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An investigation of middle school mentoring relationships through the lens of the developmental assets framework

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An Investigation of Middle School Mentoring Relationships Through the Lens of the

Developmental Assets Framework

by

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Dedication

This thesis is dedicated to two distinct groups of people. First, my thanks and admiration go out to the program directors, mentors, students, and everyday colleagues who are part of the Kids Hope USA mentoring program. They have demonstrated to me over and over again the best of what mentoring can do in the lives of people both young and old. Second, I am eternally grateful for the support of my family. My parents, Tom and Gretchen Reinsma, instilled in me a love for learning and discovery which reverberates throughout these pages. My wife, Sherri, along with our children, Toby, Zach, and Jayla, deserve even higher praise for supporting me as I *slowly* worked through this process (often at the expense of time spent with them). I have felt support and encouragement from each of them in their own unique way. It is the richest of blessings that knows no end.

ABSTRACT

School-based mentoring is a popular but relatively unstudied support intervention for students entering middle school. Mentoring research more generally reveals that relationship quality between student and mentor is foundational for achieving positive student outcomes. Using a quasi-experimental pretest-posttest design, the 20/20 Vision Project explored mentoring relationship quality and student outcomes for a group of 15 fifth and sixth grade students at an intermediate school in the upper Midwest. Students and mentors were matched in developmental relationships that focused on building developmental assets over the course of one school semester. Matched pairs met for 40 minutes, one time per week for 13 weeks. Mentoring pairs spent time using an asset-focused activity curriculum, playing games, doing crafts, and talking. Student outcomes were measured using the Developmental Assets Profile (DAP) as well as comparing mentored versus non-mentored students on office disciplinary referrals (ODRs). Mentoring relationship quality was assessed from both the student and mentor perspective at one month and again at three months using survey data. Bivariate linear regressions showed statistically significant relationships between student satisfaction with mentoring and increases in posttest DAP scores. A Poisson regression showed a statistically insignificant relationship between increases in DAP scores and decreases in ODRs for both mentored and non-mentored students. Finally, statistically significant differences were found between mentored and non-mentored students on select posttest DAP scores when controlling for pretest scores. The impacts of strong mentoring relationships and increases in developmental assets for middle school students are discussed.

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Chapter 1: Mentoring Middle School Students

For a young adolescent, the transition from the familiar and relatively stable milieu of an elementary school to an often larger and more complex middle school can be a great challenge. Among other things, these adolescents must negotiate new relationships and new social norms (Parker, 2010). It is clear that early adolescence, more commonly referred to as middle school, is a period of great change for many students biologically, socially, relationally, cognitively, and educationally (Parker 2010; Scales, 2005; Wigfield, Lutz, & Wagner, 2005) Citing a wealth of previous research, Akos (2004) lists a number of negative outcomes generally associated with the transition to middle school, including decreases in self-esteem, academic achievement, and motivation along with increases in problem behavior and psychological distress. It comes as no surprise then that research by Balfanz, Herzog, and Mac-Iver (2007) traced the roots of non-high school graduation all the way back to sixth grade. According to their research, student attendance, behavior, and academic performance in core classes in the sixth grade can predict 60% of the students who will not finish high school in schools where 40% or more of students receive free or reduced lunch (Balfanz et al., 2007). These results were replicated in multiple school districts with similar poverty rates, adding credence to the findings. The core message of this research is that students are building habits in middle school that follow them to high school. Absent some kind of intervention, students who begin to fall away in middle school are much more likely to fail to graduate from high school. If educators desire to best serve the developmental needs of middle school students, consideration of a variety of student supports is a necessity. One possible support, which has been widely used in school settings for a number of purposes, is school-based mentoring (Herrera, Grossman, Kaugh, & McMaken, 2011).

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School-Based Mentoring in Context

School-based mentoring typically involves regular one on one meetings at school between students, referred by school staff for extra support (Pryce & Keller, 2012), and either community volunteers (Portwood, Ayers, Kinnison, Waris &Wise, 2005) or less frequently existing school staff members (Converse & Lignugaris/Kraft, 2009). According to McQuillin, Terry, Strait & Smith (2013), school-based mentoring (SBM) is the fastest growing, most funded, and most studied form of mentoring in the United States today. While school-based mentoring may have beneficial effects for students at many developmental levels, Karcher (2008) has found that it can be particularly useful around the transition to middle school. During that transition, students are being asked to balance significant academic, organizational, and personal/social challenges more independently than ever before (Akos, 2004). In the current educational climate, providing adequate support for middle school students is a daunting task, given the limited number of available non-teaching staff. The National Center for Education Statistics reported that in 2012 the average K-12 school counselor had a caseload of 370 students. While it is unrealistic to expect that school counselors or social workers themselves can provide mentoring-type supports for all students who need them, it is possible for them to promote a school climate that creates conditions for mentoring relationships to emerge (Masten, Herbers, Cutuli, & Lafavor, 2008).

One challenge that intensifies as a result of creating such a climate is the requirement for school staff to understand the breadth and depth of needs across the entire student body. In order to better organize and prioritize student needs, schools are increasingly utilizing a multi-tiered preventive approach to address the needs that typically exist within a student population (Hoyle, Marshall, & Yell, 2011; McIntosh, Ty, & Miller, 2013). This approach has been fashioned after

the public health model (Cook et al., 2015; Horner et al., 2013; Walker et al., 1996). According to Cook et al. (2015), a typical multi-tiered support system (MTSS) has three levels: universal supports (Tier 1), selective supports (Tier 2), and intensive supports (Tier 3). Generally speaking, 80% of students typically fall within Tier 1, 10–15% fall within the Tier 2 category, and 5% would be considered Tier 3 (Mitchell, Stormont, & Gage, 2011). Students who fall within the Tier 1 category typically have their needs met through general school programming that serves the entire student body (e.g., an after school homework club available to all students). At the opposite end of the spectrum, students requiring Tier 3 interventions demand a high level of staff expertise and time to implement. Tier 2 supports fall in the middle, demanding less professional training, yet still providing tangible support for students whose needs are not met through Tier 1 interventions. School-based mentoring can potentially provide an important Tier 2 resource for a typical middle school (Hoyle, Marshall, & Yell, 2011). But what type of school-based mentoring is most effective for middle school students who may fall into this category and why?

Differential Outcomes: Why Some Relationships Do Better

The field of mentoring has benefitted greatly from a comprehensive large-scale meta-analysis conducted by DuBois, Portillo, Rhodes, Silverthorn, and Valentine (2011). Using data from 73 youth mentoring evaluations from 1999 to 2010, this research team explored how mentoring relationships impacted a range of youth outcomes in one or more of the following areas: attitude/motivation, social/relational, psychological/emotional, conduct problems, academic/school, and physical health. Programs included in the analysis met a clearly defined operational definition of mentoring, included a non-mentored comparison group (both experimental and quasi-experimental), did not include intervention components beyond

mentoring (unless the mentoring intervention could be isolated), and had sufficient data so effect sizes could be determined. The average effect size across all studies and outcome categories was small ($d = .21$), with a 95% confidence interval of + or - .05. It is interesting to note that even when the research team examined moderators like age groups (middle school being one), and setting (including school-based mentoring), the impact of the mentoring continued to be positive. There was a surprising amount of variability in the effect sizes across the study however, a result which was also validated in a smaller comparison of school-based mentoring studies (Wheeler, Keller, & DuBois, 2010). These results beg an important question: What elements of mentoring are most important to be able to achieve desired outcomes for students?

According to the Rhodes' (2002) model of youth mentoring, the first component of meaningful mentoring is for a strong relationship to be formed between students and mentors (DuBois et al., 2011). Her model posits that the relationship between the mentor and student should be anchored in mutuality, trust, and empathy, as foundational elements in the "soil" of relationship development. If the soil is rich in these elements, then it follows that a student is likely to be positively impacted by a mentoring relationship in three primary ways: social-emotional development, cognitive development, and identity formation (Rhodes, 2002). More distal outcomes like improvements in grades, emotional well-being, and positive behavior changes are a product of a strong relationship foundation. The importance of close relationships between mentors and students was reinforced by a recent large-scale study that demonstrated that close school-based mentoring relationships were a significant predictor of positive academic outcomes (Bayer, Grossman, & DuBois, 2015). This same study showed that students who did not feel close to their mentors fared no better than students who were not mentored at all in terms

of academic performance (Bayer et al., 2015).   But how exactly do certain relational elements lead to the type of strong relationships that are associated with positive outcomes?

One clue comes from a small qualitative study by Spencer (2006) that highlighted that mentors lacking certain relational skills (lack of youth focus, unrealistic expectations, and low awareness of personal biases and/or acknowledgement of the importance of cultural differences) significantly contributed to some mentoring relationship failures. Another important dimension of relationship health was highlighted by Pryce (2012) in a separate qualitative study of school-based relationships. Her study was designed to discover how mentors approached relationships in terms of "attunement" with respect to youth needs. Pryce (2012) defined attunement as "a broad strategy for mentors to elicit, read, interpret, and reflect on youth cues" (p. 292). She was able to categorize mentor attunement into three categories: highly attuned, moderately attuned, and minimally attuned. The highly attuned approach helped to create the most robust conditions for relationship development, with moderate and minimal attunement being less positive (Pryce, 2012). A third dimension of relationship health that has been studied was developed from analysis of a large sample of community-based matches from Big Brothers Big Sisters of America. Data from the youth perspective revealed that there are four basic types of relationships that emerge based on levels of activity and structure within the relationship (Langhout, Rhodes, & Osborne, 2004). These relationship categories are similar to categorizations identified in both counseling and parenting literature (Langhout et al., 2004). The group of mentees who experienced moderate levels of activity and structure experienced the greatest number of benefits from their relationships, with highly active relationships close behind. Interestingly, those mentees who characterized their relationships as unconditionally supportive showed no measurable benefits and actually showed an increase in parental alienation

(Langhout et al., 2004). While this study was conducted with a large sample of community-based relationships, the likelihood of transferring these insights to school-based relationships is reasonable given the similarities in terms of overall mentoring match structure.

A mentor's approach to their mentoring relationship in terms of attunement and activity structure, can also be affected by the type of communication that takes place within the relationship. According to Karcher, Herrera, and Hansen (2010), relational conversations and collaborative decision-making are both associated with higher relationship quality. In citing the work of Hamilton and Hamilton from 1992, the authors suggest that more goal-directed conversations and behavior might be very helpful to mentoring relationships, but probably at older ages where job skills and technical competence are more often the focus. They contend that based on their sample of younger students (very few high school students in their study), relational conversations and collaborative decision-making are strong predictors of greater relationship satisfaction (Karcher et al. 2010). A similar finding emerged from a mixed methods study of school-based relationship trajectories, which showed lower levels of interpersonal and problem-solving skills for mentors in what the study termed "stagnant" relationships (Pryce & Keller, 2012), corroborating the idea that mentors with less polished relationship skills like communication may have a more difficult time transmitting benefits to their mentees through a mentoring relationship.

If the relationship between a mentor and student is indeed the foundation for positive student outcomes, it bears repeating that attention to relationship dynamics is a critical dimension for any mentoring program school-based or otherwise. A mentors' lack of appropriate relationship skill threatens the survival of the relationship. Mentors who remain "attuned" to their mentee, find a moderate to high level of activity and structure, and communicate

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collaboratively in ways that demonstrate the importance of the relationship will significantly increase the likelihood of positive student outcomes.

The Developmental Assets Framework

To rightly consider the global picture of a student's functioning within a school setting, it is necessary to first understand the interaction between the student's behavior and his/her environment. One of the major contributors to this field of study (called ecological psychology) was scholar Urie Bronfenbrenner (Brofenbrenner, 1979; Nakkula & Toshalis, 2006). Bronfenbrenner created a model to help explain the relationship between behavior and environment. The most basic unit of the model was called the "microsystem." Thomas (2004) indicates that school, home, and peer group, are three common microsystems in which adolescents function. A second important point related to Bronfenbrenner's model is that it is not the actual events that occur that matter most, but the perception of those events, whether real or imagined (Thomas, 2004, p. 383). Third, it is worth noting that each student has four capacities that can affect person-environment interactions: personal characteristics, selective responsiveness to environmental threats and opportunities, a capacity for creating and participating in more and more complex interactions, and a guiding belief system about how one should interact with the environment (Thomas, 2004, p. 385).

The continuation of Brofenbrenner's pioneering work resulted in a number of advances in understanding how to more effectively work with youth, including the development of the construct of "developmental assets" (Benson, Leffert, Scales, & Blythe, 2012). Developmental assets are both a theoretical framework as well as a research model (Benson et al., 2012). The asset framework measures the developmental experiences for youth in the second decade of life (Vimot, 2012). The framework of developmental assets has been refined and widely promoted

by the Search Institute since 1990 (Scales, 2005). Developmental assets can be considered as both building blocks for future growth for adolescents, as well as protective factors (Alvarado & Ricard, 2013; Leffert, Benson, Scales, Sharma, Drake, & Blyth, 1998). The presence of developmental assets contribute to the life of a young person in at least one or more of the following categories: a reduction in risk behaviors, promotion of positive behavior, and/or increasing student resilience (Benson et al., 2012; Scales, Benson, Roehlkepartain, Sesma, & van Dulmen, 2006). To measure developmental assets, the Search Institute created the Developmental Assets Profile (DAP) in 1996. The DAP is a 58-item survey completed by students age 11 to 18 (Thompson, Corsello, McReynolds, & Conklin-Powers, 2013). The survey measures both internal assets (commitment to learning, positive values, social competency, and positive identity), as well as external assets (support, empowerment, boundaries and expectations, and constructive use of time). Surprisingly, the consideration of students as resources who have strengths that can be developed is a relatively new way of conceptualizing and approaching work with young people (Lerner et al., 2005). In fact, according to Lerner (2005), prior to the year 2000, most often youth were evaluated not on their potential for development, but instead on the absence of destructive behaviors or attitudes in their lives.

The presence or absence of developmental assets for young people is of some consequence both in the immediate as well as the longer term. Research has suggested that engagement with mentors (non-familial adults) may have more power in promoting positive behavior than in protecting them from risk behaviors, which leads to greater levels of thriving once in high school (Scales, Benson, & Mannes, 2006). The presence of more developmental assets has also been associated with a higher GPA in the same year in middle school as well as a higher GPA once a student reaches high school (Scales et al., 2006). It is noteworthy that the

more assets a young person has earlier in his or her life, the more assets they will typically have later in life (Scales et al., 2006). Unfortunately, in general, young people experience a decline in assets as they get older, with the sharpest decline happening during the middle school years (Scales, 2005).

Statement of the Problem

Three important themes emerge when considering of the needs of middle school students and the current state of school-based mentoring. The first is that while there are many deserving middle school students who could benefit from a mentoring relationship (remember 10% to 15% of students on average could be considered Tier 2), there is an emerging but undeveloped research base as to what these mentoring relationships should look like. In spite of the positive momentum centered around school-based mentoring (SBM), McQuillin et al. (2013) write that "… in terms of the scientific understanding of SBM, researchers are only beginning to understand how, for whom and under what conditions SBM may help youth" (p. 281). The current research is just beginning to be able to answer questions about what mentors and middle school students should be doing together to produce the best outcomes. At this point though, there are at least as many questions as there are answers.

A second important theme is that while many mentoring relationships begin, they often do not last. According to Spencer, Basualdo-Delmonico, Walsh, & Drew (2014), "…as many as a third to a half of formal mentoring relationships end before the initial time commitment, often a school or calendar year, is met (p. 2)." Why do so many mentoring relationships fail to meet their intended time target? While the reasons are no doubt a complex amalgamation of factors, the fact remains that huge numbers of mentoring relationships are failing, and these failures have potential negative consequences for the students they were intended to help. Rhodes (2014) and

others have even reported evidence of psychological damage to students who experienced early match closure. Given the precarious nature of positive identity formation for middle school students, it seems crucially important for this group of students that a mentoring relationship that is promised is a mentoring relationship that is delivered. Indeed the first and most basic rule of a mentoring relationship is to do no harm to the mentee (Rhodes, Liang, & Spencer, 2009).

A third important theme relates to a potential conflict about the purpose for mentoring. School staff, parents, and even mentors may have the expectation that their mentoring will result in immediate and significant improvement in school performance. This type of mentoring, more commonly referred to as *instrumental mentoring,* has the core purpose of learning skills or achieving specific goals (Karcher, Kuperminc, Portwood, Sipe, & Taylor, 2006). Students on the other hand may want to have fun and just be relational with their mentor. This type of mentoring typically called *developmental mentoring,* has the core purpose of creating a supportive relationship between mentor and student (Karcher et al., 2006). If the adult purpose and the student purpose for the mentoring are at odds, it can become a source of ongoing difficulty within the relationship (Karcher & Nakkula, 2010). Given the potential for this type of tension to emerge within a mentoring program, which in turn could negatively impact both mentors and students, clarification and agreement about mentoring outcomes should be a top priority for funders, practitioners, and program participants.

Purpose of the Study

The primary purpose of this study (called the 20/20 Vision Project) was to better understand the delivery and impact of a brief school-based mentoring model for middle school students that utilized a developmental approach to mentoring. This study sought to measure and

analyze two distinct components of the mentoring: student outcomes and student and mentor relationship quality.

To fulfill the purpose of the study, three research questions were purposed which explored different dimensions of the mentoring program:

1. Did mentored students improve compared to their non-mentored peers on their post-test DAP scores? It was hypothesized that the developmental approach to mentoring would lead to more positive gains in terms of each mentored student's DAP scores at posttest compared to a non-mentored comparison group.

2. Was there a significant relationship between the strength of the mentoring relationship and posttest DAP scores? It was hypothesized that the pretest DAP information would help mentors understand their students more fully and allow them to focus on student needs and areas of strength, thus leading to strong and positive mentoring relationships.

3. Was there a significant relationship between DAP scores and behavioral referrals? It was hypothesized that there would be a negative correlation between increases in DAP scores and school behavioral referrals.

Significance of the Study

There continues to be a considerable gap in the research literature related to school-based mentoring. As McQuillen et al. (2013) have indicated, the SBM community is only beginning to understand for whom and under what conditions school-based mentoring is truly effective. This void in understanding widens even further when considering SBM for middle school students. The present study adds to the understanding of SBM for middle school students along three key dimensions. First, the study explored the connection between student outcomes and relationship quality. While other studies have also measured student outcomes in connection with

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relationship quality data, this study attempted to add depth and breadth to the type of relationship quality data collected for analysis. Relationship quality surveys were collected from both mentors and students at two points during the program, and brief qualitative interviews were completed with mentors and students at the close of the program. Taken as a collective whole, this data provided a wealth of relationship information to analyze and consider in relation to student outcomes.

Second, this study considered global student perceptions of functioning and their relationship to student outcomes. By using the Developmental Assets Profile as both an information tool for mentors as well as an outcome assessment for program impact, student growth and progress were explored as a function of the students' own perceptions of their lives. This stands in contrast to other studies of middle school mentoring that have explored the use of mentoring to teach academic enabling behaviors (McQuillin & Lyons, 2016), or focused on academic learning strategies (Nunez, Rosario, Vallejo, & Gonzalez-Pienda, 2013) for example. This study uniquely explored the impact of focusing on developmental asset activities and their contribution and relationship to student well-being, and a typical school-related outcome measure like office disciplinary referrals.

Third, this study explored a brief mentoring model with a design structure that enhanced the possibility for match relationships to continue beyond the study under the auspices of the school staff. Other recent SBM studies (McQuillin & Lyons, 2016; McQuillin, 2012; McQuillin, Smith, & Strait, 2011; Karcher, 2008) utilized mostly, if not exclusively, college students as mentors over the course of their studies. This could be a limiting factor for mentoring to continue beyond the study. This study intentionally recruited adult mentors with strong roots in the community, who in theory would have a greater possibility of continuing their mentoring

relationships beyond the study. This design element is relevant for practical as well as theoretical reasons. From a practical standpoint, a middle school counselor or social worker who desires to have a mentoring program in their building would benefit from being able to spend more time supporting matches, and less time recruiting, screening, and training new mentors. From a theoretical standpoint, previous research on school-based mentoring (Heurra et al., 2011) has demonstrated differential effects for students based in part on the age of the mentor. It appears that older adults may have an important capacity to relate to students, and have a positive impact on them in ways that younger mentors are challenged to fully realize without a greater level of program support from staff.

Chapter 2: Review of Related Literature

Mentoring services are a scarce resource across the country in both school and community-based programs for at-risk youth. According to MENTOR (The National Mentoring Collaborative), in 2016 there were 9 million at-risk youth who say they do not have adults to turn to help them navigate challenges in their lives. As many as 1 in 5 youth lack the presence of enough caring adults in their lives (Herrera, DuBois, & Grossman, 2013). Undoubtedly, there are a huge number of middle school students represented in the group of 9 million. But why are middle students particularly at-risk and why is a caring adult so crucial for this age group?

Why Middle School Students Are Particularly At-Risk

The developmental transition from childhood and elementary school to early adolescence and middle school is the second major change a typical student encounters in his or her school career (Akos, Rose, & Orthner, 2015). Some research has shown that this transition brings with it an interruption in academic growth trajectories when compared to elementary school achievement levels (Akos et al., 2015). This research also showed that the interruption was amplified when certain risk factors were present, including status as a minority, being male, coming from a low socioeconomic level, being part of a single-parent home, or having special education status (Akos et al., 2015). Many students who are referred for mentoring services would typically have one or more of these risk factors putting them at higher risk for a larger interruption in their academic growth.

While this type of academic interruption is certainly problematic, it can also lead to a much larger challenge with school performance in the future. This is especially so for certain groups of students. Research by Balfanz (2009) found that students in high-poverty schools were particularly affected:

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We found that sixth graders who failed math or English/reading, or attended school less than 80% of the time, or received an unsatisfactory behavior grade in a core course had only a 10% to 20% chance of graduating on time. Less than 1 of every 4 students with at least one off-track indicator graduated within one extra year of on-time graduation. (p. 4)

It is interesting to note that this research also found particular profiles within the student sample which shed light on a path for successful intervention. For instance, if students began falling off the path to graduation in the first year of middle school (typically sixth grade) their odds for graduation were worse than if they exhibited these warning signs in seventh grade or beyond. Most students who exhibited warning signs in the sixth grade had only one or two off-track indicators and were still remarkably resilient in that they continued to persist in school for an average of five years (Balfanz, 2009). The core premise of this research then is that these troubling graduation trajectories are likely to persist in the absence of intervention. Over time, off-track behaviors build on one another and make high school graduation less likely. The addition of a caring, well-trained, and consistent mentor to provide support and accountability early in the middle school transition (typically sixth grade) could help prevent these off-track behaviors from becoming established.

Middle school students with greater risk profiles are especially vulnerable for academic performance problems, but they also face the same cognitive growth challenges that are typical for all early adolescents. These challenges tend to cluster around the developmental task of forming an identity (Eccles, 2009). Identity formation, as Eccles (2009) describes it, is a function of both perceptions about skills, characteristics, and competencies as well as perceptions about goals and values. According to Scales (2009), early adolescents are trying to answer three central questions for themselves: Am I normal? Am I competent? Am I loved/loving? With

greater capacities for abstract thought and perspective taking, early adolescents are for the first time experimenting with identities in a new way.

The process, however, is far from uniform or consistent (Weinberger, Giedd, & Elvevag, 2005). This unevenness in brain development is often on full display when observing early adolescent behavior. Their cognitive development can manifest itself in unpredictable decision making, increased risk taking behavior, limited or nonexistent problem-solving strategies, as well as poor future planning skills (Weinberger et al., 2005). The fact that adolescents are also becoming more independent while these cognitive inconsistencies are at play can create tension with adults who are trying to support them (Kegan, 1998; Newman, 1985). Adults may have unfair or unrealistic behavioral expectations for these adolescents just when they need to feel their unconditional support the most. As Cottle (2002) points out, the goal of development at this stage should be an affirmed self as opposed to a self defined by shame or doubt. A supportive non-familial adult in the form of a mentor can be just this type of supportive force and cheerleader for an adolescent while they grow through this dynamic period of cognitive development.

Beyond academic and cognitive challenges, middle school also presents social and emotional milieus that are inherently more complex. The transition to middle school often unsettles friendship networks that were established in elementary school as students are split into different classes with students from other feeder schools (Wigfield, Lutz, & Wagner, 2005). This greater sense of social isolation can make students more vulnerable to both individual and group victimization in the form of bullying and aggression, both of which tend to spike in middle school (Wigfield et al., 2005). Research by Akos (2002) indicated that one of the primary concerns fifth and sixth grade students expressed related to worries about being bullied by older

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students. The upshot of peer harassment is that targeted students are further isolated from social

networks as they withdraw or avoid social situations where they feel unsafe (Bishop et al., 2004).

The greater prevalence of these difficult relationship dynamics (whether real or anticipated), puts

the early adolescent in a vulnerable position where they are increasingly at-risk for internalizing

emotional and behavioral difficulties such as anxiety and depression (Merikangas et al., 2010).

School-Based Mentoring as a Solution

Supporting middle school students by utilizing a school-based mentoring strategy may at

first blush seem like a straightforward exercise. Find caring adults who want to help students

and have the time to do so, and simply match them with deserving students. Their relationships

will naturally develop over time, and students will see benefits. This recipe sounds simple and

easy to put into practice. In reality, there are a number of important considerations that can

impact implementation and, in turn, student outcomes. Paying close attention to these factors is

critical to the success of any school-based mentoring program that aspires to achieve positive

student outcomes.

While there is a growing volume of peer-reviewed research on school-based mentoring,

there is a much smaller amount of primary research specific only to middle school students.

These primary studies have demonstrated both positive impacts as well as lost opportunities.

Taken together they help to frame elements of both success and challenge for a school-based

mentoring program focused on middle school students. As the review of literature makes

evident, differential outcomes for SBM in a middle school environment may be as much the rule

as they are the exception. For purposes of clarity and comparison, the primary studies that were

reviewed have been divided into two groups. The first category reviewed studies that used

people from the community as mentors. The second category reviewed studies that used primarily, if not exclusively, school personnel as mentors.

Middle School Mentoring with Non-School Staff

A study by McQuillin, Smith, and Straight (2011), was designed to examine the effects of school-based mentoring on students transitioning from elementary to middle school. Given the difficulties typical for students during this transition period, a school-based mentoring intervention would appear to be a welcome and helpful support. The McQuillin et al. (2011) study utilized college students in a service-learning program as mentors for what was designed to be an eight-week mentoring experience. The program anticipated having meaningful effects on grades, behavior, and connectedness to school and teachers. However, the program produced no measurable benefits and showed negative effects on reading scores compared to a control group (McQuillin, Smith, & Strait, 2011). The matched pairs met only 6 of the desired 8 times, which may help explain some of their lack of findings. Although mentors had objectives for each mentoring session, there was no tracking of what mentors and students did together beyond the fact that the mentor showed up and spent time with the student. In addition, although the mentors had pre-match training along with objectives for each mentoring session, most were working cross culturally (90% percent of the mentors were white, while 75% of the students were African American). As first year college students, the mentors may not have had the relationship history and experience necessary to navigate the cultural nuances of the cross cultural relationships that were a part of the majority of the matches.

A second study by McQuillin (2012) used many of the same elements as the first study mentioned above, but with four noticeable areas of focused improvement. First, mentors were more closely supervised and given greater support by program staff. They had to check in with

program staff and show proficiency with the materials they would be using, as well as check out and provide program staff with completed materials from the mentoring time. Second, the mentoring intervention lasted a full eight weeks compared to the six weeks of the previous study. The additional two weeks allowed the curriculum to be completed in full as designed. Third, the caliber of mentors was elevated by including a much greater percentage of mentors from a specialized scholarship program (98% as opposed to 65% in the first study) from the university supplying the mentors. Finally, the curriculum was reorganized to focus more on academic enabling behaviors like organization and homework checks compared to the original study. Results of the study indicated that compared to the control group, mentored students showed significant improvement in math grades, overall life satisfaction, and a decrease in behavioral referrals.

The third and most recent study by McQuillin and colleagues (McQuillin & Lyons, 2016) again built on the results of the previous two studies to improve student outcomes. In this third iteration, four areas were once more enhanced and strengthened. A mentee manual was added, mentor training was enhanced along with greater supervision for mentors, mentors were allowed more choice in what activities to do with students, and e-training and support for mentors was enriched. According to the authors, one additional and important piece that was included in this third trial of the program was the implementation of what they termed "value-oriented and relationship-based activities." These activities were designed to blend elements of both developmental and instrumental mentoring approaches to produce closeness between mentors and students. Using a pretest and posttest experimental design, the researchers randomly assigned sixth, seventh, and eighth grade students (N=72) to either receive eight weeks of mentoring (n=36) or continue school as usual without any additional intervention (n=36).

Mentors were once again universally college undergraduate students, but unlike the first two McQuillen studies, the mentors were a much more racially diverse group representing White, African American, and Hispanic/Latino American populations almost equally. The student population was close to 90% Hispanic/Latino American. The program produced statistically significant changes on grades in math and English, overall life satisfaction, as well as school attendance. Effect sizes were small to moderate for grades in math and English, and moderate to large for life satisfaction and school attendance. Unlike the second study, there was no statistically significant change in student behavior.

Middle School Mentoring with School Personnel

In a study called LISTEN (Linking Individual Students to Educational Needs), the school district sponsored a mentoring intervention designed to assist middle school students with school performance or related issues (Johnson & Lampley, 2012). Students were selected based on difficulties with school performance, discipline, or school attendance. The mentors were made up of school staff including classroom teachers, school counselors, administrators, custodians, librarians, and various other school staff. At the conclusion of the program, significant improvements were found on all three of the study's criterion variables, which included overall student GPA, discipline referrals, and student attendance (Johnson & Lampley, 2012, p. 68). Since the mentors were all current or former school staff, it seems reasonable to assume that they were better equipped in some ways to mentor students than the mentors in any of the McQuillin studies previously cited. As part of the program, students received an individualized plan to help them with their most pressing challenge. The program lasted a full school year, which would appear to be another important factor potentially driving the positive student outcomes. This study did not indicate what mentors and students did together when they met, which is

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unfortunate. Given the positive outcomes that students experienced, it would have been helpful to have more concrete explanations or at least theories as to why the results were so overwhelmingly positive.

In another study where school staff were used as mentors, researchers structured a randomized mixed methods design (*N*=32) where mentees received weekly mentoring from teachers from within their middle school building for a period of 18 weeks (Converse & Lignugaris-Kraft, 2009). The mentor/teachers were not allowed to mentor a student in their homeroom class. During the mentoring period, mentored students compared to the non-mentored control group showed a decline in office disciplinary referrals, an increase in school attendance, and a small to moderate effect size for increased connection to school. Mentors were required to keep journals and were interviewed at the conclusion of the program at which point they were divided into two groups according to how they "saw" their relationships. Converse and Lignugaris-Kraft (2009) wrote that, "in all, 10 mentoring dyads were labeled 'positive experience' and six mentoring dyads were labeled 'questioned impact' based on interview responses" (p. 41). While there were more successful relationships than not, over 30% of the mentors seemed to struggle with the relationship based on their interview responses. The program provided some significant pre-match training for their mentors including training on cultural competence and active listening. One other element that was unique to this program was that mentors were paid a small stipend for their extra time to mentor students. It could be argued that this program had the most qualified mentors available and also provided the most incentive (paid compared to volunteer). Though student outcomes were positive in this study, it is worth noting that more than one in four of the mentors found it difficult to see the impact they were making.

A third study that utilized mostly school personnel to mentor middle school students used a quasi-experimental design to match 14 seventh and eighth grade students with mentors over a period of 16 weeks (Maerz, 2015). Mentors were a mix of district administrators, building principals, teachers, support staff, and several recent high school graduates from the district. Similar to the other studies, it was hypothesized that mentored students would see improvements in grades and attendance, and a decrease in behavioral referrals compared to the control group. The program produced no statistically significant results in any of the outcome areas under consideration. The intent of the program was to create a caring relationship between mentor and student (a developmental relationship), which would help improve overall academic performance (instrumental purpose). Mentors were provided with only minimal training for their role in the form of a list of mentor expectations. This list included instructions about mentor faithfulness (showing up to meetings), listening to students, overall approach to the relationship (positive and encouraging), activity focus (student organization and help with academics), and some clarifications about confidentiality of student information. It was not clear what mentors and students actually did together during their weekly meetings or how much support mentors received from program staff during the mentoring period.

School-Based Mentoring for Tier 2 Students

As the primary studies illustrate, school-based mentoring interventions for middle school students appear to have tremendous potential to support deserving students, but positive outcomes are not a foregone conclusion. Students who need more than universal supports (Tier 1), but stop short of needing intensive intervention (Tier 3 special education students), would likely benefit from the care and attention of a mentor *if* mentoring were delivered in the context of a well-conceived model. Hoyle et al. (2011) goes far as to say that, "With the interventions in

place early in the middle school years, fewer younger students who have behavioral difficulties may continue to have those problems as they get older" (p. 166). But what evidence is there for mentoring Tier 2 students in schools who are using an MTSS framework? Some evidence for the efficacy of mentoring-type interventions for Tier 2 students comes from McIntosh, Ty, and Miller (2013). They report in their literature review that programs with mentoring elements were able to significantly decrease internalizing and externalizing behavior problems for Tier 2 students. Similarly, Lassen, Steele, and Sailor (2006) found in a three-year study that school-wide positive behavior support and intervention led to significant decreases in office disciplinary referrals, school suspensions, as well as increases in some elements of standardized test scores. While a formal mentoring intervention was not part of their study, small group interventions focusing on social and emotional skills (a proxy for mentoring) were implemented for certain students and showed promising affects. A third study using a program called "Check & Connect" also showed promising results related to adult relationships and positive school related outcomes (Anderson, Christenson, Sinclair, & Lehr, 2004). Students with chronic attendance problems were partnered with a paid adult called a monitor who checked in with the student weekly and connected with the student's teachers and family. A closer relationship between students and monitors was associated with improved student attendance as well as being a significant predictor of teacher reported school engagement.

From a meta-analytic point of view, Mitchell, Stormont, and Gage (2011) looked at 13 studies which focused on groups of Tier 2 students who took part in supportive in-school interventions. They found that students were most often either nominated for the intervention by school staff or parents, or met criteria related to school related data (most often office discipline referrals). Students were identified and nominated based on either externalizing behavior (office

disciplinary referrals or student absences), internalizing behavior (symptoms of anxiety or depression) or a combination of both. Their review effectively indicated that within an MTSS system, student progress toward more positive behavior seemed to turn on two important dimensions. First, there needed to be an increase in positive peer and school staff interaction linked to clear behavioral expectations and recognition of positive behavior. Second, the presence of personal or small group coaching for students who did not benefit from universal supports needed to be present in some form. How might these findings inform a mentoring model designed to benefit students who are considered to have Tier 2 needs?

A SBM intervention that comprehends this evidence should include opportunities for successful school staff and peer interactions along with opportunities for personal coaching and encouragement (Mitchell et al., 2011). Combining these findings further with best practice elements of what has already been learned about mentor-student relationships, like the importance of closeness (Bayer et al., 2015), collaboration (Karcher et al., 2010), attunement (Pryce, 2012), and a healthy mix of activities (Langhout et al., 2004), would likely provide a powerful formula for a strong mentoring intervention for Tier 2 students.

Chapter 3: Research Design and Methodology

This research project utilized a non-equivalent groups design to compare mentored middle school students to their non-mentored peers over the course of one school semester. Student groups were initially compared using the Developmental Assets Profile (DAP). The DAP was utilized as a pretest/posttest instrument. The school staff administered the instrument to both the treatment and comparison groups shortly before the mentoring sessions were to begin. The DAP assesses student perceptions of their own lives in eight asset categories that the DAP measures. Subsequently, after the completion of the mentoring program, the DAP was administered again to measure change in student perceptions in the same eight asset categories.

Mentored and non-mentored students were also compared using retrospective office disciplinary referrals (ODRs). ODRs from the semester prior to the mentoring program were compared to ODRs during the semester in which the mentoring program took place. Student attendance and grade data were pursued unsuccessfully for analysis in this study. The information provided by the school on these variables was either incomplete (grades) or difficult to interpret (what counted as an excused absence), and could not reliably be used in analysis.

Since strong match quality (a solid connection between student and mentor) is widely accepted as a predictor of positive student outcomes, match quality was also measured from both the student and mentor perspective at two points during the mentoring program using survey instruments. Both mentors and students completed surveys on how they felt about different aspects of the mentoring relationship as they were experiencing it. These surveys were administered after approximately one month of mentoring and again at the conclusion of the mentoring program. Lastly, both mentors and students from the mentoring group took part in

brief informal interviews about their experience at the conclusion of the school semester in which the mentoring took place.

Site of the Study

The study was conducted at a public intermediate school (fifth and sixth grade) in a mid-sized suburban area in the Midwest. The school had 880 students for the 2013-14 school year of which 90% were Caucasian, 4% were Hispanic, 2% were Asian/Pacific Islander, 2% were African American, and 2% were classified as other (National Center for Education Statistics, 2015).

Participants

Thirty-two fifth and sixth grade students were enrolled to participate in the study. The average age of participants was 10.95 (SD=.65) with 60% of the students enrolled in the sixth grade. The majority of students were female (*n*=18). A total of 15 students were selected by the school counselor and school social worker to receive the mentoring intervention, while the remaining 17 students became part of the comparison group. Table 1 presents the basic student demographics.

Table 1

Age and Grade Level for Mentored and Non-Mentored Students

		Age		*Grade*
Student Group	*N*	*M(SD)*	*n*	*2015-16*
Mentored	15	10.9 (.64)	7	5th
			8	6th
Non-Mentored	17	11.0 (.66)	6	5th
			11	6th

Student participants for the study were recruited and selected by the school social worker and school counselor. The selected students were asked to participate based on their eligibility for Tier II interventions which meant that each student had to meet one or both of the following conditions as indicated on the school staff webpage, which was provided by the school social worker:

When the universal support of Tier I is fundamentally in place for all students, it forms the base for implementing Tier II strategies. Tier II of the PBIS (Positive Behavior Interventions and Support) triangle model provides additional interventions to support that smaller percentage of students who do not sufficiently respond to Tier I strategies. Students at Tier II may be at-risk for developing chronic problem behavior but do not need the high intensity interventions typical of individualized and complex behavior plans offered at Tier III…Repeated office disciplinary referrals (ODRs) are one indicator of the need for Tier II behavior interventions. Once ODRs reach at the 3-5 range, the teaching team, along with a building administrator and/or counselor, should consider the implementation of an available Tier II intervention. Another indicator for Tier II behavioral interventions involve the suspected presence of internalized emotional problems, such as anxiety and/or depression. These students may not have any ODRs but are struggling in school.

The number of students who received mentoring was limited by the number of available mentors recruited for the program. The matches between students and mentors were made by the school social worker and counselor, a common practice in a school-based mentoring program. Matching was completed based on information gained from mentor interviews (which the school

counselor and social worker helped to conduct), along with knowledge of student needs and personalities. All students were matched with a mentor of the same gender.

Mentors were 15 adults from the community and included ten women and five men. Mentors ranged in age from the early twenties (n=1) to mid-sixties (n=1), with the largest number of mentors in the 35- to 44-year-old range (n=4). The remaining mentors were evenly distributed among the 25- to 34-year-old age range (n=3), the 45- to 54-year-old age range (n=3), and the 55- to 64-year-old age range (n=3). Mentors were recommended by area church pastors who had a strong history of supporting the area public schools. Only one of the 15 mentors reported any previous experience mentoring a student in a formalized program.

Measures

To determine the impact of the program, several measures were used to explore ongoing dimensions of program operation (like mentoring relationship quality) as well as student outcomes. The first measure that was administered was the Developmental Assets Profile (DAP). The DAP is a 58-item student self-report instrument designed to measure developmental assets according to a well-established youth developmental framework called *The 40 Developmental Assets* (See Appendix A). This profile produces a number of different aggregate and individual scores using eight asset categories. Four of these assets are considered internal (positive identity, commitment to learning, social competencies, and positive values), and four are considered external (support, empowerment, boundaries and expectations, and constructive use of time). These individual asset categories generate single scores, which are then used to produce an overall total asset score, a total internal asset score, and a total external asset score. Further, the individual item responses are clustered and summed to generate asset scores related to five different context areas (personal, social, family, school, and community). The published

internal reliability estimates for the DAP scales using Cronbach's alpha (Search Institute, 2013) were good for all total asset scales (alpha=.93 or higher), context area scores (alpha=.85 or higher), and individual asset categories (alpha=.82 or higher). Only the constructive use of time scale failed to meet adequate reliability (alpha=.59).

A second source of data was collected via survey from both mentors and students. Adult mentors took a 20-question survey to measure the level of friendship and aspiration they experienced in their mentoring relationship. The Friendship and Aspiration Survey (See Appendix B) contained 16 adapted questions from the Match Characteristics Questionnaire (See Appendix C) developed by Harris and Nakkula (2008) as well as four original questions. This adapted survey had previously been tested with a sample of 90 middle school mentors and showed promising internal reliability as well as construct validity. The overall reliability for both scales was good with Cronbach's alpha for the Friendship scale measuring at .81, and alpha for the Aspiration scale measuring at .86. Table 2 presents the reliability estimates for the adapted scales.

Table 2

Reliability   for   Friendship   and Aspiration Scales

	Adapted Scales	
Scale	*Items*	*Cronbach's Alpha*
Friendship	10	.81
Aspiration	10	.86

The adaptations made from the Match Characteristics Questionnaire were linguistic and not conceptual. The purpose of adapting the questions was to help contextualize language to match the mentoring experience of mentors in this study.

Mentored students also completed a survey, in this case one made available by *Education Northwest* and The National Mentoring Center (See Appendix D). The "Youth Survey" included 19 questions that measured three different qualities of the mentoring relationship from the student perspective: the emotional engagement (EE) of the youth in the relationship, the degree to which the student felt the relationship was youth centered (YC), and the level of dissatisfaction (YD) the student felt with the relationship (Grossman & Johnson, 1998). Reliability estimates using Cronbach's alpha were good for all three scales with EE measuring at .82, YC at .78, and YD at .80.

Third, brief 15 minute interviews were conducted with mentors and students at the conclusion of the mentoring. Mentors and students were independently interviewed to focus on the subjective experiences of each participant, and their reflections on the strengths and weaknesses of the mentoring program as they experienced it.

Finally, school-related data pertaining to behavior was captured retrospectively for both the mentored and comparison groups. The school performance data allowed comparison of the mentored and non-mentored students' behavior and relationship to changes in DAP scores over the course of the program.

Procedures

The mentoring program followed a representative set of practices that would be expected in a well-run school-based mentoring program. This included the recruitment, screening, training, and matching of mentors, followed by a number of activities that provided support and

supervision to the mentor-student relationships once the pairs began to meet. Mentors were recruited from the community after receiving recommendations from area church pastors who were strong supporters of the area public schools. Mentors were asked to fill out applications and schedule face-to-face interviews at the school with the principal investigator, school counselor, and school social worker. Once interview and screening procedures were completed, mentors were assigned a 60-minute online video-based training module that was specific to mentoring middle school students. The video training focused on four areas:

1) Making mentors aware of the physical, social, emotional, and cognitive developments that are typical for students during the middle school years.

2) The complex social milieu of the middle school environment (e.g., the role of peers, the desire for greater independence from adults, the comparison of self to others, etc.).

3) The role the mentor could play as a supportive adult and advocate, as well as a guide to help the student begin considering their own strengths and how to use them.

4) Use of an asset-based workbook to help promote student growth.

A 90-minute follow-up face-to-face training was then completed by the mentor group at the school. This training was led by the principal investigator, the school counselor, and the social worker. Four major topics were covered:

1) The scope of the research and what information would be collected from students and mentors.

2) The structure of the mentoring time each week, which typically included an opening icebreaker activity, an asset building activity, free choice time for mentors and students, and finally completion of a weekly progress report by the mentor about the mentoring time.

3) How to access support from the school staff in the form of face-to-face conversations, receive additional student information, or take part in ongoing coaching or skill building practice related to mentor relationship skills.

4) Student and mentor safety related to confidentiality, practices important in the separation of church and state, mandatory reporting requirements, and policies about outside contact beyond the mentoring time at school.

Students in both the mentored and comparison groups were given the DAP shortly before the mentoring program began. The assessment was administered by the school staff. Mentoring took place one time each week in a large unused classroom, which also served as a site for after school programming. Mentoring always took place on the same day and at the same time. The mentoring room had a ready supply of tables and chairs as well as a number of games and activities. Mentors and students met over the student's lunch hour for a total of 40 minutes. Eight mentor-student pairs (sixth grade matches) met together during the first lunch period while the remaining seven pairs (fifth grade matches) met during the third lunch period.

Each week there was a short icebreaker (generally about 5 minutes) for mentors and students to complete at the beginning of their time together, followed by an asset-building activity from a student activity book. The asset activities were pre-selected by the school staff at the beginning of the program. Broadly speaking, activities included student self-discovery (e.g., strengths and learning styles), goal setting behaviors (both academic and non-academic), peer and social network inventories (e.g., friends who help you or friends who block you), and imagining preferred futures for themselves and how those might be accomplished. Since results of the DAP were shared with mentors during the second week of mentoring program, mentors had an idea of how their students perceived their lives at the start of the mentoring. Asset

activities took anywhere from five to twenty minutes, and results of the exercises were recorded in each student's personalized activity book. Once the asset activity was completed mentor-student pairs were allowed to choose how to spend the remainder of their time together. Some pairs engaged in physical activities (i.e., shooting baskets in the gym or playing catch), while others picked a new or favorite game (usually a board game or card game), or worked on an ongoing project (like an art or craft activity).

The final element of the mentoring time was for the mentor to complete a written record of the mentoring visit. The progress report allowed the mentor to describe what was accomplished during the visit and identify any needs or concerns they had related to the mentoring. Table 3 presents a summary of the program in terms of data collection. In total, the mentoring program lasted from the second week of January to the last week in May.

Table 3

Data Collection Timeline

Instruments	Administration Timeframe				
	Mentored Students		Non-Mentored Students		Mentors
DAP	Pre: January	Post: May	Pre: January	Post: May	X
Youth Survey	Time 1: February	Time 2: June	X	X	X
Mentor Survey	X	X	X	X	Time 1: February Time 2: June
Informal Interviews	June		X		June
Mentor Progress Reports	X		X		Completed After Each Session

Data Analysis

Examination of the data was carried out by conducting two sets of analyses. The first set of analyses focused on Developmental Asset Profile scores both within and between groups. There are a total of three aggregate DAP scores (internal assets, external assets, and total assets), eight individual sub-scale scores (support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identity), and five context area scores generated from the raw item responses of the assessment (personal, social, family, school, and community). The entire set of DAP scores were analyzed descriptively for measures of central tendency and dispersion within the mentored and non-mentored groups. These scores were then used in various ways to conduct independent-sample t-tests (mentored versus non-mentored) and paired-sample t-tests (pre/post comparisons within each group). In addition, the full battery of DAP scores were compared using ANCOVA to control for pretest differences between groups.

The second set of analyses included bivariate and Poisson regression models. Bivariate linear regression models were constructed to measure the strength and direction of relationships between posttest DAP scores and relationship quality using data collected from both students and mentors. Next, a zero-inflated Poisson model was developed to look at the relationship between group membership (mentored vs. non-mentored) and second semester office disciplinary referrals while controlling for first semester referrals.

A third set of analyses were initially planned to explore connections between mentoring relationship quality variables, DAP scores, and additional school data in the form of grades and attendance. Due to unforeseen circumstances, when this data became available at the close of the school year it was either incomplete or unable to be interpreted. Due to an information

technology problem within the school district, grade data was only partially available.

Attendance data was available for the sample but lacked a reliable consistency in terms of what did or did not count as an excused absence. Preliminary analysis of the attendance records produced frequent contradictions in accurately and fairly counting student absences. Since there was no immediate way to reconcile these discrepancies further analysis was suspended.

Chapter 4: Results

Findings will be presented in three groups following the order of the research questions. The first group of results will consider the pretest to posttest DAP change scores for both mentored and non-mentored students. Within and between group comparisons for the DAP scores will be presented. The second group of results will report on the relationship between DAP scores and overall mentoring relationship quality for the mentored group of students. This includes both mentor and student perspectives on the relationship. Third, mentored and non-mentored students will be compared related to the number of office disciplinary referrals they received during the timeframe of the mentoring program while controlling for the number of first semester referrals.

Asset Changes in Mentored and Non-Mentored Student Groups

Table 4 presents the pre and posttest DAP scores for both non-mentored and mentored students including standard deviations. Table 4 also presents the amount and direction of change in assets from pretest to posttest in each category. At pretest the mentored group of students had fewer assets than the non-mentored comparison group in every category except the school context. Mentored students showed positive gains in every asset category from pretest to posttest with the largest gain coming in total assets (an improvement of 3.7 total assets which is a combination of both internal and external asset categories). The second largest gain came in the community context area with an increase of three assets on average. The smallest gain came in the school context area showing a gain of just .7 assets. Non-mentored students showed a very slight gain in personal assets (.4), showed no difference on overall internal assets or social context assets, and declined slightly on the remaining asset categories with the largest decline coming in the school context area with a decline of one asset on average. Considering just the

raw totals then, the overall picture is that mentored students showed gains in assets from pretest to posttest, while non-mentored students remained basically flat. This was a comprehensive reversal from the pretest asset scores.

Table 4

Student DAP Scores at Pretest and Posttest for Total and Context Area Assets

Asset Category	Group	N	Pretest	SD	Posttest	SD	Change
External Assets	Mentored	15	22.1	6.6	24.5	5.1	2.4
	Non-Mentored	17	24.2	3.9	23.8	3.7	-0.4
Internal Assets	Mentored	15	22.2	5.0	23.5	4.5	1.3
	Non-Mentored	17	22.6	4.8	23	4.8	0
Total Assets	Mentored	15	44.3	11.4	48	9.3	3.7
	Non-Mentored	17	46.8	8.2	46.5	8.0	-0.3
Personal Assets	Mentored	15	21.7	4.8	22.7	5.4	1.0
	Non-Mentored	17	22	5.0	22.4	4.3	0.4
Social Assets	Mentored	15	23.2	5.7	24.8	4.3	1.6
	Non-Mentored	17	23.8	5.0	23.8	4.9	0
Family Assets	Mentored	15	22.1	7.5	24.7	6.9	2.6
	Non-Mentored	17	25.9	3.6	25.6	4.5	-0.3
School Assets	Mentored	15	23.8	6.1	24.5	5.3	0.7
	Non-Mentored	17	23.6	4.9	22.6	6.4	-1.0
Community Assets	Mentored	15	21.4	6.2	24.4	5.2	3.0
	Non-Mentored	17	22.7	5.1	22.3	4.8	-0.4

To further explore these asset changes within the mentored and non-mentored groups independent of each other, a series of paired-sample *t*-tests were conducted on overall asset totals, context area totals, as well as individual asset sub-scale totals. As illustrated in Table 5, significant differences were found for two of the three total asset categories from pretest to posttest but only for the mentored group of students. After using a Bonferroni correction to control for Type I error (.05/3 = .016), results were significant only for external assets at p = .01. Effect sizes for mentored students were medium to large in all three total asset categories. The internal asset category had a small to medium effect size (d = .39), the total asset category had a medium to large effect size (d = .67), and the external asset category had a large effect size (d = .80). Effect sizes for the non-mentored group were small to non-existent in the same three categories. The internal asset category had virtually no effect size (d = 0), the total asset category had a practically insignificant effect size (d = .06), and the external asset category nearly had a small effect size (d = .18).

Table 5

Paired-Samples T-test Results for Posttest Total Asset Scores

Asset Category	Group	Df	T	Significance (2-tailed)	Effect Size (Cohen's d)
External	Mentored	14	-3.12	.01	.80
	Non-Mentored	16	.78	.45	.18
Internal	Mentored	14	-1.5	.15	.39
	Non-Mentored	16	.00	1.00	.00
Total	Mentored	14	-2.61	.02	.67
	Non-Mentored	16	.26	.80	.06

To lay the groundwork for an analysis of covariance between groups at posttest, independent-sample *t*-tests were first performed to examine differences between the groups. There were no statistically significant differences at pretest between the mentored and non-mentored groups in any of the asset categories ($p = .05$). At posttest this trend continued to be true with no significant differences emerging between groups in any of the asset categories ($p = .05$). Effect sizes at posttest though tended to be small to medium, and reached a threshold of practical significance ($d = .20$ or greater) in 7 out of the 16 asset comparisons between groups. Table 6 presents the results for the asset categories where the effect size (*d*) was .20 or greater. In the total assets family only one category, internal assets ($d = .20$), reached this standard with mentored students ($M = 23.53$, *SD* $= 4.54$) outperforming non-mentored students ($M = 22.58$, *SD* $= 4.80$).

Table 6

Independent-Samples T-test Results for Posttest Asset Scores

Asset Category	F	T	Significance (2-tailed)	Effect Size (Cohen's d)
Internal	.78	-.57	.57	.20
Community	.03	-1.19	.24	.42
School	1.01	-.90	.38	.32
Positive Identity	.41	-1.02	.31	.35
Boundaries and Expectations	.04	-1.00	.33	.35
Support	.05	-.68	.51	.23
Social Competencies	.19	-.40	.70	.21

In context area assets, both community (d = .42) and school (d = .32) assets had small to medium effect sizes, and again mentored students were ahead of non-mentored students. For community assets, mentored students (M = 24.40, SD = 5.23) had slightly more than two assets on average compared to the non-mentored group (M = 22.29, SD = 4.76). In the school context area mentored students (M = 24.53, SD = 5.34) averaged just under two more assets on average compared to the non-mentored group (M = 22.64, SD = 6.40). On the individual scales the same pattern continued, with mentored students generally scoring higher. For positive identity (d = .35) mentored students (M = 23.66, SD = 5.25) had stronger scores than the comparison group (M=21.70, SD=5.53), and this held true for boundaries and expectations as well (d=.35) where students with mentors (M = 26.46, SD = 5.30) were stronger than the non-mentored group (M = 24.76, SD = 4.35). The support (d = .23) and social competencies (d = .21) categories had small effect sizes but continued to show mentored students scoring higher. Mentored students (M = 25.80, SD = 6.33) had stronger support scores than the comparison group of students (M = 24.47, SD = 4.77), and with social competencies again the mentored group had slightly higher scores (M = 24.66, SD = 4.49) compared to non-mentored students (M = 24.00, SD = 4.93). In summary, although the findings for the independent-samples t-tests were statistically non-significant at both pretest and posttest, mentored students were higher at posttest in all but one asset categories.

As a final comparison between mentored and non-mentored student DAP scores, a series of one-way analysis of covariance (ANCOVA) tests were performed to explore the differences while controlling for pretest results. There were three significant results, and one additional result that was nearly significant. There was a significant effect for group membership on post-test external asset scores $F(1, 30) = 7.29$, $p = .01$, post-test boundaries and expectations scores,

F(1,30) = 4.45, p = .04, and post-test community context scores $F(1, 30)$ = 5.97, p = .02. The

family context scores also nearly reached the threshold for a significant effect $F(1, 30)$ = 3.89, p

= .058. These results added depth to earlier findings. Mentored students showed statistically

significant differences from the non-mentored comparison group in expected areas like external

and community context assets, and significant differences also emerged in the boundaries and

expectations category.

Assets and Mentoring Relationship Quality

It was hypothesized that access to pretest DAP scores would give mentors insight into

their students and subsequently help them to build stronger mentoring relationships. It was

further theorized that the strength of the mentoring relationship would have a significant

relationship with posttest DAP scores. Correlation coefficients were calculated between strength

of relationship measures and posttest DAP scores for internal, external, and total assets. This

was done first using *student* strength of relationship scores, and then the process was repeated

using *mentor* strength of relationship scores. Using the Bonferonni method to control for Type I

error, a p value of .004 (.05/12) was needed to achieve significance between student strength of

relationship measures and asset totals (a total of six scales and 12 possible correlations).

Application of this standard produced three significant correlations. The Youth Disappointment

scale at posttest was significantly negatively correlated to internal, $r(13)$ = -.86, p .001, external,

$r(13)$ = -.79, p .001, and total assets $r(13)$ = -.85, p .001, at posttest. This suggests that when

students were more satisfied with their mentoring relationships (a lack of disappointment), there

tended to be an association with higher levels of developmental assets. Any significant

correlations between posttest mentor strength of relationship scores and posttest asset totals (a

total of five scales and 10 possible correlations) became non-significant once appropriate

Bonferonni corrections were utilized.

Mentoring and Office Disciplinary Referrals

To test the relationship between office disciplinary referrals (ODRs) and group

membership a general linear model with a Poisson link function was utilized. The Poisson link

function was used because most children had zero referrals, but some had more than one. This

met the criteria for a zero-inflated Poisson distribution. The mentored group had approximately

.21 fewer ODRs compared to the non-mentored comparison group. This difference was not

significant. Results are contained in Table 7.

Table 7

Poisson Regression for Office Disciplinary Referrals

Coefficient	Estimate	Exp(Tx)	SE	Z	P
Intercept	-0.62	0.53	0.33	-1.92	0.05
Pre-Test	0.61	1.83	0.61	4.77	0.00
Experimental Condition	-0.29	0.74	0.39	-0.77	0.44

Chapter 5: Discussion

This study took place in a middle school in the upper Midwest during the second semester of the school year (See Appendix E). The study began in mid-January and ended the last week of April. This relatively brief time frame (a total of 13 possible mentoring times) limited the potential for measurable student outcomes to be realized. This limitation was in some ways compounded by two factors. First, the study focused on establishing developmental mentoring relationships. Contributing to a student's overall number of developmental assets in a measurable way is a process that may take place over a relatively long period of time before positive results emerge. Second, mentors and students met over a 40 minute lunch period one day each week. All mentors and students met in the same place and at the same time which allowed for observation of the relationships by the school staff. The group dynamic was a both a help and a hindrance. Students and mentors universally enjoyed the fun of being together, but it also may have inhibited opportunities for matched pairs to have deeper conversations where greater self-disclosure could have been important and helpful.

It was hypothesized that pretest DAP scores would give mentors insight into their students and help them to build strong mentoring relationships. Each mentor was given this information within the first two weeks of the mentoring relationship. They were also given opportunity to talk to school staff about what the scores meant and how they might represent student strengths or areas of need. In some ways this is similar to the individualized mentoring plan that produced such positive student outcomes in the LISTEN mentoring program (Johnson & Lampley, 2010). It is difficult though, to gauge about how much this information may or may not have shaped thinking or contributed to each mentor's approach. It was only one piece of a much bigger puzzle. Many other factors may have contributed to or stood as barriers to the

development of strong relationships. Nonetheless, the overall relationship survey scores for

mentors and students were extremely positive. Using the reported norms for the student

satisfaction survey (Grossman & Johnson, 1998), the overall average for mentored students in

this sample would classify the group as being engaged in strong relationships. This is the most

positive category listed by the authors of the instrument.

The structure of the program, the quality of the matching done by the school staff,

personalities of mentors and students, and the pre-match expectations for mentoring, are just a

few of the factors that were likely operating as the mentoring relationships developed. The most

recent study by McQuillin and Lyons (2016) utilized program elements similar to this study and

with good result. They saw significant gains in grades in math and English, improvements in

school attendance, and gains in overall like satisfaction compared to controls. They did not see

any changes in student behavior. Like their study, each mentor-student pair in this project had

their own individual workbook, had an established structure as to what they would do during part

of their mentoring time, and had choice as to what they would do during the remaining portion of

time. The latest McQuillin et al. (2016) study indicated that one of their primary interests was to

create instrumental mentoring relationships focused on academic enabling behaviors. But they

were also interested in being intentional about including activities (i.e. allowing selection of

games by mentors and students) that would be more akin to developmental mentoring. They

suggest that their brief instrumental model could be a gateway to longer more developmental

types of mentoring. This offers a novel solution to the problem of such a large percentage of

mentoring relationships ending early (Spencer et al., 2014). If mentors feel engaged and

connected to students, while also feeling purposeful and helpful, they will be more likely to

continue mentoring. It is interesting to consider if this project is the other side of the same coin.

Perhaps the developmental mentoring approach used in this study could lead to a more instrumentally-based mentoring relationship in the future. For example, if relationships from this study were to continue, they could focus on academic enabling behaviors similar to the McQuillin (2016) study, which in turn could help mentors see their time as contributing to each student's academic success. Is it easier to go from a more instrumental to a more developmental approach to mentoring or the other way around? A very rich and profitable direction for future research would be to continue the study of blending instrumental and developmental elements of school-based mentoring, and what outcomes can be achieved.

A unique element to the mentoring structure implemented in this study was the group dynamic that was part of the mentoring time. Mentors and students always met on the same day and at the same time over one of two different lunch periods. Mentors and students sat side by side at tables with their students with six or seven other pairs of mentor-student matches nearby. Generally the first 15 to 20 minutes of the mentoring time was spent in the group setting working on set activities. After this, mentors and students could leave and go to other designated spots in the building which offered more privacy for conversation or playing games. More often than not, the mentoring pairs stayed in the room with the larger group. In informal interviews at the close of the program, the large majority of both students and mentors indicated an appreciation for the group dynamic. They stated that the group provided energy, a chance to meet and see others, and a sense of being part of a group or community. The school staff reported little resistance from students toward coming to mentoring each week, and the group identity piece may have been a significant contributor to this dynamic. At a time in their lives when they are getting their first taste of greater independence, these early adolescents were surprisingly positive about spending time with adults with whom they had no prior relationship. Despite the fact they

were missing out on lunch with their friends, they found enough value in the mentoring time that they were excited to come. One student indicated that mentoring provided relief from a difficult relationship with another classmate during lunch. Others spoke about how much they appreciated the opportunity to meet in the presence of other students and adults, and how this contributed to the expansion of their social network.

While the group dynamic provided value in many cases, it may also have prevented some conversations or relational interactions from taking place. Mentors, in particular, expressed some disappointment that they seemed unable to have deep and meaningful conversations with their students with more regularity. Some of the mentors felt that the group dynamic prevented these types of opportunities. The school social worker and counselor expressed the same concern; that perhaps the group dynamic was working against more meaningful and deeper conversation. In the end then, the group element proved to be a double-edged sword. On the one hand, it provided comfort and affiliation for both mentors and students. On the other hand, it was distracting for the pairs sometimes and compromised opportunities for a greater level of closeness.

It was further theorized that the strength of the mentoring relationship would have a positive and significant relationship with posttest DAP scores. This was in fact true, but only for the youth disappointment sub-scale and its relationship to the total number of student assets at posttest. The less disappointment with the relationship, the higher the total number of assets for the student at posttest ($r^2 = .72$). This finding concurs with recent research that touts the importance of relationship closeness and positive student outcomes (Bayer, Grossman, & DuBois, 2015). It is not too difficult to imagine how this might work as a model for successful school-based mentoring. First, create the conditions for strong mentoring relationships to form

by providing evidence-based elements for training, matching, and structuring the relationship. When these elements are missing, as was the case in the Maerz (2015) and McQuillin et al. (2011) studies, the likelihood of positive outcomes is significantly reduced. Next, provide activities that contribute to the developmental assets of students. And third, support and nurture relationships so they have the longevity necessary to make an impact. Previous research has shown that more assets lead to higher grades for the same year in middle school, and a higher GPA once the student reaches high school (Scales et al., 2006).

Another hypothesis assumed that developmental asset profiles would differ between the mentored and non-mentored groups at posttest. Further, it was expected that mentored students would have more assets or see more growth in assets compared to the non-mentored comparison group. This was the case for several of the asset categories but not all. After controlling for pre-test scores, mentored students had more positive overall external asset profiles, community context asset scores, and scores on the boundaries and expectations scale. It appears that the mentoring relationships were helpful in building assets for the mentored students but only in certain categories. Some categories however, may be more important than others. Research by Scales et al. (2006) has shown that connection to community may be a particularly strong predictor of future academic performance. Their study followed students over a three year period from middle to high school, and showed that for every one point gain a student had in connection to community in middle school, they were three times more likely to be in a high GPA group in high school (Scales et al. 2006). The mentored group of students in this study showed a three-point gain in their community context asset score from pre to posttest, while the non-mentored group lost slightly less than half a point in this category. These results are certainly encouraging considering the aforementioned study and suggest that positive gains in

terms of connection to community may be powerfully associated with desirable school-related behaviors. These results, however, must also be digested with some caution. The community context asset scale used in the previous study is similar though not identical to the community context scale used in this study. Another interesting line of future research would be to further investigate the links between community asset scores and future academic performance.

The mentoring approach used in this study aligns with recent thinking about how youth grow and develop. Positive Youth Development (PYD) experts suggest that a sustained relationship with an adult (such as a mentor) can provide opportunities for successful engagement and skill development if done in a meaningful context (Lerner, 2004). In many respects, this is exactly what the program attempted to do. It was hoped that the mentoring would help students build confidence in their capabilities. A number of the developmental asset activities mentors and students pursued together using the workbook revolved around identifying student strengths and building student self-awareness. When asked about the value of the program (if any), one student responded that an exercise done on the topic of friends was the most helpful. This student had wondered if she really had any friends, but after completing the exercise with her mentor, she felt confident she had a much more substantial network of support than she had realized. The student appeared to be emboldened by this realization. It stands to reason that she might be more willing to do and try new things in the future, in part because of this feeling of support. Since activity participation is associated with a number positive student outcomes in high school, a strong foundation of confidence at the fifth and sixth grade level has some gravitas (Agans et al., 2014).

Finally, in line with previous research (Converse & Lignugaris-Kraft, 2009; Johnson & Lampley, 2010; McQuillin et al. 2016; McQuillin, 2012) this study showed mixed results

between mentoring and behavioral referrals. On the one hand, increases in total asset totals had a significant relationship with decreasing behavioral referrals when both groups of students were analyzed together ($r^2 = .32$).   Since mentored students increased in overall asset totals while non-mentored students remained basically flat, this appears to be a positive finding for the mentored group of students. When controlling for number of behavioral referrals from first to second semester however, the mentored and non-mentored groups were not significantly different. A larger sample size in future studies may help to illuminate the relationship between behavioral referrals and developmental assets more clearly. Future research could also focus not just on the number of behavioral referrals, but the reasons for which students were given a referral. Perhaps gains in assets are more strongly associated with decreases in certain types of behavioral referrals, which would be helpful information to inform practice for school staff and mentoring practitioners alike.

Limitations

The findings from this study should be considered tentatively for some important reasons. First, the sample size is very small (15 students in the mentored group and 17 in the comparison group). Although the sample is big enough to theoretically approach a normal distribution in total, it is by no means large enough to be considered a representative sample. As such, the findings should be considered as exploratory and not as generalizable to populations beyond the sample itself. Second, because the study design does not include random sampling, it is unclear if results from the mentoring are due to the intervention or simply due to sampling error. Third, because developmental mentoring is a broader and more non-specific intervention (unlike instrumental mentoring in a particular subject area), correlations between mentoring and student gains should be considered cautiously. It is possible that significant correlations that were found

could be associated with student performance indicators (like student grades), but this was not researchable due to the lack of available school data. Finally, although the mentoring took place over one complete semester, the prevailing wisdom in the mentoring field is that longer relationships produce stronger outcomes. With this in mind it is likely that certain impacts may not have had time to emerge in the course of a single semester program.

Chapter 6: Conclusion

Middle school is an important crossroads for students in shaping what trajectory they will follow into the future. Since performance in middle school is predictive of high school graduation for many students (Balfanz et al., 2007), it deserves a high level of consideration by educators and researchers as to what supports are most helpful for struggling students. School-based mentoring provides an opportunity to come alongside middle school students who may be falling behind for a variety of reasons, but it has proven to be an elusive intervention in terms of what works, for whom, and under what conditions (Wheeler et al., 2010).

The results of this study offer some encouraging evidence about the efficacy of using a developmental mentoring approach to support struggling middle school students. The brief mentoring model that was utilized demonstrated the capacity to help mentors and students form strong and satisfying relationships within the course of a single school semester. Intentional use of an asset-building workbook, structuring time for both group interaction and one-on-one mentoring, and providing timely support for mentors were all important factors. The data presented indicated that mentoring relationships were associated with gains in developmental assets for students, and that these gains were also associated with decreases in behavior referrals. Asset gains at the middle school level have potential to impact student performance in both the short term in middle school, as well as the medium term into high school.

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Appendices

Appendix A: Developmental Assets Profile
Appendix B: Mentor Friendship and Aspiration Survey
Appendix C: Match Characteristics Questionnaire
Appendix D: Mentee Relationship Survey
Appendix E: IRB Approval Letter

Appendix A- Developmental Assets Profile

1. I understand that I'm about to take a voluntary survey and that I may stop participation in this survey at any time without penalty. Yes/No
INSTRUCTIONS: Below is a list of positive things that you might have in yourself, your family, friends, neighborhood, school, and community. For each item that describes you now or within the past 3 months, check if the item is true: Not At All or Rarely, Somewhat or Sometimes, Very or Often, Extremely or Almost Always. If you do not want to answer an item, leave it blank. But please try to answer all items as best you can.
2. I tell other people what I believe in.
3. I can shape and influence what happens in my life and future.
4. I like myself.
5. I say no to things that are dangerous or bad for me.
6. I enjoy reading or being read to.
7. I make friends with other people.
8. I care about school.
9. I do my homework.
10. I say no to cigarettes, alcohol, and other drugs.
11. I enjoy learning.
12. I show my feelings in proper ways.
13. I feel good about my future.
14. I ask my parents for ideas when I need help
15. I can be disappointed about something, but not get too upset.
16. I find good ways to handle things that are hard in my life.
17. I think it is important to help other people.
18. I feel safe at home.
19. I plan ahead and make good choices.
20. I stay away from bad people and bad things.
21. I solve conflicts without anyone getting hurt.
22. I feel that people like and respect me.
23. I take responsibility for what I do.
24. I tell the truth even when it is not easy.
25. I accept people who are different from me.
26. I feel safe at school.
27. I try to learn new things.
28. I think about what I want to do in my life when I grow up.
29. I am told to try things that might be good for me.
30. I do chores at home and help make family decisions.
31. I help to make my school, neighborhood, or community a better place.
32. I do things at a religious place, like a church.
33. I do healthy things like eat good food and exercise.
34. I am told to help others.
35. I am part of a sports activity, a club, or another group.
36. I help fix problems in the world, such as giving food to hungry people or giving money to those who need it.
37. I am given important things to do at home, at school, or in my community.
38. I respect other people.
39. I want to do well in school and my other activities.
40. I am aware of other people's feelings and needs.
41. I am involved in creative activities like music, theater, or art.
42. I do things for others in my community.
43. I spend time at home doing things with my parents.
44. I have friends who set good examples for me.
45. I have a school that gives students clear rules.
46. I have adults who are good role models for me.

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A: Developmental Assets Profile (Continued)

47. I have a safe neighborhood.
48. I have parents who want me to do my best and help me do it.
49. I have good neighbors who care about me.
50. I have a school that cares about kids and helps them learn.
51. I have teachers who help me do my best.
52. I have other adults in my life - who are not my parents - who care about me.
53. I have a family that sets clear rules for me.
54. I have parents who talk to me about doing well in school.
55. I have a family that gives me love and support.
56. I have neighbors who help watch out for me.
57. I have parents who are good at talking with me about things.
58. I have a school where every student has to follow the same rules.
59. I have a family that knows where I am and what I am doing.

Appendix B: Mentor Friendship and Aspiration Survey

Friendship Scale (Likert Scale Responses on a Six Point Scale)

I feel like my student wishes he/she had a different mentor.

My past life experiences help me relate well to my student.

My mentoring relationship has taken away from other relationships with family and friends.

I have a difficult time with my student's behavior when we are together.

My student and I enjoyed being together from the very beginning of our relationship.

My student and I like the same things (like sports, crafts, reading, etc.)

I think I would relate better to a different type of student.

I think my student and I are well suited for one another.

I look forward to spending time with my student.

My student and I both contribute to the relationship...there is give and take in our interactions.

Aspiration Scale (Likert-Type Responses on a Six-Point Scale)

Helping your student develop values (like honesty, trustworthiness, etc.).

Helping your student make healthy choices related to his/her behavior.

Helping your student learn how to serve others.

Improving basic social skills (like politeness, making eye contact, saying thank you, etc.)

Challenging your student to explore or try something new.

Helping your student take part in a new experience beyond the school classroom.

Focusing on developing the strengths of your student.

Talking with your student about important life issues (like friends, family, the future, etc.)

Helping your student be successful at school with classwork.

Encouraging your student to be confident in who they are becoming (developing a positive identity).

Match Characteristics Questionnaire, v 2.22
© 2008

John Harris, Applied Research Consulting
Michael Nakkula, Project IF "Inventing the Future"

APPLIED
RESEARCH
CONSULTING

OFFICE USE ONLY: **Match ID:** _____ **DOM:** _____ **Mentee's age:** _____ **GIS:** _____
Match Type: CB ☐₁ / SB ☐₂ / SB+ ☐₃ **Other Current Match?** No ☐₀ *If yes*, CB ☐₁ / SB ☐₂ / SB+ ☐₃
Mentee's Ethnicity: White ☐₁ / Black ☐₂ / Hispanic ☐₃ / Asian ☐₄ / Native American ☐₅ / Other ☐₆

Name:_____ Date:_____ Gender: M ☐₀ / F ☐₁ Age: _____

Section I: How do you feel about your match?

For each statement below, please say how often it is true for you by choosing a number from the scale at the bottom of the page. If you do not think a question applies to you or if it does not make sense to you, please leave it blank.

1. My mentee is open with me (shares thoughts and feelings).	1 2 3 4 5 6
2. I feel like the match is getting stronger.	1 2 3 4 5 6
3. My mentee is very private about his/her life at home (does not talk to me about it).	1 2 3 4 5 6
4. My mentee asks for my opinion or advice.	1 2 3 4 5 6
5. My mentee makes me aware of his/her problems or concerns.	1 2 3 4 5 6
6. I feel distant from my mentee.	1 2 3 4 5 6
7. I feel like my mentee and I are good friends (buddies, pals).	1 2 3 4 5 6
8. I feel unsure that my mentee is getting enough out of our match.	1 2 3 4 5 6
9. My mentee asks me for help when he/she has difficult schoolwork or a major project to do.	1 2 3 4 5 6
10. My mentee avoids talking with me about problems or issues at home.	1 2 3 4 5 6
11. My mentee is open with me about his/her friends.	1 2 3 4 5 6
12. I feel awkward or uncomfortable when I'm with my mentee.	1 2 3 4 5 6
13. I feel frustrated or disappointed about how the match is going.	1 2 3 4 5 6
14. My mentee is willing to learn from me.	1 2 3 4 5 6
15. My mentee does things to push me away.	1 2 3 4 5 6
16. I feel like I am making a difference in my mentee's life.	1 2 3 4 5 6
17. My mentee seems to want my help with his/her academics.	1 2 3 4 5 6
18. My mentee talks to me about it when he/she has problems with friends or peers.	1 2 3 4 5 6
19. My mentee shows me how much he/she cares about me (says things, smiles, does things, hugs me, etc.).	1 2 3 4 5 6
20. I feel like my mentee and I have a strong bond (are close or deeply connected).	1 2 3 4 5 6
21. My mentee seems uncomfortable (or resistant) when I try to help with problems he/she may be having.	1 2 3 4 5 6
22. I can trust what my mentee tells me.	1 2 3 4 5 6

1	2	3	4	5	6
NEVER	RARELY	SOMETIMES	PRETTY OFTEN	VERY OFTEN	ALWAYS

Appendix D: Mentee Relationship Survey

		Not True At All	Not Very True	Sort of True	Very True
0.	My mentor knows my name.				
1.	My mentor makes fun of me in ways I don't like.	1	2	3	4
		1	2	3	4
2.	My mentor almost always asks me what I want to do.	1	2	3	4
3.	When I'm with my mentor, I feel special.	1	2	3	4
4.	Sometimes my mentor promises we will do something; then we don't do it.	1	2	3	4
5.	My mentor is always interested in what I want to do.	1	2	3	4
6.	When I'm with my mentor, I feel excited.	1	2	3	4
7.	When my mentor gives me advice, it makes me feel stupid.	1	2	3	4
8.	My mentor and I like to do a lot of the same things.	1	2	3	4
9.	When I'm with my mentor, I feel sad.	4	3	2	1
10.	I feel I can't trust my mentor with secrets—my mentor would tell my parent/guardian.	1	2	3	4
11.	My mentor thinks of fun and interesting things to do.	1	2	3	4
12.	When I'm with my mentor, I feel important.	1	2	3	4
13.	When I'm with my mentor, I feel bored.	4	3	2	1
14.	I wish my mentor asked me more about what I think.	1	2	3	4
15.	My mentor and I do things I really want to do.	1	2	3	4
16.	When I'm with my mentor, I feel mad.	4	3	2	1
17.	I wish my mentor knew me better.	1	2	3	4
18.	When I'm with my mentor, I feel disappointed.	4	3	2	1
19.	When I'm with my mentor, I feel happy.	1	2	3	4

RESEARCH @ EMU

UHSRC Determination: **EXPEDITED INITIAL APPROVAL**

DATE: **October 7, 2015**

TO: **Chris Reinsma**
Eastern Michigan University

Re: **UHSRC: # 761648-1**
Category: Expedited
Approval Date: October 7, 2015
Expiration Date: October 6, 2016

Title: **An Investigation of Middle School Mentoring Relationships Through the Lens of the Developmental Assets Profile**

Your research project, entitled **An Investigation of Middle School Mentoring Relationships Through the Lens of the Developmental Assets Profile,** has been approved in accordance with all applicable federal regulations.

This approval included the following:

1. Enrollment of *45* subjects to participate in the approved protocol.
2. Use of the following study measures: *DAP Notebook; Developmental Assets Profile; Interview Questions – Mentor and Student; Mentor Friendship and Aspiration Survey; Measuring the Quality of Mentor-Youth Relationships*
3. Use of the following stamped recruitment materials: *Parent Follow up Letter; Recruitment Letter*
4. Use of the stamped*: Assent Form; Mentor Consent; Parental Consent Form*

Renewals: This approval is valid for one year and expires on October 6, 2016. If you plan to continue your study beyond October 6, 2016, you must submit a Continuing Review Form by September 6, 2016 to ensure the approval does not lapse.

Modifications: All changes must be approved prior to implementation. If you plan to make any minor changes, you must submit a **Minor Modification Form.** For any changes that alter study design or any study instruments, you must submit a **Human Subjects Approval Request Form**. These forms are available through IRBNet on the UHSRC website.

Problems: All major deviations from the reviewed protocol, unanticipated problems, adverse events, subject complaints, or other problems that may increase the risk to human subjects **or** change the category of review must be reported to the UHSRC via an **Event Report** form, available through IRBNet on the UHSRC website

Follow-up: If your Expedited research project is not completed and closed after **three years,** the UHSRC office requires a new **Human Subjects Approval Request Form** prior to approving a continuation beyond three years.

Please use the UHSRC number listed above on any forms submitted that relate to this project, or on any correspondence with the UHSRC office.

Good luck in your research. If we can be of further assistance, please contact us at 734-487-3090 or via e-mail at human.subjects@emich.edu. Thank you for your cooperation.

Sincerely,

Joan Cowdery,
PhD Vice Chair
University Human Subjects Review Committee