriate, identifying data to assist in promoting confidentiality.

Data Analysis

Data analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense, and recap, and evaluate data collected in a research study (Creswell & Plano Clark, 2018; Trochim et al., 2016). Quantitative data analysis involves the analysis and interpretations of figures and numbers in an attempt to find rationale behind the findings (Creswell & Creswell, 2017; Mertens, 2017). Qualitative data analysis involves identifying common themes or patterns within the

responses and analyzing the themes/patterns to achieve the objectives of the research. (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010).

Quantitative Phase

For the analysis of the data from the pre-and posttest in the quantitative phase of the study, I used SPSS for recording and analysis of data (Creswell, 2015). I used the baseline pretest from the Hemingway measure of adolescent connectedness of the control group and the experimental group (student participants in the Promoting Positive School Engagement program) as the covariate to control for the initial group differences on school connectedness (Huirema, 2005; Lo et al., 2011; Tabachnick et al., 2007). I used analysis of covariance to analyze the quantitative data using the posttest measurement as the response, the treatment (participation in the Promoting Positive School Engagement program) as the design factor with the pretest as the covariant (Mertens, 2017; Trochim et al., 2016).

Qualitative Phase

In the qualitative data analysis, I used content analysis, a common method to analyze qualitative data (Mertens, 2017; Tashakkori & Teddlie, 2010). Content analysis is a research technique used to make replicable inferences by interpreting and coding textual material (Hsieh & Shannon, 2005; Mertens, 2017; Tashakkori & Teddlie, 2010). Content analysis is frequently employed to analyze documented information and responses from interviewees (Mertens, 2017; Tashakkori & Teddlie, 2010). I coded and classified the interview responses from the staff and students into meaningful categories to search for relevant patterns or themes (Creswell, 2015; Creswell & Creswell, 2017). I

combined themes developed from the interview protocol to form major ideas of the staff and students' perceptions of school connectedness and the Promoting Positive School Engagement program (Creswell, 2015; Creswell & Plano Clark, 2018).

Triangulation

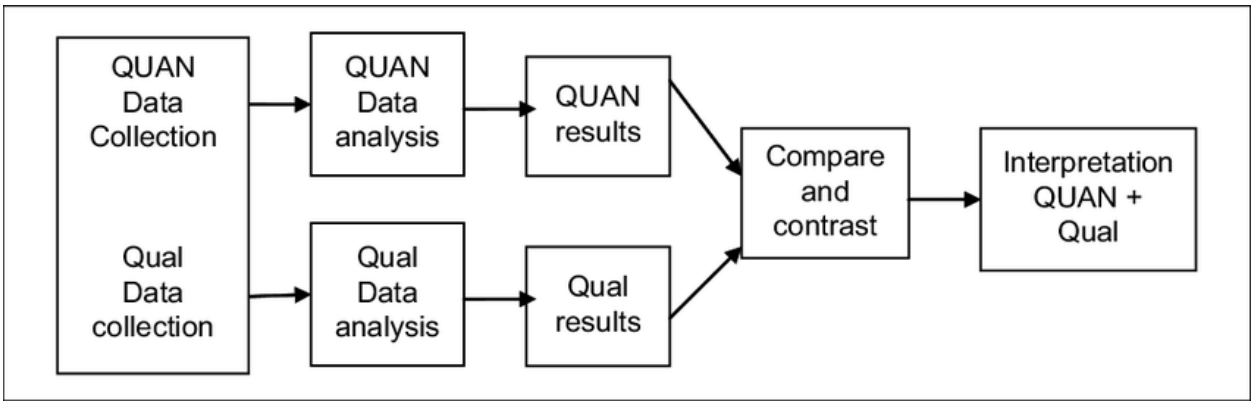
Campbell and Fiske (1959) introduced the concept of triangulation, referring to *multiple operationalism,* where more than one method is used as a part of a process to assist in showing the variance is the result of the underlying phenomenon and not of the method (Creswell & Plano Clark, 2018; Hesse-Biber, 2010; Johnson et al., 2007; Mathison, 1988; Mertens, 2017; Tashakkori & Teddlie, 2010). Webb et al. (1966) took Campbell and Fiske's (1959) ideas, extending the idea of multiple operationalism, coining the term *triangulation,* which is between or across-method triangulation (Hesse-Biber, 2010; Johnson et al., 2007; Mertens, 2017). The use of triangulation tests the consistency of findings obtained through different instruments and increases the chance to control, or at least assess, some of the threats influencing the results (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018; Hesse-Biber, 2010; Tashakkori & Teddlie, 2010).

In this convergent mixed methods program evaluation, I used a convergence triangulation model (Creswell, 2015; Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). In the convergence triangulation model (Figure 1) the collection and the analysis of quantitative and the qualitative data on the same phenomenon occur separately, then converging the results through comparing and contrasting during the interpretation (Creswell, 2015; Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). The use of the convergence triangulation method may provide a well-substantiated

conclusion about a single phenomenon (Creswell, 2015; Creswell & Creswell, 2017; Creswell & Plano Clark, 2018).

Figure 1

Convergence Triangulation Method



Note. From *Designing and conducting mixed methods research* (3rd ed., p 70), by Creswell & Plano Clark, 2018) Copyright 2018 by Sage Publications.

Reliability

Reliability in research refers to the quality of measurement (Trochim, Arora, & Donnelly, 2016). In quantitative research, reliability relates to whether the instrument provides consistent results (Creswell & Creswell, 2017; Frankfort-Nachmias & Nachmias, 2008; Mertens, 2017). An example of reliability in an instrument is if one person takes the same personality test several times and always receives the same results, then the test is reliable. In qualitative research, reliability relates to the consistent use of protocols and procedures that are replicable across researchers, and the rigors in the research design (Frankfort-Nachmias & Nachmias, 2008; Franklin, Cody, & Ballan, 2010).

Quantitative Phase

The instrument in the quantitative phase of this study, The Hemingway Measure of Adolescent Connectedness, is a standardized instrument that measures the engagement of youth at school, how much they enjoy school, how successful they feel at school, and how much they value this success (Gordon et al., 2013; Karcher, 2011; Karcher & Sass, 2010; National Mentoring Resource Center, 2019; Sass et al., 2011; Zou, & Shahnawaz, 2014). Additionally, the instrument is reliable across cultures (Abubaker et al., 2014; Sass et al., 2011; Yuen & Yau, 2015; Zou & Shahnawaz, 2014) as well as across genders (Gordon et al., 2013; Karcher & Sass, 2010; National Mentoring Resource Center, 2019).

Karcher (2011) reported the reliability values for the Hemingway Measure of Adolescent Connectedness in the manual for the instrument. The development of the instrument took place through five different versions with accompanying research studies to determine the reliability values (Karcher, 2011; Karcher 2003). In calculating the inter-item reliability, Karcher (2011) reported using Cronbach's alpha in the instrument manual for the composite scales and subscales. Karcher (2011) reported Cronbach's alpha for connectedness to school is $\alpha = .80$, for connectedness to family is $\alpha = .89$, for connectedness to friends is $\alpha = .77$, and for connectedness to self is $\alpha = .81$. Cronbach's alpha of .70 is an acceptable level of inter-item reliability (Frankfort-Nachmias & Nachmias, 2008; Tavakol & Dennick, 2011). Karcher (2011) reported test-retest coefficients of $r = .87$ for connectedness to school, $r = .88$ for connectedness to family, $r = .87$ for connectedness to friends, and $r = .88$ for connectedness to self.

One additional area of concern is type I and type II errors (Creswell & Creswell, 2017; Creswell & Plano-Clark, 2018; Mertens, 2017). Type I errors occur when a researcher rejects a null hypothesis when the hypothesis is true in the population (Creswell & Plano-Clark, 2018; Tashakkori & Teddlie, 2010; Trochim et al., 2016). Type II errors occur when a researcher fails to reject a null hypothesis that is false in the population (Banerjee et al., 2009; Frankfort-Nachmias & Nachmias, 2008; Mertens, 2017; Trochim et al., 2016). Although avoiding type I and type II is not always possible, a researcher may reduce likelihood of occurrence by increasing the sample size; the larger the sample, the less likely the sample will differ significantly from the population (Banerjee et al., 2009; Creswell & Creswell, 2017; Tashakkori & Teddlie, 2010; Trochim et al., 2016).

Qualitative Phase

The concept of reliability in qualitative research refers to the consistency with which the protocols and procedures may be replicable, that is the dependability and consistency of the approach in gathering the data (Creswell, 2015; Creswell & Creswell, 2017; Frankfort-Nachmias & Nachmias, 2008). To assist in promoting reliability in qualitative research, documenting all aspects of the research process is important and assists other researchers in replicating the research. To assist in the reliability of this convergent mixed method study I will follow several procedures such as following the same interview protocol (see Appendix A & B) with each interviewee, checking transcripts for obvious mistakes during transcription, and being consistent with the

meaning of codes during the coding process (Creswell, 2015; Creswell & Plano Clark, 2018; Tashakkori, & Teddlie, 2010).

Validity

Validity in quantitative research is the appropriateness of the instrument, that is if the instrument measures what the instrument is supposed to measure then the instrument is valid (Creswell & Plano Clark, 2017; Frankfort-Nachmias & Nachmias, 2008; Leung, 2015; Mertens, 2017). An example would be if the results of a personality test show that a timid person is outgoing, the test would be invalid. In qualitative research validity is the integrity and employment of the methods as well as the sureness in which the findings accurately reflect the data (Mertens, 2017; Noble & Smith, 2015).

Quantitative Phase

Karcher (2011) reported in the Hemingway Measure of Adolescent Connectedness manual validity studies that the instrument underwent before verifying the validity of the final version of the instrument. Using the significance level of .002, with a Bonferroni adjustment of the .05 level, the composite scales of connectedness to family, connectedness to friends, connectedness to school, and connectedness to self, of the Hemingway Measure of Adolescent Connectedness, version 5, show a positive correlation with the respective validity scales (Karcher, 2011).

The Hemingway Measure of Adolescent Connectedness self-report survey consists of 57 items which make up the 10 four- to six-item subscales (Karcher, 2003, 2008, 2011, 2018). Appendix G (Karcher & Sass, 2010, p.278) shows the complete standardized parameters for the sample (n = 3,633) with each estimated standardized

factor loadings and corresponding residuals, the other factor loadings and residuals were fixed at zero.

Validity also applies to the experimental design (Campbell & Stanley, 1963). When addressing validity in terms of experimental design there are threats to internal and external validity (Campbell & Stanley, 1963). Threats to internal validity (Figure 2) are that there may be an alternative explanation instead of treatment for the outcomes (Campbell & Stanley, 1963).

Figure 2

Threats to Internal Validity

History:	Events, other than the experimental treatments, influence results.
Maturation:	During the study, changes occur within subjects
Testing:	Exposure to a pretest influences performance on a posttest.
Instrumentation:	Testing instruments or conditions are inconsistent; or pretest and posttest are not equivalent, creating the illusion of change in performance.
Statistical Regression:	Scores of subjects that are very high or very low tend to regress towards the mean during retesting.
Selection:	Systematic differences exist in subjects' characteristics between treatment groups.
Experimental Mortality:	Subject attrition may bias the results.
Diffusion of Treatments:	Implementation of one condition influences subjects in another condition.

Note. Figure created from *Experimental and quasi-experimental designs for research by* Campbell & Stanley, 1963.

Using a quasi-experimental, non-equivalent control group design in the quantitative phase of this study, may control for the main effects of history, maturation, testing, and instrumentation, the more similar the experimental and control group are in the pretest score comparisons (Campbell & Stanley, 1963). Selecting subjects from the same middle school using criterion sampling for the experimental group and stratified random sampling for the control group will assist in minimizing the selection threat to internal validity (Creswell & Plano Clark, 2018; Mertens, 2017). Analysis using analysis of covariance with the pretest scores as the covariate will assist in controlling for initial group differences on school connectedness between the control and experimental groups and assist in minimizing the threat of statistical regression (Campbell & Stanley, 1963; Creswell & Creswell, 2017; Huirema, 2005; Lo et al., 2011; Tabachnick et al., 2007).

In quantitative research, reliability and validity are independent of each other (Leung, 2015; Trochim et al., 2016). An instrument may be valid but not reliable or reliable but not valid (Mertens, 2017; Trochim et al., 2016). An example of the independence of reliability and validity is: suppose a scale is set to display 10 pounds lighter, the weight displayed on the scale will be reliable but will not be valid as the scale is not displaying the actual weight.

Qualitative Phase

Validity in qualitative research refers to the process of determining if the inferences made in the study are accurate from the perspective of the participant, the researcher, or the readers of the research that is, the believability and trustworthiness of the collected data (Creswell & Creswell, 2017; Leung, 2015; Onwuegbuzie & Leech,

2007; Smith, 2015; Whittemore et al., 2001). Incorporating multiple validity strategies enhances the ability to assess the trustworthiness of the research data (Creswell & Creswell, 2017; Mertens, 2017; Tashakkori & Teddlie, 2010; Whittemore et al., 2001). To assist in the validity of the qualitative phase of this convergent mixed method study, I followed several validation strategies such as triangulation, member checking, theoretical saturation, using rich, thick descriptions to convey findings, as well as reflexivity (Creswell & Creswell, 2017; Leung, 2015; Onwuegbuzie & Leech, 2007; Tashakkori & Teddlie, 2010; Whittemore et al., 2001).

Ethics and Data Management

For the protection and confidentiality of the participants, I assigned each member taking the pre-and post-test with a code in the place of their name. Additionally, assigning a pseudonym to each participant of the semi-structured interviews will assist in protecting the confidentiality and privacy of those participants. No participant will be part of the study without first receiving and signing the informed consent (see Appendix C, D). Consent forms, interview transcripts, and other hard copies of data were scanned to an encrypted, password-protected, removable drive, after which the physical copies were shredded. All digital copies of data will be secured in a locked box and destroyed after publication in accordance with University policy.

Summary

Chapter 3 contained the methodology of this convergent mixed methods program evaluation. The purpose of this study is to evaluate the degree of effectiveness of the Promoting Positive School Engagement program and to test the theory of adolescent

connectedness that youths' connectedness is a response to relatedness and belonging (Karcher, 2004). Chapter 3 also contained the research design and rationale, methodology, data collection, analysis and management, reliability, and validity issues, along with ethical considerations.

Chapter 4: Results

Introduction

This study aimed to determine to what degree a program initiated by school social workers to increase school connectedness in at-risk students in a public urban middle school in the Midwest United States is accomplishing the program goal. In addition, testing the theory of adolescent connectedness that youths' connectedness is a response to relatedness and belonging, a reflection of adolescents' perceptions of their involvement in events, organizations, and activities (Karcher, 2004, 2011, 2018). The program evaluated is based on the concepts from the Wingspread Declaration on School Connectedness (2004) that increasing school connectedness increases students' success in schools. The primary goal of Promoting Positive School Engagement is to increase staff-student relationships and increase the students' connectedness to schools. This chapter describes the program, the setting, the participants' demographics, the data collection, the analysis, and the findings.

Program Evaluation

The Promoting Positive School Engagement program used for the study took place during the 21-22 school year at an urban Midwest middle school (Grades 6-8) with an enrollment of approximately 250 students during the school year. Once the school personnel selected the students to participate in the program, parent consent and student assent were sought and secured before the beginning of the program. A like number of students not participating in the Promoting Positive School Engagement program were randomly selected to serve as the control group. Although there were 35 students initially

participating in Promoting Positive School Engagement program, parental consent was only secured for 30 students to participate as the experimental group in the study. Additionally, during the 4 months of the program, 10 other students from the experimental group dropped out of the program as they transferred to another school/educational setting before the culmination of the program. The initial number of students randomly selected for the control group was 30. Of the initial 30 selected for the control group, six transferred to another school/educational program before the end of the program, and four students did not complete the posttest.

Quantitative Phase

After identifying the experimental and control groups, each student was given the Hemingway measure of adolescent connectedness as the pretest (Karcher, 2011, 2018). The Promoting Positive School Engagement program was implemented for 4 months between mid-January 2022 and May 2022 before the Hemingway measure of adolescent connectedness was again given to the students in the experimental and control groups to serve as the posttest. The results from the pre and posttest serve as the quantitative data for analysis.

Qualitative Phase

For the qualitative phase of the study, the data was collected through semi-structured interviews using the interview protocols in Appendixes A and B after completing the Promoting Positive School Engagement program. Six students from the control group participated in the face-to-face interviews. Additionally, five staff participated in the semi-structured interviews.

Demographics

Quantitative Phase

The control and experimental groups comprised 10 6th and 10 7th graders for the quantitative analysis. The experimental group had 11 females (six 6th graders and five 7th graders) and nine males (four 6th graders and five 7th graders), and the control group had 10 females (six 6th graders and four 7th graders) and 10 males (four 6th graders and six 7th graders). In terms of ethnicity, the experimental group was composed of eight students who identified as Black, seven who identified as White, four who identified as Hispanic, and one who identified as Asian. In the control group, eight students identified as White, six identified as Black, five identified as Hispanic, and one as Asian. This is shown in Table 1 below.

Table 1

Participants of Study (Quantitative)

	Control group (n=20)		Experimental group (n=20)	
	6th grade (n=10)	7th grade (n=10)	6th grade (n=10)	7th grade (n=10)
male	4	6	4	5
Black	1	2	2	2
White	2	2	2	1
Hispanic	1	1		2
Asian		1		
female	6	4	6	5
Black	2	1	2	2
White	2	2	2	2
Hispanic	2	1	1	1
Asian			1	

Note. Control and experimental group participant demographics.

Students in the experimental and the control groups were from similar socio-economic backgrounds, as the students qualified for free and reduced lunch as part of the National School Lunch Program (Ohio Department of Education, 2022).

Qualitative Phase

In the qualitative analysis, selecting the students was done utilizing criterion sampling for the face-to-face interviews. Four of the students were females (two 6th and two 7th graders), and two students were male (one from each grade). The ethnicity breakdown was two students identified as Black, two students identified as White, and two students identified as Hispanic. Of the staff participating in the face-to-face interviews, four were female, one was male, three staff identified as white, and two staff identified as Black.

Data Collection

In this convergent mixed method program evaluation, the collection and analysis of the quantitative data will be first, with the collection and analysis of the qualitative data second. (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010). Upon completion of the collection and analysis of the quantitative data and the qualitative data, the databases will be merged (Creswell & Plano Clark, 2018; Tashakkori & Teddlie, 2010).

Quantitative Phase

The quantitative phase of the study is a nonequivalent control group design (Campbell & Stanley, 1963). The Hemingway measure of adolescent connectedness instrument (see Appendix E) is the pre and posttest for the participants in the Promoting

Positive School Engagement program and the control group (Creswell & Creswell, 2017; Creswell & Plano Clark, 2018). The Hemingway measure of adolescent connectedness was developed from the theory of adolescent connectedness to measure the individual's connectedness to school (school and teachers), family, and friends as well as to self (Karcher, 2003, 2004, 2011, 2018). With the focus of this study being to what degree a student's sense of belonging/school connectedness changes after participating in the Promoting Positive Connectedness program, the scores on the Hemingway measure of adolescent connectedness ecological subscales that will be analyzed are school and teacher (Karcher, 2011, 2018). The school subscale rates how much students enjoy school, how successful they feel at school, how hard the student works at school, and how much they care for school (Karcher, 2011, 2018). The teacher subscale rates the students' sense of enjoying being with their teacher and how invested the student is in their relationship with their teacher (Karcher, 2011, 2018).

The Hemingway measure of adolescent connectedness version 5 short form was used as a pretest and posttest and is composed of 57 questions. Students involved in the study were emailed an individual link through Survey Monkey when they took the pretest at the beginning of the study. Then a separate individual link was sent via Survey Monkey for the posttest. Pre and posttest scores were transferred into an Excel spreadsheet before analysis using IBM SPSS Statistics (ver.28).

Qualitative Phase

In the qualitative phase of the study, the data collection occurred through semi-structured interviews. These interviews used the interview protocols (see Appendix A &

B). Six students who participated in the Promoting Positive School Engagement program were interviewed after the completion of the program and before the end of the 2021-2022 academic year. Additionally, five staff involved in the Promoting Positive School Engagement program sat down for interviews. The individual, face-to-face interviews with the students were conducted in an office at the school during the regular school day to help maintain confidentiality. The interviews with staff took place in a school office after the conclusion of the school day.

Quantitative Results

This section includes the statistical analysis results of the data from the Hemingway measure of adolescent connectedness used as the pre and posttest. An analysis of covariance was completed on the pre and posttest results to examine the outcomes of the Promoting Positive School Engagement program in promoting the sense of belonging/school connectedness for adolescent students. The dependent variable in the test was adolescent connectedness measured at the posttest, the independent variable condition with two levels of control and experiment groups, and the covariate adolescent connectedness measured at the pretest.

Reliability

To ensure the study's data met internal consistency and reliability criteria Cronbach's alpha was calculated on the subscales for connectedness to school and teachers. A Cronbach alpha value above .70 is desirable and suggests internal reliability and consistency (Field, 2017; Pallant, 2020). Table 2 shows the reliability statistics for the adolescent connectedness scale; according to the table, there are twelve items. From

the table, Cronbach's Alpha for adolescent connectedness is 0.888, which shows that the twelve items that make up the scale have high internal reliability and consistency. The findings suggest a high correlation between the 12 subscale items.

Table 2

Reliability Statistics

Cronbach's Alpha	N of items	N
0.888	12	80

Note. Cronbach's Alpha for subscales of connectedness to school and teacher.

In the quantitative portion of this study, I sought to answer the research question:

Research Question 1

Research Question 1: To what degree does the student's sense of belonging/school connectedness change after participating in the Promoting Positive School Connectedness program, while controlling for pretest scores (covariate)?

H_0: The Promoting Positive School Engagement program does not increase school connectedness of the participants.

H_a: The Promoting Positive School Engagement program increases school connectedness of the participants.

In reviewing Table 3, the average adolescent connectedness for the control and experiment groups at the pretest level was (M= 2.56, SD= 0.26), and at the posttest level was (M= 3.37, SD= 0.55). The mean adolescent connectedness for the control group at the pretest level was (M= 2.54, SD= 0.25), and at the posttest level was (M= 2.86, SD= 0.17), as seen in Table 3. The average adolescent connectedness for the experiment group

at the pretest level was (M= 2.58, SD= 0.28) and at the posttest level was (M= 3.88, SD= 0.17).

Table 3

Descriptive Summary of Experimental and Control Groups

Condition	Statistic	Hemingway measure of adolescent connectedness (Pretest)	Hemingway measure of adolescent connectedness (Posttest)
Control	Mean	2.5375	2.857
	Std. deviation	0.24992	0.1733
	Minimum	2.08	2.5
	Maximum	3	3.33
Experiment	Mean	2.583	3.883
	Std. deviation	0.28068	0.17484
	Minimum	2.17	3.5
	Maximum	3.33	4.25
Total	Mean	2.5602	3.37
	Std. deviation	0.26333	0.54721
	Minimum	2.08	2.5
	Maximum	3.33	4.25

Figure 3 is a clustered bar chart with the average adolescent connectedness for the control and experiment groups at the pretest and posttest levels. The mean scores for adolescent connectedness of the control and experimental group at the pretest level and the respective error bars overlap, suggesting that the two groups are statistically equal at pretest. Additionally, the means of the control and experimental groups at posttest are higher than the average adolescent connectedness at pretest for both groups. Further, the chart graphically displays the error bars for the average adolescent connectedness for the control group at the posttest level, and those for the experiment group do not overlap,

suggesting a significant difference in the mean adolescent connectedness between the control group and the experimental group at the posttest level.

Figure 3

Average Adolescent Connectedness

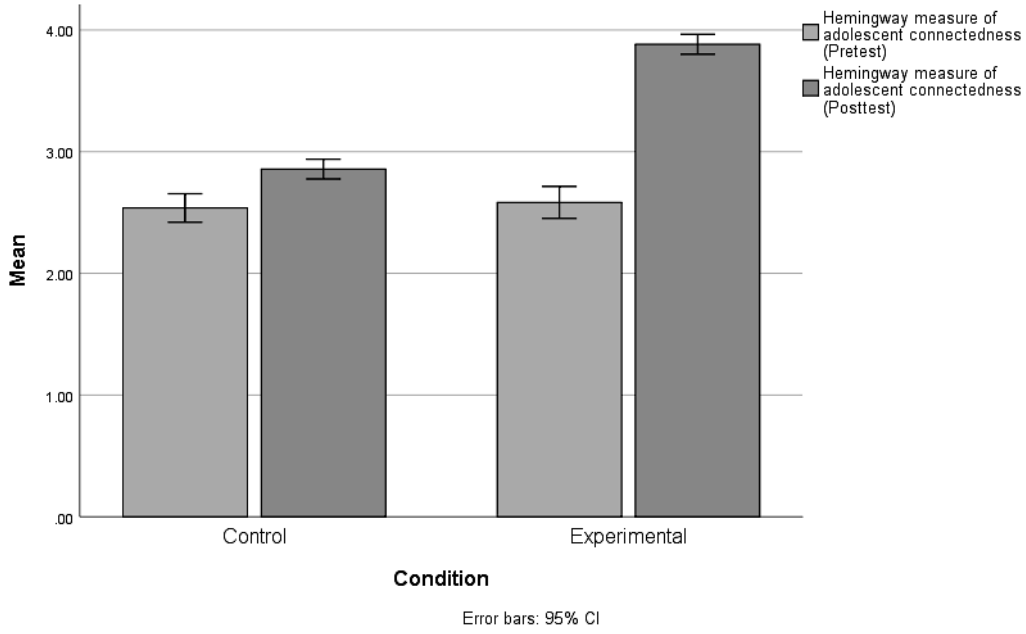


Table 4 shows the summary output for the between-subjects effect test for the covariance analysis. According to the findings in the table, the independent variable condition has a significant effect on the target variable adolescent connectedness as determined by $F = 374.721$, $p = 0.000$; therefore, rejecting the null hypothesis: The Promoting Positive School Engagement program does not increase school connectedness of the participants. From the tests, one can conclude that there is a significant difference in mean adolescent connectedness between the control and experiment groups.

From the table, the covariate adolescent connectedness at the pretest level significantly influences the target variable adolescent connectedness at the posttest level

as determined by F = 5.156, p = 0.029, rejecting the null hypothesis at α= .05 level of significance. The test results show that the average adolescent connectedness for the control group at the posttest level is significantly different from the average adolescent connectedness for the experiment group at the posttest level.

Table 4

Test of Between-Subject Effects

Tests of Between-Subjects Effects						
Dependent Variable: Hemingway measure of adolescent connectedness (Posttest)						
Source	Type III sum of squares	df	MS	F	Sig.	Partial eta squared
Corrected model	10.668a	2	5.334	195.279	0	0.913
Intercept	3.14	1	3.14	114.955	0	0.757
Pretest	0.141	1	0.141	5.156	0.029	0.122
Condition	10.235	1	10.235	374.721	0	0.91
Error	1.011	37	0.027			
Total	465.954	40				
Corrected total	11.678	39				
R Squared = .913 (Adjusted R Squared = .909)						

Table 5 shows the LSD pairwise comparisons for the average adolescent connectedness between the control and experiment groups. According to the table, there is sufficient evidence to conclude that the mean adolescent connectedness for the experimental group at the posttest level is significantly higher than the mean adolescent connectedness for the control group at the posttest level (significance level of .05). The results of the test suggest with 95% certainty that the Promoting Positive School Engagement program significantly improves adolescent connectedness.

Table 5

Pairwise Comparisons Adolescent Connectedness (Control and Experimental Groups)

Pairwise Comparisons						
Dependent variable: Hemingway measure of adolescent connectedness (Posttest)						
(I) Condition	(J) Condition	Mean Difference (I-J)	Std. Error	Sig. b	95% Confidence interval for difference b	
					Lower bound	Upper bound
Control	Experiment	-1.016*	0.052	0	-1.122	-0.909
experiment	control	1.016*	0.052	0	0.909	1.122

Based on estimated marginal means

* The mean difference is significant at the .05 level.

b Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

The findings of the analysis of covariance support the study's alternative hypothesis that the Promoting Positive School Engagement program improves adolescent connectedness. According to the findings of the descriptive summary, the average adolescent connectedness for the control group at the posttest level is less compared to the average adolescent connectedness for the experiment group that received the program posttest level. According to the bar chart analysis, the average adolescent connectedness for the control and experiment groups is statistically equal at the pretest level. In contrast, the average adolescent connectedness for the experiment group is significantly higher than that of the control group at the posttest level. The analysis of covariance supports the findings of the clustered bar chart that the average adolescent connectedness for the experiment group at the posttest level is significantly different from that of the control group at the posttest level. The covariance analysis findings indicate that the average

connectedness after participating in the program is significantly higher than the average adolescent connectedness before the program. Therefore, the Promoting Positive School Engagement Program improves the adolescent connectedness of the students who participated in this study.

Qualitative Results

The qualitative phase of this convergent mixed methods program evaluation (Creswell & Plano Clark, 2018) addressed the study's second research question: RQ2: How do research participatory characterizations of the Promoting Positive School Engagement Program aligns with the adolescent theory of connectedness? This section includes the results of the data analysis from the student and staff participant interviews conducted. I randomly invited students and staff participants of the Promoting Positive Engagement program and conducted interviews until the point of theoretical saturation. I analyzed the responses and results from the interview protocols after multiple reviews of the transcripts and recordings of the interviews. Responses were coded and classified into meaningful categories and sub-themes, further combined to form the main concepts of the student's and staff's perceptions of school connectedness and the Promoting Positive School Engagement program (Bengtsson, 2016; Drisko & Masschi, 2016).

Content Analysis of Student Responses

Appendix A has the interview protocol that I used when interviewing each student. I conducted each student interview individually during the school day when the student had a non-academic period. Interviews lasted approximately 30 minutes for each

student participant. In using content analysis on the student participants responses to each question the following concepts and themes emerged.

Analysis of Responses to Question #1

Each interview of the student participants started with this question: "Tell me about your experience in the Promoting Positive School Engagement program. Tell me more about……" A typical response among the student participants was that they forgot the program's name. Further reflection on the student's part explained that since the program did not appear in their daily class schedule, nor were there formal meeting times for the program, they did not refer to the program by name. The students did not perceive this as a negative, as they reported that it made the program feel less forced on them. Even knowing they were in the Promoting Positive School Engagement program, some students were initially wary of the staff mentors, reporting they questioned why the staff was involved with them and what motivated them. "I didn't get why this teacher, that wasn't one of my assigned teachers, was talking to me." "Why you bothering me?" The students interviewed reported that this wariness or lack of trust toward their mentors faded as they spent more time with their staff mentor. "After a few weeks of talking with my mentor, it was real nice just having someone to talk with." The overall theme from the students was that participation in the program was a positive experience that helped them to navigate the school year successfully. "It was nice having someone to talk with at school who wasn't one of my teachers and just seemed to be interested in me no matter what was going on". "At first, I just didn't want to be involved with my mentor, but after a while, I started looking forward to seeing him and being able to talk with him."

Further analysis of the responses to this question provides a key concept that students involved in the program developed a positive sense of belonging toward the school from the experiences and relationship with their mentor.

Analysis of Responses to Question #2

Question two of the student participant interview was: "What are/were the most valuable learning experiences for you within the program? Why?" Responses to this question covered a variety of learning experiences for the student participants. The students reported academic experiences and challenges ("classes and subjects were different, even harder than before") as well as non-academic learning experiences, such as navigating the differences between elementary school and middle school, adjusting to a new school building, new routines such as changing classes and utilizing lockers, new people, and the differences between their previous elementary school building and their middle school building. "I never had to change classes at my last school", and "getting to class on time was a challenge." "There are so many more students in this school than at my previous school." "the last school I was at didn't have a gym and a cafeteria, just one room for both." The prominent theme from the variety of experiences of the student participants was that their mentors helped them navigate these challenges, especially the non-academic challenges, when they arose more than their classroom teacher could. "You know, my mentor was able to help me out with talking with my math teacher and helped me with understanding some of my other classes when I talked with her about the class that I was having trouble in." The mentors provided a deeper understanding of the

middle school experience and environment, a connectedness to school, than the students received from their classroom teachers.

Analysis of Responses to Question #3

For the third question the student participants were all asked: "What difficulties have you experienced in the program? Why?" The students described various difficulties while participating in the Promoting Positive School Engagement program. These difficulties included bullying, difficulties with classroom assignments, time management, problems at home and in the community, attendance, and others. "I didn't always like coming to school; it was easier when we were doing classes online." The main theme emerging from the difficulties the student participants described was that they learned to go to school staff to seek help and guidance when difficulties occurred, and there was an increase in the student's trust in the teachers and staff. "When I talked with my mentor about some of the problems I was having, she was able to help me out, she gave me some ideas to try." "A couple of times when I talked to my mentor about some problems I was having, he got me in to see the school counselor, and the counselor helped me with what was going on." Students learned there is staff in the school besides their identified teachers that they could go to for help and assistance when needed and increased their connectedness to teachers/staff.

Analysis of Responses to Question #4

With question four the student participants were asked: "Could you tell me how participation in the program affected your feelings, thinking, or behaviors about your school? Tell me more about…." The primary theme emerging from question #4 was that

the student participants' feelings and thinking about the school became more positive while in the program. “I guess I like school more than I used to; it's not so bad.” I missed being at school during the weekends sometimes; I don’t remember feeling that before this year.” Students reported that they learned more about what was happening in the school and what other activities, clubs, and events were available. “I never realized we had a soccer club at this school until I was talking with my mentor about sports I like.” “A repeated comment was that “it was more enjoyable to be at school” and “I liked coming to school more.”

Analysis of Responses to Question #5

For question five all of the student participants were asked: “Could you tell me how participation in the program affected your feelings, thinking, or behaviors about your teacher? Tell me more about….” The student participants reported differences in their thinking and feelings toward their classroom teachers after participating in the Promoting School Connectedness Program. Students still reported liking some teachers and disliking others, but they reported a better understanding that the classroom teacher was there to help them learn the subject matter. Student participants reported that through discussions and interactions with their mentors, they learned to "see things through the teacher's point of view" and that the classroom teachers are "just trying to do their job, teach us the material." As one student stated, "I still got angry/frustrated in class, but I realized I didn't need to take it out on my teacher; they were trying to help me." These responses reinforced the concept of increased connectedness to the teachers and staff in school through participation in the program.

Analysis of Responses to Question #6

With the sixth question in the interview protocol the student participants were asked: “Could you tell me how participation in the program affected your feelings, thinking, or behaviors about your classes/subjects? Tell me more about….” The underlying theme from the student participant's responses to this question was that they realized they could get help from their mentors and other school staff with issues they had in classes or subjects. This help was not always because their mentor knew the solution to the problem but because their mentor knew who else in the building could help find the solution. “It was through my mentor that I got in touch with the school social worker at my school.” Students continued to report that some of their feelings toward certain classes had not changed. As one student put it, "I still hate math." However, students learned of more resources in the building to assist them with learning academic content where they struggled. “I was so glad my mentor told me that some of the teachers also did tutoring for those who needed it.”

Analysis of Responses to Question #7

With the final question of the interview protocol, the student participants were asked: “Do you have any further comments about the program?” Based on the student participant's responses, the main takeaway from this question was that the students enjoyed being part of this program and wanted to continue in something like this in future school years. “Can I keep talking with my mentor next school year?” “I hope I can be a part of this (the program) next year.” Students reported that it was nice to have other school staff “interested in them” and interested in their well-being, not just how they

were doing in class. “You know what was nice, my mentor always seemed to be interested in what was going on in my life.” Furthermore, it made coming to school more enjoyable, as they looked forward to seeing their mentor. “I was so looking forward to seeing my mentor after spring break; I missed seeing her.”

Content Analysis of Staff Responses

Appendix B has the interview protocol I used when interviewing each staff participant. I conducted each staff interview individually after the school day when the staff had no student responsibilities. Using content analysis on the staff's responses to each question, the following themes and concepts emerged.

Analysis of Responses to Question #1

Each staff interview started off with asking: “Could you describe for me your experiences as a mentor in the Promoting Positive School Engagement program?” Responses to this question provided a variety of experiences for the staff participants. These experiences included listening to and helping the mentees with issues at school (“mentee had issues with classes they talked with me about”, at home (“My mentee talked with me about the problems she was having with her mom and also the good stuff”, and within their community “my mentee didn’t know anyone on his street, but I was able to get her in touch with another student a block away”. Other experiences centered around getting into the habit of meeting and checking on the mentee during the school week. “At first, I had to put a reminder on my phone to touch base with my mentee.” “I forgot to meet my mentee the first week of the program…” The primary

theme from the experiences was the development of trusting relationships between the mentor and the mentee.

Analysis of Responses to Question #2

In question two each staff were asked: “How do you think the program impacted your mentee? Explain what you mean?” The central theme emerging from the staff participant’s responses to this question was that they saw an improvement in the students in the program. Staff reported they saw the students “open up” to students and staff not in their classroom circles through their interactions in the hallways, classrooms, and cafeteria. “My mentee really opened up to the other staff in the building as we worked together. She was not just saying ‘hi’ to the people she knew but other students and also staff, especially to the staff.” Staff also reported that their interactions with their mentees were more “positive”, and “productive” as their relationship progressed.

Analysis of Responses to Question #3

Question three for the staff interviews was: “Describe what you liked best about being part of the program? Why?” The most prominent theme concerning this question expressed by the staff participants was how easy this program was to do during the school day. Staff participants reported that most new programs initiated in the schools had built-in learning curves as the teachers/staff had to learn new practices, processes, procedures, paperwork, and even new "lingo." Those aspects of new programs often make them tedious to initiate, and there is little initial impact. “Between PBIS, Trauma-informed care, SEL, I-Ready, Canvas, and testing, I’m not always sure what I’m supposed to be doing, at least with this [Promoting Positive School Engagement

program] I understand what to do and how to do it without having to learn some new technique." However, with this program, they got to do what they already knew how to do, which is developing a relationship with students. "I work on relationship building all the time in my classroom without even thinking about it. Doing the same thing with a student outside my classroom was simple." There was no additional paperwork, processes, or procedures to learn, which made initiating the program easier than initially anticipated by the mentors. The staff participants reported seeing a difference in their mentees within a month of the program's start.

Analysis of Responses to Question #4

For question four the staff were asked: "What did you like the least about being part of the program? Why?" Staff reported very little to dislike being part of the program other than wishing the program would have been running the whole school year rather than the four months it ran. "It would have been great if we could have started this at the beginning of the school year." Staff participants would have liked more time with the mentee during the program and from the beginning of the school year. "Wonder how much difference working with my mentee the whole school year would have made?"

Analysis of Responses to Question #5

Question five of the staff interview protocol was: "What challenges did you experience in the program? Why?" The primary theme from the staff participants' answer to this question was that they did not always know how to help the student directly, especially regarding non-academic issues. "Getting these kids used to being back to daily in-person learning was a challenge after having school remotely and then in

that hybrid fashion the past year and a half; I think this program helped my mentee with that." Staff reported that this challenge created the most stress initially. "I got really nervous about how to help my mentee with some issues, it was great we have a counselor and a social worker in the building to go to for those problems." Staff concluded that they did not have to have the answer all the time, and through utilizing the support staff of the school (counselor, social worker, nurse, psychologist), they could provide the resources the mentees needed when they did not have the answer. "I consulted with our nurse, counselor, psychologist and social worker more this year than ever before and that was, in part, due to being a mentor."

Analysis of Responses to Question #6

With question six the staff participating in the interviews were asked: "Describe for me your experiences with mentoring in relation to school connectedness. Explain." The theme from the staff responses to this question was that through the mentee/mentor relationship, they could see the mentee wanted to be at the school and was more engaged with school activities, school events, and even school clubs. "My mentee was telling everyone he could about some of our group activities trying to get more students involved; I'm not sure I've seen that before." Additionally, they reported that the mentees made more connections with the teachers and staff outside their classroom circle than those students who were not involved in the program. "Watching my mentee positively interact with the other staff and teachers in the building that were not his teachers was pretty cool. He was so timid when we started working together."

Analysis of Responses to Question #7

The final question of the interview protocol for the staff participating was: “Is there anything else you would like to share?” The staff participants' responses to this question were variations of the staff asking if they could be involved in the program again in the upcoming school year or how they could do this type of mentee/mentor program in the future. “If we do this next year, can we start sooner?” “What would it take to do this next year? Staff reported that they enjoyed being part of this program more than they anticipated. “I really enjoyed working with my mentee; nice to see the impact of connecting with a student I’m not teaching.”

Summary

In the quantitative phase of this study, the focus was on research question #1: To what degree does the student's sense of belonging/school connectedness change after participating in the Promoting Positive School Connectedness program while controlling for pretest scores (covariate)? Along with the null hypothesis: H0: The Promoting Positive School Engagement program does not increase school connectedness of the participants. And the alternative hypothesis: Ha: The Promoting Positive School Engagement program increases school connectedness of the participants.

The analysis of covariance results suggests that the independent variable (participation in the Promoting Positive School Engagement program) has a significant effect on the target variable (adolescent connectedness). Additionally, the quantitative data analysis results suggest with 95% certainty that the Promoting Positive School Engagement program significantly improves adolescent connectedness. The analysis

findings indicate that the average connectedness after participating in the program is significantly higher than the average connectedness before the program. Therefore, the Promoting Positive School Engagement program improves the adolescent connectedness of the students who participated in this study.

In the qualitative phase of the study, the focus was on research question #2: How do research participatory characterizations of the Promoting Positive School Engagement Program align with the adolescent theory of connectedness? Mentees and mentors sat down for interviews regarding their experiences in the Promoting Positive School Engagement program to answer this research question. The mentees interviewed in the study indicated that mentoring positively impacted their feelings and thinking toward the school and their connectedness to the school and their teachers. Responses and findings from the mentor's interviews supported the increase in student connectedness to school as well as the student's involvement in events and activities in the school. This is in line with the theory of adolescent connectedness that connectedness in adolescents is a response to relatedness and belonging, a reflection of adolescents' perception of their involvement in events, organizations, and activities (Karcher, 2003, 2004, 2018).

Chapter 5 identifies the underlying conclusion on the results and findings of this study. Chapter 5 also includes limitations, implications, and research recommendations from this study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This chapter provides a summary of the study and a discussion of the findings, limitations, and recommendations. This convergent mixed methods program evaluation examined to what degree a student connectedness program accomplished its goals and tested the theory of adolescent connectedness. Finally, implications and research recommendations will conclude this study's discussion.

Summary of Study

The Promoting Positive School Engagement program evaluated for this study occurred during the last four months of the 2021-22 school year at an urban public middle school in the Midwest US. School personnel selected the student to participate in the program, and staff at the school served as the mentors for the students in the Promoting Positive School Engagement program. Pairing the mentees with a school staff they did not have for an academic period during the school year was part of the program. A random selection of a like number of students not participating in the Promoting Positive School Engagement formed the control group for the study. The evaluation of the program was a convergent mixed methods design. For the quantitative portion of the study, students in the Promoting Positive School Engagement Program and the control group took the Hemingway measure of adolescent connectedness as a pretest to assess their school and teacher connectedness level before the program started (Karcher, 2011, 2018). At the end of the school year, students in the Promoting Positive School Engagement program and the control group took the Hemingway measure of adolescent connectedness as a posttest (Karcher,

2011, 2018). Then conducting an analysis of variance using SPSS on the results of the pre and posttest (Field, 2017).

Using individual semi-structured interviews to collect the reflections from the staff and students participating in the Promoting Positive School Engagement program to test the theory of adolescent connectedness during the qualitative portion of the study (Karcher, 2004, 2018). These interviews used the interview protocols in Appendix A and B and occurred after the completion of the Promoting Positive School Engagement program. Finally, analyzing the responses using content analysis to identify themes, patterns, and concepts within the responses (Bengtsson, 2016; Drisko & Masschi, 2016).

Interpretation of the Findings

This program evaluation occurred during the 2021-22 school year at an urban middle school, Grades 6-8. For the students involved, this was the first time they had in-person, traditional academic instruction at this school. The previous 2 school years were very different than usual due to COVID-19. During the 2019-20 school year, the school district went full remote beginning March 15th by the governor's order. For the 2020-21 school year, at this district, the students were in a hybrid learning environment, with two days of in-person learning with half the regular student population and three days of remote learning. When these students were in person during the 2020-21 school year, they had to wear masks and maintain six feet of social distancing during class and lunch. There was little social interaction between the students and teachers, with the various restrictions in place to mitigate the spread of COVID. For the 2021-22 school year, the

district returned to a traditional in-person learning environment, and in this middle school, only the 8th graders had a traditional learning environment in this building.

Using the analysis of variance of the quantitative data from the pre and posttest yielded results to answer research question 1: To what degree does the student's sense of belonging/school connectedness change after participating in the Promoting Positive School Connectedness program while controlling for pretest scores (covariate)? The instrument for the pre and posttest was the Hemingway measure of adolescent connectedness, specifically the subscales (school and teacher subscales) that measure connectedness to school (Karcher, 2011, 2018). In looking at the results of the statistical analysis in chapter four, the scores of the control and experimental groups were statistically equivalent. The posttest scores of the control and experimental groups were higher than the pretest scores. However, the variance between the pre and posttest scores of the experimental group was more significant than the variance between the pre and posttest scores of the control group. When comparing the posttest scores, there was a significant difference between the control and experimental groups, with the experimental group's posttest scores being significantly higher. The overall results of the data analysis suggest, with a 95% certainty, that the Promoting Positive School Engagement program significantly improves adolescent connectedness.

The content analysis of the student and staff responses to the interview protocol provided additional insight into the Promoting Positive School Connectedness program from the perspective of the staff and student participants. The student interviews followed the interview protocol found in Appendix A, and the staff interviews followed the

interview protocol found in Appendix B. Student and staff responses provided insight into answering Research Question 2: How do research participatory characterizations of the Promoting Positive School Engagement Program align with the adolescent theory of connectedness?

The theory of adolescent connectedness is that a youth's connectedness is a response to relatedness and belonging, a reflection of adolescents' perceptions of their involvement in events, organizations, and activities (Karcher, 2004, 2018). Analyzing the student responses provides insight into the perceptions of their development throughout the program. Initially, the students reported being cautious about their mentors' purpose and intent. As the program progressed, the students' perceptions of their mentors transformed, and with that transformation, they developed more positive relationships. As these mentor/mentee relationships developed, the students' perceptions of their teachers and classes became more positive, even with some students still disliking certain subjects. The students relayed increased involvement in clubs and activities at their school and more awareness of the school's support staff and how they could assist them. The students' perceptions portrayed their positive feelings toward their teachers, classes, and the school as a direct reflection of their relationship with their mentors. After completing the Promoting Positive School Engagement program, the student participants reported more trust that the staff in the school cared for them and were there to help them throughout the school year with their academic and other issues. A deeper look at the student responses reveals that the students became more connected with the school and teachers through engaging and valuing their time with their mentors.

Staff perceptions of their mentees' transformation as the school year progressed were comparable to the students' perceptions. Staff reported increases in their mentees' positive interactions with themselves and their classroom teachers. Additionally, staff saw how their mentees increased their interactions with students, not in their classroom circles, and interacted more positively with other staff and teachers in the building. Also noted by the staff participants was how the mentees' sought them out more often as the school year progressed and that the mentees' appeared to enjoy the interaction and time they spent with their mentors. One other perception of the staff participants was how effortless it was to be a mentor in the program and yet how impactful the relationship they developed was with their mentee.

Limitations of the Study

This convergent mixed methods program evaluation was time-consuming, which can be a limitation of any mixed methods study (Creswell & Plano Clark, 2018; Teddlie & Tashakkori, 2003). Although the program evaluated typically operates the whole school year, for this study, the program was in effect during the last four months of the school year. Another limitation of this program evaluation is that the results of the study are not generalizable across a larger population (Johnson et al., 2007; Teddlie & Tashakkori, 2003). Although the participants in the study were representative of the school where the program took place, the participants do not completely represent the population of this urban school district.

Mentor programs can have limitations as well. The duration of a mentor-mentee relationship is a significant factor in determining the success of a student (Herrera et al.,

2013; Jucovy, 2007; Karcher, 2008; Lindt & Blair, 2017; Pryce et al., 2021). Programs with a short duration (3-6 months) typically have no significant impact on mentees' social or academic outcomes (Erdem et al., 2016; Gordon et al., 2013; Pryce et al., 2021; Woods & Mayo-Wilson, 2012). When the duration of mentoring programs increases, the occurrence of positive, lasting connections increases as well as the positive outcomes of the mentoring program (Erdem et al., 2016; Herrera et al., 2013).

Recommendations

From the results of this study, the main recommendation is that other schools develop and implement mentoring programs designed to increase school connectedness in at-risk students. As noted in the background for this study, there is considerable research about the significant impact school connectedness has had on a student's success (Allen et al., 2018; Appleton et al., 2008; CDC, 2009; Fredricks et al., 2004; Gallup, 2014; Karcher, 2004; Loukas et al., 2016; O'Malley et al., 2015). Even with the research that links students' higher levels of school connectedness with students improved performance, there are few studies that include assessments and evaluations of school-wide initiatives and programs designed to increase school connectedness in at-risk students (Bowers et al., 2015; Chapman et al., 2013; Klem & Connell, 2004; Steiner et al., 2019). As the Promoting Positive School Connectedness program did increase the school connectedness in the students who participated, it is worth recommending initiated programs such as this in other schools.

A further recommendation would be to start the program as early in the school year as possible to develop positive, lasting connections that will increase the positive

outcomes of mentoring programs (Erdem et al., 2016, Herrera et al., 2013, Raposa et al., 2019). Mentoring programs are most effective when the duration of the program is 6 months or longer (McQuillin et al., 2018; Pryce et al., 2021).

Implications

The Promoting Positive School Connectedness program is a school-based mentoring program that uses the existing staff and teachers in the school as mentors to the targeted students to increase student connectedness to schools. An implication from the effectiveness of the program is that utilizing the school personnel increases the likelihood of successfully increasing the student's school connectedness. These school personnel have a personal stake in the successful outcome of this program, as its success will directly and positively impact the environment of their workplace (the school). The incorporation of school personnel mentors leads to more successful school connectedness than utilizing mentors from outside the school environment.

An additional implication from this study is that a school-wide, systemic program utilizing the schools' current personnel is a cost-effective way to increase the school connectedness of at-risk students in the building. There was no need to bring in people from outside the school or purchase a program or materials to operate the program successfully. The program incorporates the skills and talents of the school staff to develop positive relationships with the targeted at-risk students. This study also helps fill the gap in the literature regarding inexpensive, and easy-to-administer programs designed to increase school connectedness for at-risk students, especially at the middle school level (Bowers et al., 2015; Chapman et al, 2013; Loukas et al., 2016).

Conclusion

Students who experience a sense of belonging in schools are more motivated, engaged in academics and school activities, and dedicated to school than students who do not experience a sense of belonging in schools (Fong Lam et al., 2015; Lawson & Lawson, 2013; Libbey, 2004; Moeller et al., 2020; Osterman, 2000; Shochet et al., 2006). Moreover, students who feel a sense of belonging to learning environments report higher enjoyment, happiness, and more confidence in engaging in learning activities than students who do not feel a sense of belongingness to school (Aldridge et al., 2016; Allen et al., 2018; Appleton et al., 2008; Joyce & Early, 2014; Lessard et al., 2008; Millings et al., 2012). The importance of school connectedness is easy to see from the research. Developing effective ways to enhance and positively impact students' school connectedness is a benefit to a school's environment and the student's success. This study provides an evaluation of a school-based program that significantly increases the participant's connectedness to the school utilizing an easy-to-implement, systemic, school personnel-steered mentoring approach.

References

Abubakar, A., van de Vijver, F. J., Mazrui, L., Murugami, M., & Arasa, J. (2014). Connectedness and psychological well-being among adolescents of immigrant background in Kenya. In *Global perspectives on well-being in immigrant families* (pp. 95-111). Springer. https://doi.org/10.1007/978-1-4614-9129-3

Aguilar, R. E. (2019). *Predictive validity of i-Ready diagnostic scores for high-stakes test outcomes with middle school students: A program evaluation*. State University of New York at Albany.

Aldridge, J. M., Fraser, B. J., Fozdar, F., Ala'i, K., Earnest, J., & Afari, E. (2016). Students' perceptions of school climate as determinants of wellbeing, resilience, and identity. *Improving Schools, 19*(1), 5-26. https://doi.org/ 10.117/1365480215612616

Allen, K., & Bowles, T. (2012). Belonging as a guiding principle in the education of adolescents. *Australian Journal of Educational & Developmental Psychology*, *12*, 108-119. https://eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ1002251

Allen, K., Kern, M. L., Vella-Brodrick, D., Hattie, J., & Waters, L. (2018). What schools need to know about fostering school belonging: A meta-analysis. *Educational Psychology Review*, *30*(1), 1-34. https://doi.org/ 10.1007/s10648-016-9389-8

Alexander, J. A., & Hearld, L. R. (2012). Methods and metrics challenges of delivery-system research. *Implementation Science*, *7*(1), 15. https://doi.org/ 10.1186/1748-5908-7-15

Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical, conceptual, and methodological issues of the construct. *Psychology in Schools, 45*(5), 369-386. https://doi.org/ 10.1002/pits.20303.

Aseltine, R. H., Dupre, M., & Lamlein, P. (2000). Mentoring as a drug prevention strategy: An evaluation of Across Ages. *Adolescent and Family Health, 1*, 11-20.

Bae, S. M. (2020). Long-term effect of adverse childhood experiences, school disengagement, and reasons for leaving school on delinquency in adolescents who dropout. *Frontiers in Psychology*, 2096.

Baker, D. B., & Maguire, C. P. (2005). Mentoring in historical perspective. *Handbook of youth mentoring*, 14-29.

Bamberger, M, Rao, V, Woolcock, M (2010) Using mixed methods in monitoring and evaluation: experiences from international development. In: Tashakkori, A, Teddlie, C (eds), Handbook of Mixed Methods in Social and Behavioral Research, 2nd revised edition. SAGE, 613–41.

Banerjee, A., Chitnis, U. B., Jadhav, S. L., Bhawalkar, J. S., & Chaudhury, S. (2009). Hypothesis testing, type I and type II errors. *Industrial Psychiatry Journal, 18*(2), 127. https://doi.org/ 10.4103/0972-6748.62274

Banks, S., Armstrong, A., Carter, K., Graham, H., Hayward, P., Henry, A., Holland, T., Holmes, C., Lee, A., McNulty, A., Moore, N., Nayling, N., Stokes, A., & Strachan, A. (2013). Everyday ethics in community-based participatory research. *Contemporary Social Science, 8*(3), 263-277. https://doi.org/10.1080/21582041.2013.769618

Barondess, J. A. (1995). A brief history of mentoring. *Transactions of the American Clinical and Climatological Association, 106*, 1.

Bath, H. (2008). The three pillars of trauma-informed care. *Reclaiming Children & Youth, 17*(3), 17-21.

Bauldry, S., & Hartmann, T. A. (2004). *The Promise and Challenge of Mentoring High-Risk Youth: Findings from the National Faith-Based Initiative*. Public/Private Ventures. Retrieved from ERIC database. ERIC Document 503198.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497-529. https://doi.org/ 10.1037/0033-2909.117.3.497

Becker, B. E., & Luthar, S. S. (2002). Social-emotional factors affecting achievement outcomes among disadvantaged students: Closing the achievement gap. *Educational Psychologist, 37*(4), 197-214. https://doi.org/ 10.1207/S15326985EP3704_1

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus open, 2*, 8-14.

Big Brothers Big Sisters of America (BBBS). (2016). History. Retrieved from https://www.bbbs.org/history.

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: a tool to enhance trustworthiness or merely a nod to validation? *Qualitative health research, 26*(13), 1802-1811. https://doi.org/10.1177/1049732316654870.

Blair, C., & Raver, C. C. (2015). School readiness and self-regulation: A developmental psychobiological approach. *Annual review of psychology, 66*, 711-731. https://doi.org/ 10.1146/annurev-psych-010814-015221.

Blum, R. W. (2005). A case for school connectedness. *Educational Leadership*, *62*(7), 16-20.

Blum, R. W., & Libbey, H. P. (2004). Executive summary. *Journal of School Health*, 74(7), 231–232., https://doi.org/:10.1111/j.1746-1561.2004.tb08278.x.

Blum, R. W., Libbey, H. P., Bishop, J. H., & Bishop, M. (2004). School connectedness–strengthening health and education outcomes for teenagers. *Journal of School Health, 74*(7), 231-235. https://doi.org/ 10.1111/j.1746-1561. 204.tb08278.x.

Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G. & Patton, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health, 40*, 357. https://doi.org/ 10.1016/j.jadohealth.2006.10.013

Borkar, V. N. (2016). Positive school climate and positive education: Impact on students' well-being. *Indian Journal of Health & Wellbeing, 7*(8).

Bowers, H., Lemberger, M. E., Jones, M. H., & Rogers, J. E. (2015). The influence of repeated exposure to the Student Success Skills Program on middle school students' feelings of connectedness, behavioral and metacognitive skills, and reading achievement. *Journal for Specialists in Group Work, 40*(4), 344-364. https://doi.org/ 10.1080/01933922.2015.1090511.

Boynton, M., & Boynton, C. (2005). *The educator's guide to preventing and solving discipline problems*. ASCD.

Brand, S., Felner, R. D., Seitsinger, A., Burns, A., & Bolton, N. (2008). A large scale study of the assessment of the social environment of middle and secondary schools: The validity and utility of teachers' ratings of school climate, cultural pluralism, and safety problems for understanding school effects and school improvement. *Journal of School Psychology, 46*, 507-535. https://doi.org/ 10.1016/j.jsp.2007.12.001.

Bridgen, S. (2017). Using systems theory to understand the identity of academic advising: A case study. *NACADA Journal*, *37*(2), 9-20. https://doi.org/ 10.12930/NACADA-15-038.

Bryan, J., Moore-Thomas, C., Gaenzle, S., Kim, J., Lin, C.-H., & Na, G. (2012). The effects of bonding on high school seniors' academic achievement. *Journal of Counseling & Development, 90*, 467-480. https://doi.org/ 10.1002/j.1556-6676.2012.00058.x.

Bryan, J., Williams, J. M., & Griffin, D. (2020). Fostering Educational Resilience and Opportunities in Urban Schools Through Equity-Focused School–Family–Community Partnerships. *Professional School Counseling*. https://doi.org/10.1177/2156759X19899179

Bynum, Y. P. (2015). The power of informal mentoring. *Education, 136*(1), 69-73.

Campbell, D., & Stanley, J. (1963). *Experimental and quasi-experimental designs for research*. Wadsworth.

Catalano, R. E, & Hawkins, J. D. (1996). The social development model: A theory of antisocial behavior. In J. D. Hawkins (Ed.), *Delinquency and crime: Current theories* (149-197). Cambridge University Press.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of school health, 74*(7), 252-261. https://doi.org/ 10.1111/j.1746-1561.2004.tb08281.x.

Centers for Disease Control and Prevention (CDC). (2009). School connectedness: Strategies for increasing protective factors among youth.

Chapman, R. L., Buckley, L., Sheehan, M., & Shochet, I. (2013). School-based programs for increasing connectedness and reducing risk behavior: A systematic review. *Educational Psychology Review, 25*(1), 94-114. https://doi.org/ 10.1007/s10648-013-9216-4.

Checkland, P. (2000). Soft systems methodology: A thirty-year retrospective(a). *Systems Research and Behavioral Science*, S11-S58. Retrieved from http://link.galegroup.com.ezp.waldenulibrary.org/apps/doc/A69750682/EAIM?u=minn4020&sid=EAIM&xid=5d125a7b.

Checkland, P. (2012). Four conditions for serious systems thinking and action. *Systems Research & Behavioral Science, 29*(5), 465-469. https://doi.org/ 10.1002/sres.2158.

Chiu, M. M., Chow, B. W. Y., McBride, C., & Mol, S. T. (2016). Students' sense of belonging at school in 41 countries: cross-cultural variability. *Journal of Cross-Cultural Psychology, 47*(2), 175-196. https://doi.org/ 10.1177/0022022115617031.

Collier, L. (2015, June). Grabbing students. *Monitor on Psychology, 46*(6), pp. 58-63.

Coller, R. J., & Kuo, A. A. (2014). Youth development through mentorship: A Los Angeles school-based mentorship program among Latino children. *Journal of Community Health, 39*(2), 316-21. https://doi.org/ 10.1007/s10900-013-9762-1.

Collins, M. E., Spencer, R., & Ward, R. (2010). Supporting youth in the transition from foster care: formal and informal connections. *Child Welfare, 89*(1).

Creswell, J. W. (2015). Educational research: Planning, conducting, and evaluating quantitative and qualitative research (5th ed.). Pearson Education.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J. W., Klassen, A. C., Plano Clark, V. L., & Smith, K. C. (2011). Best practices for mixed methods research in the health sciences. *National Institutes of Health, 2013*, 541-545.

Creswell, J. W., & Plano Clark, V L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.

Crisp, G., & Cruz, I. (2009). Mentoring college students: A critical review of the literature between 1990 and 2007. *Research in Higher Education*, *50*(6), 525-545. https://doi.org/ 10.1007/s11162-009-9130-2.

Curren, R. (2020). Punishment and motivation in a just school community. *Theory and Research in Education*, *18*(1), 117–133. https://doi.org/ 10.1177/1477878520916089.

Curran, T., & Wexler, L. (2017). School-based positive youth development: A systematic review of the literature. *The Journal of School Health, 87*(1), 71-80. https://doi.org/ 10.1111/josh.12467.

Darling-Hammond, L., & Cook-Harvey, C. M. (2018). Educating the whole child: Improving school climate to support student success. Learning Policy Institute. https://doi.org/ 10.54300/145.655.

Darling-Hammond, L., Schachner, A., & Edgerton, A. K. (2020). *Restarting and Reinventing School: Learning in the Time of COVID and Beyond*. Learning Policy Institute. Retrieved from ERIC database. ED610890.

Desimone, L. M., Hochberg, E. D., Porter, A. C., Polikoff, M. S., Schwartz, R., & Johnson, L. J. (2014). Formal and informal mentoring: complementary, compensatory, or consistent? *Journal of Teacher Education*, (2), 88. https://doi.org/ 10.1177/0022487113511643.

Drisko, J. W., & Maschi, T. (2016). *Content analysis: pocket guides to social work research methods*. Oxford University Press.

DuBois, D. L., & Karcher, M. J. (2005). *Handbook of youth mentoring*. Sage Publications.

DuBois, D. L., Portillo, N., Rhodes, J. E., Silverthorn, N., & Valentine, J. C. (2011). How effective are mentoring programs for youth? A systematic assessment of the evidence. *Psychological Science in the Public Interest, 12*(2), 57-91. https://doi.org/ 10.1177/1529100611414806.

Duggins, S. D., Kuperminc, G. P., Henrich, C. C., Smalls-Glover, C., & Perilla, J. L. (2016). Aggression among adolescent victims of school bullying: Protective roles of family and school connectedness. *Psychology of Violence, 6*(2), 205–212. https://doi.org/ 10.1037/a0039439.

Erdem, G., DuBois, D. L., Larose, S., De Wit, D., & Lipman, E. L. (2016). Mentoring relationships, positive development, youth emotional and behavioral problems: Investigation of a mediational model. *Journal of Community Psychology*, *44*(4), 464-483. https://doi.org/ 10.1002/jcop.21782.

Espelage, D. L., Hong, J. S., Valido, A., & Lee, J. M. (2019). Anti-bullying programmes in the United States: What works and what doesn't? *Making an Impact on School Bullying*, 87-108.

Farley, J. P., & Kim-Spoon, J. (2014). The Development of Adolescent Self-Regulation: Reviewing the Role of Parent, Peer, Friend, and Romantic Relationships. *Journal of Adolescence*, *37*(4), 433–440. https://doi.org/ 10.1016/j.adolescence.2014.03.009.

Field, A. (2017). *Discovering statistics using IBM SPSS statistics* (5th edition). SAGE Publications.

Fong Lam, U., Chen, W. W., Zhang, J., & Liang, T. (2015). It feels good to learn where I belong: School belonging, academic emotions, and academic achievement in adolescents. *School Psychology International*, *36*(4), 393-409. https://doi.org/ 10.1177/0143034315589649.

Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences*. Worth.

Franklin, C., Cody, P. & Ballan, M. (2010). Reliability and validity in qualitative research. In Thyer, B. *The handbook of social work research methods* (pp. 355-374). SAGE Publications, Inc. https://doi.org/ 10.4135/9781544364902.

Freiberg, H. J., & Lapointe, J. M. (2006). Research-based programs for preventing and solving discipline problems. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 735-786). Lawrence Erlbaum Associates Publishers.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, *74*(1), 59-109. https://doi.org/ 10.3102/00346543074001059.

Freedman, M. (1991). *The Kindness of Strangers: Reflections on the Mentoring Movement*. Public/Private Ventures. Retrieved from ERIC database. ED341749

Furrer, C., & Skinner, E. (2003). Sense of relatedness as a factor in children's academic engagement and performance. *Journal of Educational Psychology*, *95*(1), 148-162. https://doi.org/ 10.1037/0022-0663.95.1.148.

García-Carrión, R., Villarejo-Carballido, B., & Villardón-Gallego, L. (2019). Children and Adolescents Mental Health: A Systematic Review of Interaction-Based Interventions in Schools and Communities. *Frontiers in Psychology*, *10*. https://www.frontiersin.org/articles/10.3389/fpsyg.2019.00918

Gallup. (2014). State of America's schools: The path to winning again in education. Retrieved from http://www.gallup.com/ services/178709/state-america-schoolsreport.aspx.

Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. (2015). Sampling in Qualitative Research: Insights from an overview of the methods literature. *The Qualitative Report, 20(11)*, 1772-1789. Retrieved from http://nsuworks.nova.edu/tqr/vol20/iss11/5

Gerard, J. M., & Booth, M. Z. (2015). Family and school influences on adolescents' adjustment: The moderating role of youth hopefulness and aspirations for the future. *Journal of Adolescence*, *44*, 1-16. https://doi.org/ 10.1016/j.adolescense.2015.06.003.

Goodenow, C. (1992). Strengthening the links between educational psychology and the study of social contexts. *Educational Psychologist, 27*(2), 177-196. https://doi.org/ 10.1207/s15326985ep2702_4

Goodenow, C. (1993). The psychological sense of school membership among adolescents: Scale development and educational correlates. *Psychology in the Schools*, 30(1), 79-90. https://doi.org/ 10.1002/1520-6807(199301)30:1 3.0.CO;2-X.

Goodenow, C, & Grady, K. E. (1993). The relationship of school belonging and friends' values to academic motivation among urban adolescent students. Journal of Experimental Education, 62, 60-71. https://doi.org/ 10.1080/00220973.1993.9943831.

Gordon, J., Downey, J., & Bangert, A. (2013). Effects of a school-based mentoring program on school behavior and measures of adolescent connectedness. *The School Community Journal*, 23, 227–250. Retrieved from http://www.eric.ed.gov/contentdelivery/servlet/ERICServlet?accno=EJ1028864.

Gotz, C., & Carlson, S. W. S. (2014). Mixed methods approach to program evaluation: Measuring impact of a cancer support program. *J Womens Health, Issues Care 3(3).* https://doi.org/ 10.4172/2325-9795.1000151.

Grover, H. M., Limber, S. P., & Boberiene, L. V. (2015). Does it matter if students experience school as a place of community? *American Journal of Orthopsychiatry*, *85*(6S), S79. https://doi.org/ 10.1037/ort0000131.

Gubbels, J., van der Put, C. E., & Assink, M. (2019). Risk Factors for School Absenteeism and Dropout: A Meta-Analytic Review. *Journal of Youth and Adolescence*, *48*(9), 1637–1667. https://doi.org/ 10.1007/s10964-019-01072-5.

Gunnarsdóttir, H., Hensing, G., & Hammarström, A. (2021). Poor school connectedness in adolescence and adulthood depressiveness: a longitudinal theory-driven study from the Northern Sweden Cohort. *European Journal of Public Health*, *31*(4), 797–802. https://doi.org/ 10.1093/eurpub/ckab027.

Hagerty, B. M., Lynch-Sauer, J., Patusky, K. L., Bouwsema, M., & Collier, P. (1992). Sense of belonging: A vital mental health concept. *Archives of Psychiatric Nursing*, 6(3), 172-177. https://doi.org/ 10.1016/0883-9417(92)90028-H.

Haggard, D. L., Dougherty, T. W., Turban, D. B., & Wilbanks, J. E. (2011). Who is a mentor? A review of evolving definitions and implications for research. *Journal of management, 37*(1), 280-304. https://doi.org/ 10:1177/0149206310386227.

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development,* 72, 625-638. https://doi.org/ 10.1111/1467-8624.00301.

Hartley, R. (2004). Young people and mentoring: Time for a national strategy. *Family Matters*, (68), 22.

Hendron, M., & Kearney, C. (2016). School climate and student absenteeism and internalizing and externalizing behavioral problems. *Children & Schools, 38*(2), 109-116. https://doi.org/ 10.1093/cs/cdw009.

Henry, K. L., Knight, K. E., & Thornberry, T. P. (2012). School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *Journal of Youth & Adolescence, 41*, 156-166. https://doi.org/ 10.1007/s10964-011-9665-3.

Herrera, C., DuBois, D. L., & Grossman, J. B. (2013). The Role of Risk: Mentoring Experiences and Outcomes for Youth with Varying Risk Profiles. Washington, DC: MDRC. Retrieved from ERIC database. ED544233.

Herrenkohl, T.I., Hong, S. and Verbrugge, B. (2019), Trauma-Informed Programs Based in Schools: Linking Concepts to Practices and Assessing the Evidence. Am J Community Psychol, 64: 373-388. https://doi.org/10.1002/ajcp.12362

Herrera, C., Sipe, C. L., & McClanahan, W. S. (2000). *Mentoring school-age children: Relationship development in community-based and school-based programs*. Public/Private Ventures. Retrieved from ERIC database. ERIC Document 441066.

Hesse-Biber, S. N. (2010). *Mixed methods research: Merging theory with practice*. Guilford Press.

Homer. (1997). *The Odyssey* (R. Fagles, Trans.). Penguin Books.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative health research*, *15*(9), 1277-1288. https://doi.org/ 10.1177/1049732305276687.

Hughes, J., Rogerson, M., Barton, J., & Bragg, R. (2019). Age and connection to nature: when is engagement critical? *Frontiers in Ecology and the Environment*, *17*(5), 265-269.

Huitema, B. E. (2005). Analysis of covariance. *Encyclopedia of Statistics in Behavioral Science*. https://doi.org/ 10.1002/0470013192.bsa018.

Hurd, N. M., Hussain, S., & Bradshaw, C. P. (2015). School disorder, school connectedness, and psychosocial outcomes moderation by a supportive figure in the school. *Youth & Society*, 1-23. https://doi.org/ 10.1177/0044118X15598029.

Ivey-Stephenson, A. Z., Demissie, Z., Crosby, A. E., Stone, D. M., Gaylor, E., Wilkins, N., Lowry, R., & Brown, M. (2020). Suicidal Ideation and Behaviors Among High School Students — Youth Risk Behavior Survey, United States, 2019. *MMWR Supplements, 69*(1), 47–55. https://doi.org/ 10.15585/mmwr.su6901a6.

Jackson, C. A., Henderson, M., Frank, J. W., & Haw, S. J. (2012). An overview of prevention of multiple risk behaviour in adolescence and young adulthood. J*ournal of Public Health, 34(S1),* i31-i40. https://doi.org/ 10.1093/pubmed/fdr113.

Jekielek, S. M., Moore, K. A., Hair, E. C., & Scarupa, H. J. (2002). Mentoring: A promising strategy for youth development. *Child Trends Research Brief, 2*, 1-8. https://doi.org/ 10.1037/e47962006-001.

Jetten, J., Haslam, C., Haslam, S. A., & Branscombe, N. (2009). The social cure. *Scientific American Mind, 20*(5), 26-33.

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*, 112–133. https://doi.org/ 10.1177/1558689806298224.

Joyce, H. D. (2015). School connectedness and student–teacher relationships: A comparison of sexual minority youths and their peers. *Children & Schools, 37*(3), 185-192. https://doi.org/ 10.1093/cs/cdv012

Joyce, H. D., & Early, T. J. (2014). The impact of school connectedness and teacher support on depressive symptoms in adolescents: A multilevel analysis. *Children and Youth Services Review, 39*, 1001-107. https://doi.org/ 10.1016/j.childyouth.2014.02.005.

Jucovy, L. (2007). The ABCs of school-based mentoring: Effective strategies for providing quality youth mentoring in schools and communities. Retrieved from http://educationnorthwest.org/sites/default/files/abcs.pdf.

Karcher, M. J. (2003). The Hemingway: Measure of adolescent connectedness: Validation studies. Retrieved from ERIC database. ED477969

Karcher, M. J. (2004). Connectedness and school violence: A framework for developmental interventions. *Handbook of school violence*, 7-42.

Karcher, M. J. (2008). The study of mentoring in the learning environment (SMILE): A randomized evaluation of the effectiveness of school-based mentoring. *Prevention Science, 9*(2), 99-113. https://doi.org/ 10.1007/s11121-008-0083-z.

Karcher, M. J. (2011). *The Hemingway: Measure of adolescent connectedness: A manual for scoring and interpretation*. The University of Texas at San Antonio. Retrieved from http://adolescentconnectedness.com/media/HemingwayManual2012.pdf.

Karcher, M. J. (2018). *Hemingway Measure of Adolescent Connectedness: Research & Theory*. Retrieved from http://adolescentconnectedness.com/research.php.

Karcher, M. J., Nakkula, M. J., & Harris, J. (2005). Developmental mentoring match characteristics: Correspondence between mentors' and mentees' assessments of relationship quality. *Journal of Primary Prevention, 26*(2), 93-110. https://doi.org/ 10.1007/s10935-005-1847-x.

Karcher, M. J., & Sass, D. (2010). A multicultural assessment of adolescent connectedness: Testing measurement invariance across gender and ethnicity. *Journal of Counseling Psychology, 57,* 274–289. Https://doi.org/ 10.1037/a0019357.

King, K. A., Vidourek, R. A., Davis, B., & McClellan, W. (2002). Increasing self-esteem and school connectedness through a multidimensional mentoring program. *Journal of school health, 72*(7), 294-299. https://doi.org/ 10.1111/j.1746-1561.2002.tb01336.x.

Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health, 74,* 262-273. https://doi.org/ 10.1111/j.1746-1561.2004.tb08283.x.

Korpershoek, H., Canrinus, E. T., Fokkens-Bruinsma, M., & de Boer, H. (2020). The relationships between school belonging and students' motivational, social-emotional, behavioural, and academic outcomes in secondary education: a meta-analytic review. *Research Papers in Education, 35*(6), 641–680. https://doi.org/ 10.1080/02671522.2019.1615116

Kupersmidt, J. B., Stump, K. N., Stelter, R. L., & Rhodes, J. E. (2017). Predictors of premature match closure in youth mentoring relationships. *American journal of community psychology*, *59*(1-2), 25-35. https://doi.org/ 10.1002/ajcp.12124.

Lakind, D., Atkins, M., & Eddy, J. M. (2015). Youth mentoring relationships in context: Mentor perceptions of youth, environment, and the mentor role. *Children and youth services review*, *53*, 52-60. https://doi.org/ 10.1016/j.childyouth.2015.03.007.

Lalande, D., & Baumeister, R. F. (2013). Systems theories (psychology). *Salem Press Encyclopedia of Health*.

Laursen, E. K. (2002). Seven habits of reclaiming relationships. *Reclaiming Children and Youth*, 11, 10-14.

Lawson, M. A., & Lawson, H. A. (2013). New conceptual frameworks for student engagement research, policy, and practice. *Review of Educational Research*, *83*(3), 432-479. https://doi.org/ 10.3102/0034654313480891.

Leary, M. R., & Baumeister, R. F. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. In *Interpersonal Development* (pp. 57-89). Routledge.

Lessard, A., Butler-Kisber, L., Fortin, L., Marcotte, D., Potvin, P., & Royer, É. (2008). Shades of disengagement: High school dropouts speak out. *Social Psychology of Education*, *11*(1), 25-42. https://doi.org/ 10.1007/s11218-007-9033-z.

Leung L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of family medicine and primary care*, *4*(3), 324–327. https://doi.org/ 10.4103/2249-4863.161306.

Lewallen, T. C., Hunt, H., Potts-Datema, W., Zaza, S., & Giles, W. (2015). The Whole School, Whole Community, Whole Child model: a new approach for improving educational attainment and healthy development for students. *Journal of School Health, 85*(11), 729-739. https://doi.org/ 10.1111/josh.12310.

Libbey, H. P. (2004). Measuring student relationships to school: Attachment, bonding, connectedness, and engagement. *Journal of school health*, *74*(7), 274-283. https://doi.org/ 10.1111/j.1746-1561.2004.tb08284.x.

Libbey, H. P. (2007). *School connectedness: Influence above and beyond family connectedness.* University of Minnesota.

Lindt, S. F., & Blair, C. (2017). Making a difference with at-risk students: The benefits of a mentoring program in middle school. Middle School Journal, 48(1), 34-39. https://doi.org/ 10.1080/00940771.2017.1243919.

Lo, S. F., Wang, Y. T., Wu, L. Y., Hsu, M. Y., Chang, S. C., & Hayter, M. (2011). Multimedia education programme for patients with a stoma: effectiveness evaluation. *Journal of advanced nursing*, *67*(1), 68-76. https://doi.org/ 10.111/j.1365-2648.2010.05455.x.

Longaretti, L. (2020). Perceptions and experiences of belonging during the transition from primary to secondary school. *Australian Journal of Teacher Education (Online)*, *45*(1), 31-46.

Lohmeier, J. H., & Lee, S. W. (2011). A school connectedness scale for use with adolescents. *Educational Research and Evaluation*, *17*(2), 85-95. https://doi.org/ 10.1080/13803611.2011.597108.

Loukas, A., Duncan Cance, J., & Batanova, M. (2016). Trajectories of school connectedness across the middle school years: Examining the roles of adolescents' internalizing and externalizing problems. *Youth & Society, 48*(4), 557-576. https://doi.org/ 10.1177/0044118X13504419.

Maslow, A. H. (1970). *Motivation and personality*. New York, NY: Harper & Row.

Maslow, A. H. (2013). *A theory of human motivation*. Martino Fine Books. (Original work published 1943).

Maslow, A. H. (2014). *Toward a psychology of being*. Sublime Books. (Original work published 1962).

Masten, A. S. (2014). Global perspectives on resilience in children and youth. *Child development*, *85*(1), 6-20. https://doi.org/ 10.1111/cdev.12205.

Mathison, S. (1988). Why Triangulate? *Educational Researcher*,*17*(2), 13-17. https://doi.org/ 10.2307/1174583.

McCluskey, K. W., Noller, R. B., Lamoureux, K., & McCluskey, A. L. A. (2004). Unlocking hidden potential through mentoring. *Reclaiming Children & Youth*, *13*(2), 85–93.

McFarland, J., Cui, J., Holmes, J., and Wang, X. (2019). Trends in High School Dropout and Completion Rates in the United States: 2019 Compendium Report. NCES 2020-117. National Center for Education Statistics.

McKee, M. T., & Caldarella, P. (2016). Middle school predictors of high school performance: A case study of dropout risk indicators. *Education*, *136*(4), 515-529.

McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of school health*, *74*(7), 284-292. https://doi.org/ 10.1111/j.1746-1561.2004.tb08285.x.

McNeely, C. A., Nonnemaker, J., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. Journal of School Health, 72, 138–146. https://doi.org/ 10.1111/j.1746-1561.2002.tb06533.x.

McQuillin, S. D., Lyons, M. D., Clayton, R. J., & Anderson, J. R. (2018). Assessing the impact of school-based mentoring: Common problems and solutions associated with evaluating nonprescriptive youth development programs. *Applied Developmental Science*, 1-15. https://doi.org/ 10.1080/10888691.2018.1454837.

McQuillin, S., Strait, G., Smith, B., & Ingram, A. (2015). Brief instrumental school-based mentoring for first-and second-year middle school students: A randomized evaluation. *Journal of Community Psychology*, *43*(7), 885-899. https://doi.org/ 10.1002/jcop.21719.

McWhirter, B. T., & McWhirter, E. H. (2011). Connectedness among Chilean adolescents: Factor analysis of the Hemingway measure of adolescent connectedness. *Psykhe*, *20*(1).

Mertens, D. M. (2017). *Mixed methods design in evaluation* (Vol. 1). SAGE Publications.

Miller, A. (2004). *Mentoring students and young people: A handbook of effective practice*. Routledge.

Miljkovitch, R., Mallet, P., Moss, E., Sirparanta, A., Pascuzzo, K., & Zdebik, M. A. (2021). Adolescents' attachment to parents and peers: Links to young adulthood friendship quality. *Journal of child and family studies, 30*(6), 1441-1452.

Millings, A., Buck, R., Montgomery, A., Spears, M., & Stallard, P. (2012). School connectedness, peer attachment, and self-esteem as predictors of adolescent depression. *Journal of Adolescence, 35*(4), 1061-1067. https://doi.org/10.1016/j.adolescence.2012.02.015.

Moeller, J., Brackett, M. A., Ivcevic, Z., & White, A. E. (2020). High school students' feelings: Discoveries from a large national survey and an experience sampling study. *Learning and Instruction, 66*, 101301. https://doi.org/10.1016/j.learninstruc.2019.101301.

Monahan, K. C., Oesterle, S., & Hawkins, J. D. (2010). Predictors and consequences of school connectedness: The case for prevention. *The Prevention Researcher, 17*, 3-6. https://doi.org/ 10.1037/e597072010-002.

Murray, M. (2002). *Beyond the myths and magic of mentoring: How to facilitate an effective mentoring process*. John Wiley & Sons.

National Center for Education Statistics (NCES). (2018a). *Trends in high school dropout and completion rates in the United States.* Retrieved from www.nces.ed.gov.

National Center for Education Statistics (NCES). (2018b). *State Education Reforms (SER)*. Retrieved from National Center for Education Statistics: www.nces.ed.gov.

National Mentoring Resource Center. (2019.). School connectedness. Retrieved from https://nationalmentoringresourcecenter.org/index.php/toolkit/item/269-school-connectedness.html.

Niehaus, K., Irvin, M. J., & Rogelberg, S. (2016). School connectedness and valuing as predictors of high school completion and postsecondary attendance among Latino youth. *Contemporary Educational Psychology*, *44*, 54-67. https://doi.org/ 10.1016/j.cedpsych.2016.02.003.

Nijhawan, L. P., Janodia, M. D., Muddukrishna, B. S., Bhat, K. M., Bairy, K. L., Udupa, N., & Musmade, P. B. (2013). Informed consent: Issues and challenges. *Journal of advanced pharmaceutical technology & research*, *4*(3), 134-40. https://doi.org/ 10.4103/2231-4040.116779.

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-based nursing*, *18*(2), 34-35. https://doi.org/ 10.1136/eb-2015-102054.

O'Donnell, B. (2017, October 13). The Odyssey's millennia-old model of mentorship. *The Atlantic.* Retrieved from https://www.theatlantic.com/business/archive/2017/10/the-odyssey-mentorship/542676.

Ohio Department of Education. (2022). *Data for free and reduced-price meal eligibility*. Ohio Department of Education. Retrieved from https://education.ohio.gov/Topics/Student-Supports/Food-and-Nutrition/Resources-and-Tools-for-Food-and-Nutrition/Data-for-Free-and-Reduced-Price-Meal-Eligibility

O'Malley, M., Voight, A., Renshaw, T. L., & Eklund, K. (2015). School climate, family structure, and academic achievement: A study of moderation effects. *School Psychology Quarterly*, *30*(1), 142-157. https://doi.org/ 10.1037/spg0000076.

Onwuegbuzie, A. J., & Leech, N. L. (2007). Validity and qualitative research: An oxymoron? *Quality & Quantity*, *41*(2), 233-249. https://doi.org/ 10.1007/s11135-006-9000-3.

Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 7(4). https://doi.org/ 10:17169/fqs-7.4.175.

Osher, D., Kidron, Y., DeCandia, C. J., Kendziora, K., & Weissberg, R. P., (2016). Interventions to promote safe and supportive school climate. *Handbook of social influences in school contexts, emotional, motivation, and cognitive outcomes* (pp.384-404). Routledge.

Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of educational research*, *70*(3), 323-367.

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(5), 533-544. https://doi.org/10.1007/s10488-013-0528-y.

Pallant, J. (2020). SPSS survival manual: a step by step guide to data analysis using IBM SPSS (7th edition). Open University Press.

Parr, E. J., Shochet, I. M., Cockshaw, W. D., & Kelly, R. L. (2020). General belonging is a key predictor of adolescent depressive symptoms and partially mediates school belonging. *School Mental Health*, *12*(3), 626-637.

Peris, A. (2017, September 13). Ten famous mentor-mentee relationships – from Socrates to Sheryl Sandberg. Retrieved from https://collegeconnectionssite.wordpress.com/2017/09/ 13/ten-famous-mentor-mentee-relationships-from-socrates-to-sheryl-sandberg.

Pianta, R. C., & Walsh, D. J. (1998). Applying the construct of resilience in schools: Cautions from a developmental systems perspective. *School Psychology Review*, 27, 407-417.

Pillow, D. R., Malone, G. P., & Hale, W. J. (2015). The need to belong and its association with fully satisfying relationships: A tale of two measures. *Personality and individual differences*, *74*, 259-264. https://doi.org/10.1016/j.paid.2014.10.031

Positive Behavioral Interventions and Support (PBIS). (2018). *Positive behavioral interventions and supports- OSEP technical assisitance center*. Retrieved from PBIS.org: www.pbis.org.

Poteat, L. F., Shockley, K. M., & Allen, T. D. (2015). Attachment anxiety in mentoring: the role of commitment. *Career Development International*, *20*(2), 119-132. https://doi.org/ 1-.1108/CDI-12-2014-0157.

Potter, J., & Hepburn, A. (2005). Qualitative interviews in psychology: Problems and possibilities. *Qualitative Research in Psychology*, *2*(4), 281-307. https://doi.org/ 10.1191/1478088705qp045oa.

Prabha, R., & Kabadi, M. G. (2016). Overview of data collection methods for intelligent transportation systems. *The International Journal of Engineering and Science (IJES)*, *5*(3), 16-20.

Preiss, D. R., Arum, R., Edelman, L. B., Morrill, C., & Tyson, K. (2016). The more you talk, the worse it is: Student perceptions of law and authority in schools. *Social Currents*, *3*(3), 234-255. https://doi.org/ 10.1177/2329496515616813.

Pryce, J., Deane, K. L., Barry, J. E., & Keller, T. E. (2021). Understanding Youth Mentoring Relationships: Advancing the Field with Direct Observational Methods. *Adolescent Research Review*, *6*(1), 45–56. https://doi.org/ 10.1007/s40894-019-00131-z.

Public School Review. (2018). *publicschoolreview.com*. Retrieved from Public School Review: www.publicschoolreview.com.

Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, *6*(2), 1-5. https://doi.org/ 10.4172/2162-6359.1000403.

Raposa, E. B., Rhodes, J., Stams, G. J. J. M., Card, N., Burton, S., Schwartz, S., Sykes, L. A. Y., Kanchewa, S., Kupersmidt, J., & Hussain, S. (2019). The Effects of Youth Mentoring Programs: A Meta-analysis of Outcome Studies. *Journal of Youth and Adolescence*, *48*(3), 423–443. https://doi.org/ 10.1007/s10964-019-00982-8.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., Tabor, J., Beuhring, T., Sieving, R. E., Shew, M., Ireland, M., Bearinger, L. H., and Udry, J. R. (1997). Protecting adolescents from harm: Findings from the national longitudinal study on adolescent health. Journal of the American Medical Association, 278(10), 823- 832. https://doi.org/ 10.1001/jama.1997.03550100049038.

Rhodes, J. (2015, September 13). Top 25 mentoring relationships in history. *The Chronicle of Evidence-Based Mentoring.* Retrieved from https://www.evidencebasedmentoring.org/ top-25-mentoring-relationships-in-history.

Roeser, R. W., Eccles, J. S., & Sameroff, A. J. (2000). School as a context of early adolescents' academic and social-emotional development: A summary of research findings. *The Elementary School Journal*, *100*(5), 443-471. https://doi.org/ 10.1086/499650.

Rose, I. D., Lesesne, C. A., Sun, J., Johns, M. M., Zhang, X., & Hertz, M. (2022). The Relationship of School Connectedness to Adolescents' Engagement in Co-Occurring Health Risks: A Meta-Analytic Review. *The Journal of School Nursing*, 10598405221096802.

Rychetnik, L., Frommer, M., Hawe, P., & Shiell, A. (2002). Criteria for evaluating evidence on public health interventions. *Journal of Epidemiology & Community Health*, *56*(2), 119-127.

Salkind, N. J. (2010). *Encyclopedia of research design.* SAGE Publications, Inc. https://doi.org/ 10.4135/9781412961288.

Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools—a study of the importance of the school climate and the students' satisfaction with school. *Health education research*, *13*(3), 383-397. https://doi.org/ 10.1093/her/13.3.383.

Sampasa-Kanyinga, H., Chaput, J. P., & Hamilton, H. A. (2019). Social media use, school connectedness, and academic performance among adolescents. *The journal of primary prevention*, *40*, 189-211.

Sass, D. A., Castro-Villarreal, F., McWhirter, B. T., McWhirter, E. H., & Karcher, M. J. (2011). A cross-cultural assessment of school connectedness: Testing measurement invariance with United States and Chilean adolescents. *Journal of Psychoeducational Assessment*, 29(5), https://doi.org/ 10.1177/0734282910391067.

School Social Work Association of America (SSWAA). (2020). *School Social Worker's Role*. Retrieved from School Social Work Association of America: SSWAA.org.

Schwartz, S. E., & Rhodes, J. E. (2016). From treatment to empowerment: New approaches to youth mentoring. *American Journal of Community Psychology*, *58*(1-2), 150-157. https://doi.org/ 10.1002/ajcp.12070.

Shea, G. F. (1997). Mentoring (Rev. Ed.). Menlo Park, CA: Crisp Publications.

Shochet, I. M., Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child & Adolescent Psychology*, *35*(2), 170-179. https://doi.org/ 10.1207/s1537442jccp3502_1.

Shukla, K., Konold, T., & Cornell, D. (2016). Profiles of student perceptions of school climate: Relations with risk behaviors and academic outcomes. *American journal of community psychology*, *57*(3-4), 291-307. https://doi.org/ 10.1002/ajcp.12044.

Snipes, J. C., Holton, G. I., Doolittle, F., & Sztejnberg, L. (2006). Striving for student success. The effect of Project GRAD on high school student outcomes in three urban school districts. *MDRC*.

Snyder, F., Vuchinich, S., Acock, A., Washburn, I., Beets, M., & Li, K. K. (2010). Impact of the Positive Action program on school-level indicators of academic achievement, absenteeism, and disciplinary outcomes: A matched-pair, cluster randomized, controlled trial. *Journal of Research on Educational Effectiveness*, *3*(1), 26. https://doi.org/ 10.1080/1934574093353436.

Smith, J. A. (Ed.). (2015). *Qualitative psychology: A practical guide to research methods*. SAGE.

Smith, C. A., & Stormont, M. A. (2011). Building an Effective School-Based Mentoring Program. *Intervention in School and Clinic, 47*(1), 14-21. https://doi.org/ 10.1177/1053451211406544.

Sosik, J. J., Lee, D., & Bouquillon, E. A. (2005). Context and mentoring: Examining formal and informal relationships in high tech firms and K-12 schools. *Journal of Leadership & Organizational Studies*, *12*(2), 94-108.

Steiner, R. J., Sheremenko, G., Lesesne, C., Dittus, P. J., Sieving, R. E., & Ethier, K. A. (2019). Adolescent Connectedness and Adult Health Outcomes. *Pediatrics*, *144*(1), e20183766. https://doi.org/ 10.1542/peds.2018-3766.

Stratton, S. J. (2021). Population research: convenience sampling strategies. *Prehospital and disaster Medicine*, *36*(4), 373-374.

Stufflebeam, D. L., Madaus, G. F., & Kellaghan, T. (Eds.). (2006). *Evaluation models: Viewpoints on educational and human services evaluation* (Vol. 49). Springer Science & Business Media.

Szucs, L. (2014). Impact of positive school connectedness on adolescent mental health and academic performance. *College Stations, TX: Texas A&M University*, 1207.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson.

Tashakkori, A., & Teddlie, C. (Eds.). (2010). *Handbook on mixed methods in the behavioral and social sciences* (2nd ed.). Sage Publications.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, *2*, 53. https://doi.org/ 10.5116/ijma.4dfb.8dfb.

Tay, L., & Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*, 101(2), 354-365. https://doi.org/ 10.1037/a0023779.

Teddlie, C., & Tashakkori, A. (2003). Major issues and controversies in the use of mixed methods in the social and behavioral sciences. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 3–50). Sage Publications.

Tian, L., Tian, Q., & Huebner, E. S. (2015). School-related social support and adolescents' school-related subjective well-being: The mediating role of basic psychological needs satisfaction at school. *Social Indicators Research*. https://doi.org/ 10.1007/s11205-015-1021-7.

Trochim, W. M., Arora, K., & Donnelly, J. P. (2016). *Research methods: The essential knowledge base*. Cengage Learning.

Wang, M. T., & Degol, J. L. (2016). School climate: A review of the construct, measurement, and impact on student outcomes. *Educational Psychology Review*, *28*(2), 315-352. https://doi.org/ 10.1007/s10648-015-9319-1.

Warner, R. M. (2008). *Applied statistics: From bivariate through multivariate techniques* (2nd ed.). Sage Publications.

Washor, E., & Mojkowski, C. (2014). Student disengagement: It's deeper than you think. *Phi Delta Kappan*, *95*(8), 8-10. https://doi.org/ 10.1177/003172171409500803.

Waters, S., & Cross, D. (2010). Measuring students' connectedness to school, teachers, and family: Validation of three scales. *School Psychology Quarterly*, *25*(3), 164–177. https://doi.org/ 10.1037/a0020942

Waters, S., Cross, D., & Runions, K. (2009). Social and ecological structures supporting adolescent connectedness to school: A theoretical model. Journal of School Health, 79(11), 516–524. https://doi.org/ 10.1111/j.1746-1561.2009.00443.x.

Wehlage, G. G., & Rutter, R. A. (1985). *Dropping out: How much do schools contribute to the problem?* Wisconsin Center for Education Research.

Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative health research*, *11*(4), 522-53. https://doi.org/ 10.1177/104973201129119299.

Wingspread Declaration on School Connections. (2004). *Journal of School Health, 74*(7), 233-234. https://doi.org/ 10.1111/j.1746-1561.2004.tb08279.x

Wood, S., & Mayo-Wilson, E. (2012). School-based mentoring for adolescents: A systematic review and meta-analysis. *Research on Social Work Practice, 22*(3), 257-269. https://doi.org/ 10.1177/1049731511430836.

Yuen, M., & Yau, J. (2015). Relation of career adaptability to meaning in life and connectedness among adolescents in Hong Kong. *Journal of Vocational Behavior*, *91,* 147-156. https://doi.org/ 10.1016/j.jvb.2015.10.003.

Zou, M., & Shahnawaz, M. G. (2014). Personality and connectedness as predictors of school bullying among adolescent boys. *Journal of Indian Association for Child & Adolescent Mental Health, 10*(4).

Zorn, T. (2008). Designing and conducting semi-structured interviews for research. *Waikato: Waikato Management School*.

Appendix A: Interview Protocol for Students

Date of interview:

Location of interview:

Start time: End time:

Name of interviewer:

Recording mechanism:

Introduction:

Thank you for taking the time to meet with me today. As you are aware this interview will contribute information for a research study intended to evaluate the Promoting Positive School Engagement program. You have signed an informed consent, but you may decline to answer any questions you do not wish to answer or withdraw from the interview at any time. This interview will take approximately 20 minutes. Do you have any questions before we begin?

1. Tell me about your experience in the Promoting Positive School Engagement program? Tell me more about….
2. What are/were the most valuable learning experiences for you within the program? Why?
3. What difficulties have you experienced in the program? Why?
4. Could you tell me how participation in the program affected your feelings, thinking, or behaviors about your school? Tell me more about …
5. …about your teachers? Tell me more about…

6. …about your classes/subjects? Tell me more about …
7. Do you have any further comments about the program?

Potential probes:

Please tell me more about….

Why exactly do you feel that way?

You said you liked/disliked _____, tell me more about this…

Conclusion:

Thank you for your time today. I appreciate your help in this study.

Appendix B: Interview Protocol for Staff

Date of interview:

Location of interview:

Start time: End time:

Name of interviewer:

Recording mechanism:

Introduction:

Thank you for taking the time to meet with me today. As you are aware this interview will contribute information for a research study intended to evaluate the Promoting Positive School Engagement program. You have signed an informed consent, but you may decline to answer any questions you do not wish to answer or withdraw from the interview at any time. This interview will take approximately 20 minutes. Do you have any questions before we begin?

1. Could you describe for me your experiences as a mentor in the Promoting Positive School Engagement program.
2. How do you think the program impacted your mentee? Explain what you mean?
3. Describe what you liked best about being part of the program? Why?
4. What did you like least about being part of the program? Why?
5. What challenges did you experience in the program? Why?
6. Describe for me your experiences with mentoring in relation to school connectedness? Explain.
7. Is there anything else you would like to share?

Potential probes:

Please tell me more about….

Why exactly do you feel that way?

You said you liked/disliked _____, tell me more about this…

What would you have done differently?

Conclusion:

Thank you for your time today. I appreciate your contribution to this study.

Appendix C: Informed Assent for Students, Quantitative Phase

Hello, my name is _____, and I am doing a research project to learn about student connectedness to schools. I am inviting you to join my project. I am inviting students who may benefit from participating in a school-based mentor program to be in the study. I am going to read this form to you. I want you to learn about the project before you decide if you want to be in it.

WHO I AM:

I am a student at Walden University, and I am working on my doctoral degree. You might already know me as a school social worker, but this study is separate from that role.

ABOUT THE PROJECT:

The purpose of this research study is to assess the Promoting Positive School Connectedness program. If you agree to be in this project, you will be asked to:

Complete two surveys (approximately 30 minutes each) about adolescent connectedness, the first survey (pretest) before the start of the Promoting Positive School Connectedness program, and the second survey (posttest) at the end of the program. Answers to the survey questions may include a Likert Scale (a scale used to rate responses such as: not at all true, not really true, sort of true, true, very true, or unclear) as well as demographic questions (gender, race, age).

IT'S YOUR CHOICE:

You do not have to be in this project if you do not want to. If you decide now that you want to join the project, you can still change your mind later. If you want to stop, you can.

Being in this study might make you tired or stressed, just like taking a multiple-choice test for a class in school. But we are hoping this project might help others by providing information on a program that assists students in making positive connections at the schools they attend.

PRIVACY:

Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. The only time I have to tell someone is if I learn about something that could hurt you or someone else.

ASKING QUESTIONS:

You can ask me any questions you want now. If you think of a question later, you or your parents can reach me at _____@waldenu.edu. If you or your parents would like to ask my university a question, you can call _____. Walden University's approval number for this study is **12-23-19-0360767,** and it expires on **January 03, 2023**.

Please keep this consent form for your records.

Name of Participant (printed) _____

Date of Consent _____

Participant's Signature _____

Researcher's Signature _____

Appendix D: Informed Assent for Students Qualitative Phase

Hello, my name is _____ , and I am doing a research project to learn about student connectedness to schools. For this part of the study, I am inviting students who took part in the Promoting Positive School Connectedness program to discuss their experiences in the program.

WHO I AM:

I am a student at Walden University, and I am working on my doctoral degree. You might already know me as a school social worker, but this study is separate from that role.

ABOUT THE PROJECT:

The purpose of this research study is to assess the Promoting Positive School Connectedness program.

If you agree to be in this part of the project, you will be asked to:

Complete a semi-structured interview which will last 20-30 minutes.

Here are some sample questions:

1. Tell me about your experience in the Promoting Positive School Engagement program?
2. What are/were the most valuable learning experiences for you within the program? Why?
3. What difficulties have you experienced in the program? Why?

IT'S YOUR CHOICE:

You do not have to be in this project if you do not want to. If you decide now that you want to join the project, you can still change your mind later. If you want to stop, you can.

Being in this project might make you tired or stressed, just like answering questions your dentist might ask at a checkup. But we are hoping this project might help others by providing data on a program that assists students in making positive connections at the schools they attend.

PRIVACY:

Everything you tell me during this project will be kept private. That means that no one else will know your name or what answers you gave. The only time I have to tell someone is if I learn about something that could hurt you or someone else.

ASKING QUESTIONS:

You can ask me any questions you want now. If you think of a question later, you or your parents can reach me at _____@waldenu.edu. If you or your parents would like to ask my university a question, you can call _____. Walden University's approval number for this study is **12-23-19-0360767**, and it expires on **January 03, 2023**.

Please keep this consent form for your records.

Name of Participant (printed) _____

Date of Consent _____

Participant's Signature _____

Researcher's Signature _____

Appendix E: Hemingway Measure of Adolescent Connectedness (MAC 5 Adolescent, Grades 6-12) Short Form

Hemingway Measure of Adolescent Connectedness

Number: _____ **Date:** _____
Sex: *Male____ Female_____* **Grade:** _____ **Age:** _____
Race/ethnicity: *White___ Black ___ Hispanic ___ Bi-racial ___ Native American ___ Other ____*
Who do you live with? *Mother____ Father ____ Both____ Other ____*

Please use this survey to tell us about yourself. Read each statement. CIRCLE the number that best describes how true that statement is for you or how much you agree with it. If a statement is unclear to you, ask for an explanation.

How TRUE about you is each sentence?" Not at all=1 Not really=2 Sort of true=3 True=4 Very true=5

	Not at all	Not really	Sort of	True	Very true
(1) I like hanging out around where I live (like my neighborhood).	1	2	3	4	5
(2) Spending time with friends is not so important to me.	1	2	3	4	5
(3) I can name 5 things that my friends like about me.	1	2	3	4	5
(4) My family has fun together.	1	2	3	4	5
(5) I have a lot of fun with my brother(s) or sister(s). (Skip if you have none.)	1	2	3	4	5
(6) I work hard at school.	1	2	3	4	5
(7) My classmates often bother me.	1	2	3	4	5
(8) I care what my teachers think of me.	1	2	3	4	5
(9) I will have a good future.	1	2	3	4	5
(10) I enjoy spending time by myself reading.	1	2	3	4	5
(11) I spend a lot of time with kids around where I live.	1	2	3	4	5
(12) I have friends I'm really close to and trust completely.	1	2	3	4	5
(13) There is not much that is unique or special about me.	1	2	3	4	5
(14) It is important that my parents trust me.	1	2	3	4	5
(15) I feel close to my brother(s) or sister(s). (Skip if you have none.)	1	2	3	4	5
(16) I enjoy being at school.	1	2	3	4	5
(17) I like pretty much all of the other kids in my grade.	1	2	3	4	5
(18) I do not get along with some of my teachers.	1	2	3	4	5
(19) Doing well in school will help me in the future.	1	2	3	4	5
(20) I like to read.	1	2	3	4	5
(21) I get along with the kids in my neighborhood.	1	2	3	4	5

(22) Spending time with my friends is a big part of my life.	1	2	3	4	5
(23) I can name 3 things that other kids like about me.	1	2	3	4	5
(24) I enjoy spending time with my parents.	1	2	3	4	5
(25) I enjoy spending time with my brothers/sisters. (Skip if you have none.)	1	2	3	4	5
(26) I get bored in school a lot.	1	2	3	4	5
(27) I like working with my classmates.	1	2	3	4	5
(28) I want to be respected by my teachers.	1	2	3	4	5
(29) I do things outside of school to prepare for my future.	1	2	3	4	5
(30) I never read books in my free time.	1	2	3	4	5
(31) I often spend time playing or doing things in my neighborhood.	1	2	3	4	5
(32) My friends and I talk openly with each other about personal things.	1	2	3	4	5
(33) I really like who I am.	1	2	3	4	5
(34) My parents and I disagree about many things.	1	2	3	4	5
(35) I try to spend time with my brothers/sisters when I can. (Skip if you have none.)	1	2	3	4	5
(36) I do well in school.	1	2	3	4	5
(37) I get along well with the other students in my classes.	1	2	3	4	5
(38) I try to get along with my teachers.	1	2	3	4	5
(39) I do lots of things in school to prepare for my future.	1	2	3	4	5
(40) I often read when I have free time.	1	2	3	4	5
(41) I hang out a lot with kids in my neighborhood.	1	2	3	4	5
(42) I spend as much time as I can with my friends.	1	2	3	4	5
(43) I have special hobbies, skills, or talents.	1	2	3	4	5
(44) My parents and I get along well.	1	2	3	4	5
(45) I try to avoid being around my brother/sister(s). (Skip if you have none.)	1	2	3	4	5
(46) I feel good about myself when I am at school.	1	2	3	4	5
(47) I am liked by my classmates.	1	2	3	4	5
(48) I always try hard to earn my teachers' trust.	1	2	3	4	5
(49) I think about my future often.	1	2	3	4	5
(50) I usually like my teachers.	1	2	3	4	5
(51) My neighborhood is boring.	1	2	3	4	5

(52) My friends and I spend a lot of time talking about things.	1	2	3	4	5
(53) I have unique interests or skills that make me interesting.	1	2	3	4	5
(54) I care about my parents very much.	1	2	3	4	5
(55) What I do now will not affect my future.	1	2	3	4	5
(56) Doing well in school is important to me.	1	2	3	4	5
(57) I rarely fight or argue with the other kids at school.	1	2	3	4	5

Appendix F: Use Agreement for Hemingway Measure of Adolescent Connectedness

Terms of Condition for use of the Hemingway: Measure of Adolescent Connectedness©

Thank you for your interest in the Hemingway: Measure of Adolescent Connectedness© (pre-adolescent, adolescent, and college versions). You have my permission to use the subscales, under the conditions described below.
In most cases there is no cost to use the subscales. I ask that you reply in an email to acknowledge your agreement with these conditions.

However, I ask that the following terms be abided:

(a) use only for stated research purposes (e.g., not for fee-based assessments or diagnostic uses, such as private pay mental health treatment or for-profit evaluation services*);

(b) do not distribute to others outside of your research team without first securing my permission;

(c) do not make financial profit from its use* (e.g., similar to "(a)" above, the scale may be used freely for research and grant-funded evaluations or projects only);

(d) allow me to view (not to "approve" or to censure) any manuscript before it is submitted for publication so that I may gauge (and potentially provide comments on) the nature in which the subscale were used;

(e) notify me of any publications or reports related to its use;

(f) use only complete subscales (e.g., don't pull items from subscales for use in other ad hoc scales created by the research/scale-user; don't use subsets of items from a given subscale. One exception, for cross-cultural comparisons of elementary aged youth, the negatively worded items maybe be omitted from the scale, although these should remain in the items provided in the survey to decrease response bias);

(g) provide me with access to the connectedness subscale data that is collected, along with basic demographic information (age, sex, race/ethnicity, clinical diagnosis), but blinded to exclude identifying information about the individuals who completed the measures, and also share other measures that could prove useful in tests of discriminant or convergent validity);

(h) allow Michael Karcher to utilize the data provided (under g above) for possible secondary data analysis, for scale norming, for tests of construct validity, and possibly for publication.

* For those who wish to use the scale in the private sector or in a for-profit venture (e.g., for clinical diagnosis in private treatment or for an evaluation in which one or more Hemingway© subscale is used once or regularly as part of an evaluation for which the scale user is compensated directly), a nominal fee will be required (to avoid breaking copyright law). Typically, a fee of $.95 per individual use of 3 or more subscales at a time and $.75 for 2 or fewer subscales per use will be requested each time the survey is administered. A discounted rate for large samples or surveys used more than 200 times (e.g., used once with 200 individuals), the fees are $.85 for use of 3 or more scales and $.70 for use of two or fewer scales. Payment may be made to a PayPal account with the identifying address of karcheronline@yahoo.com. These funds will be used to offset time I provide groups or individuals pro-bono to help them score, interpret, or analyze their Hemingway data. Minimum order $450.

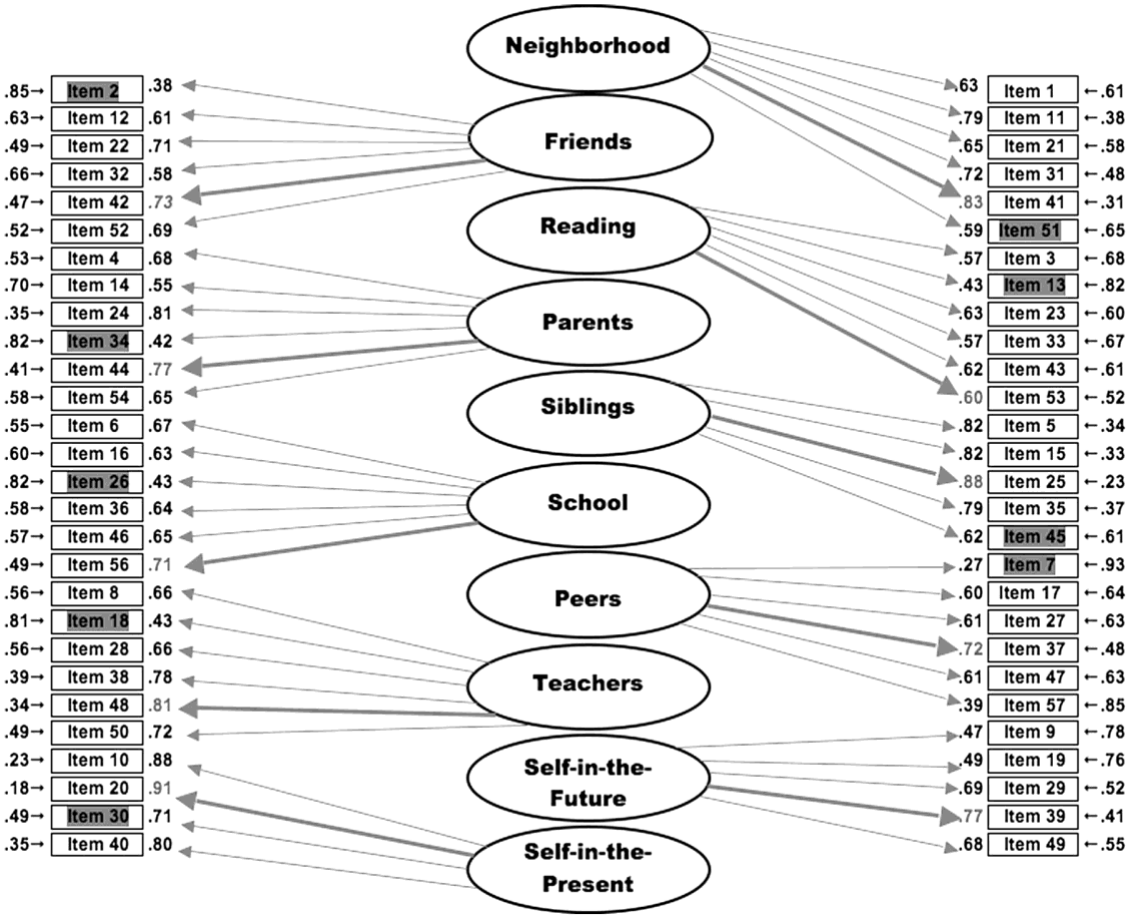
For those who plan regular use of the scale, quarterly payments are appropriate. Simply communicate to me in writing (e.g., via email) your plans and purposes.

Scantron forms also are available for .30 each. For $1.25 one will receive the sheet *and* scanning of the form into a dbf file. Please contact me at the address below if you would like to order forms or scanning services. The scantron forms are available in short (57 item, 10-subscales) or long (78 items, 15 subscales) and are available in Spanish and English. Minimum order $450.

Translated copies of the form also may be retrieved from www.adolescentconnectedness.com . Currently we have versions in Korean, Chinese, French, North-American Spanish, South-American Spanish (Chile), and Lithuanian.

Please let me know if these terms are acceptable via email at michaelkarcher@mac.com

Appendix G: Complete Standardized Parameters for Hemingway Measure of Adolescent Connectedness from Karcher & Sass, 2010, p. 278.



Displays parameter estimates for the completely standardized item factor loadings and residuals for the 10 adolescent connectedness subscales. Grayed items are reverse-scored, negatively worded items. Grayed factor loadings indicate parameters fixed to 1 for scale identification.

Source: Karcher, M. J., & Sass, D. (2010). A multicultural assessment of adolescent connectedness: Testing measurement invariance across gender and ethnicity. *Journal of Counseling Psychology, 57,* 274-289. Https://doi.org/ 10.1037/a0019357.