NATIONAL MENTORING RESOURCE CENTER
A Program of OJJDP

Mentoring for Enhancing School Attendance, Academic Performance, and Education Attainment

National Mentoring Resource Center Population Review

Michael D. Lyons[a] & Wing Yi (Winnie) Chan[b]

[a] University of Virginia, School of Education and Human Development
[b] The Education Trust

Summary

This review examines how youth mentoring influences school attendance, academic performance, and educational attainment (APEA) outcomes. In general, empirical studies reveal that mentoring programs tend to have "small-to-moderate" impact on mentees' academic outcomes. Importantly, small-to-moderate effects should not necessarily be interpreted as "not meaningful". Although individual mentors may produce small, positive changes on APEA outcomes, these small effects can have a large cumulative effect. Because mentoring services are among the most frequently provided prevention program offered in the United States[1], small positive effects of mentoring program can equate to large, population changes on APEA outcomes. At the same time, some mentoring programs have integrated specific activities to increase the effects mentors have on APEA outcomes for individual youth participating in their programs.

What mentoring activities account for variability in APEA outcomes? One of the primary factors that influences mentors' impact on APEA outcomes is the type of activities in which mentors engage. Others have differentiated between two broad types of activities, 1) those focused primarily on enhancing relationship closeness between the mentor and mentee and 2) those focused primarily on helping the mentee develop a skill or achieve a goal.[2,3] Instrumental mentoring programs — those that target specific school-related skills (e.g., organization, coping with stress) for improving specific outcomes (e.g., improved grades, high school graduation) — tend to have a larger than average impact on mentees' academic performance. Instrumental mentoring programs are typically characterized by structured or semi-structured curriculum, training for mentors that focus on skills building in mentees, and ongoing or as-needed supervision for mentors. It is important to note that the emphasis of instrumental programs on skill building does not mean that the emotional quality of the relationship is unimportant. Indeed, mentoring programs generally show larger than average effects when mentors and mentees report having high quality mentoring relationships (e.g., those characterized by mutuality, trust, longer duration).

It appears that both types of mentoring activity described above are important contributors to promoting APEA outcomes, although the relative emphasis of each type of activity varies across programs. As an alternative to the instrumental programmatic approach, for example, high quality mentoring relationships may also facilitate mentors' ability to set goals and teach specific skills (i.e., those activities common to instrumental mentoring programs). This mentoring focused on relationship development, sometimes referred to as a *developmental model of mentoring*, builds on the assumption that mentors can adapt to the needs of mentees as they go through different phases of development and face different challenges. Likewise, some evidence suggests that designing and implementing activities to explicitly address the cultural and socio-political needs of mentees from minoritized backgrounds may result in the formation of stronger mentoring relationships and lead to greater impact on APEA outcomes. We also find that school-based mentoring services – programs offered to youth in school settings – are popular ways for mentoring programs to target APEA outcomes (particularly for students experiencing elevated risk due to observed academic or behavioral difficulties), but that implementing school-based mentoring programs with sufficient fidelity and dosage can be challenging.

How do these mentoring activities produce positive impact on APEA outcomes? From the research reviewed, we know less about the intervening processes that link mentoring to academic outcomes. It appears that mentoring supports improvement in mentees' academic performance by building mentees' internal and external skills and resources. Internal skills and resources include coping skills, help-seeking, growth mindset, and self-efficacy. External skills and resources include stronger connections with schools, parents, and teachers.

Introduction

Promoting academic success is among the most frequent outcomes targeted by youth mentoring services. Academic outcomes, in this review, refer to measures of youth learning (e.g., grades, standardized test scores) as well as regular attendance and, ultimately, graduation from high school. Formal mentors (i.e., non-familial adult volunteers matched with youth) as well as natural mentors (e.g., teachers, fictive kin, coaches, or other adults) are often considered to be important resources for supporting success in school. Given the importance of academic outcomes, and prevalence of mentoring, what does research on mentoring and academic outcomes tell us about the impact of mentoring on these outcomes? This review was conducted to answer the following four questions:

1. What are the effects of mentoring on school attendance, academic performance, and educational attainment (APEA) among youth?
2. What factors condition or shape the effects of mentoring on APEA?
3. What intervening processes are most important for linking mentoring to beneficial effects on APEA?
4. To what extent have efforts to provide mentoring to youth with APEA as a priority outcome reached and engaged the intended youth, been implemented with high quality, and been adopted and sustained by host organizations and settings?

For this review, we defined APEAs in the following ways. *School attendance* refers to how often students attended K-12. For example, attendance is often measured in terms of number of days absent from school (e.g., absenteeism or truancy), or the amount of instructional time a student receives. (e.g., instructional time). *Academic performance* refers to quantitative measures of learning. Measures may be summarized through letter grades, grade point averages (self-reported or administrative records summarizing grades across courses), as well as standardized measures of learning (e.g., standardized state test scores, college entrance examinations etc.) *Educational attainment* refers to the successful completion of an educational degree program (e.g., high school diploma), demonstrated progress toward high school graduation (e.g., credits earned), or demonstrated progress toward completing a post-secondary degree (e.g., credits earned, enrollment in a post-secondary degree program). Educational attainment also refers to the failure to successfully complete a degree program (e.g., early school dropout). Finally, *Mentoring* refers to "relationships and activities that take place between youth (i.e., mentees) and older or more experienced persons (i.e., mentors) who are acting in a nonprofessional helping capacity, whether through a program or more informally, to provide support that benefits one or more areas of the young person's development" (see Mentoring Defined).

What are the effects of mentoring on school attendance, academic performance, and educational attainment (APEA) among youth?

Background

APEAs are associated with a wide range of positive outcomes later in life – on average, higher levels of APEAs are associated with increased income, fewer health problems, and lower rates of incarceration.[4] For this reason, schools and communities devote significant social and economic resources to support the development of APEAs. Mentoring – referring to both formal mentoring programs (i.e., mentors and mentees are matched through a program) and natural mentoring (i.e., youth-adult mentoring relationships form organically) – is one common approach implemented to provide youth with an additional supportive adult in their life and to support APEA development.[1]

How do mentors support APEA outcomes? Mentoring relationships are thought to promote APEAs by offering youth opportunities to receive various types of support from a trusted adult.[5] This rationale is based on research demonstrating that positive youth-adult relationships serve as a critical foundation for teaching youth the skills necessary to be successful later in life. The relationships that youth develop with parents, teachers, and other adults are essential for helping youth develop a variety of skills – including coping with stress, life skills, and problem solving. Mentors, by extension, serve as an additional youth-adult relationship in a child's life. Like other youth-adult relationships, mentors are thought to support APEAs by acting as a "sounding board" and help youth troubleshoot a challenging relationship with a peer or teacher. Mentors may also support youth by normalizing difficult experiences in school as well as provide direct academic support (e.g., teaching study skills or helping youth with homework). Mentoring relationships (both formal and informal), therefore, are thought to support APEA development by adapting the mentorship activities to meet the particular needs of school-age youth.[6]

Defining mentoring in this way (i.e., a relationship that adapts to meet the needs of youth) presents both challenges and opportunities for understanding its impact on APEAs.[7] One strength of this approach is that mentors have the potential to be immediately responsive to specific (and changing) youth needs. The historical focus on developing a close, trusting relationship means that mentors may become aware of shifting needs of youth (e.g., an impending test) and then provide direct support to meet that need (e.g., teaching study strategies). This also means that mentors may be in a position to support diverse, and changing, needs of youth (e.g., academic, relationships, mental health) participating in mentoring programs.[8]

Despite strengths of mentoring relationships, this definition of mentoring presents challenges for researchers interested in evaluating the impact of mentoring on APEAs. When evaluating a program or a service, it is typical for impact to be measured by observing the differences in outcomes between those who received support and those who did not. For example, to estimate the effect of a 2-hours of weekly math tutoring on math grades, one could observe differences in math grades between students who received a tutor and those who did not. In most instances, mentors do not operate in this way – youth who receive a mentor may receive some tutoring, some emotional support, and some support with peer relationships. Consequently, it can be difficult to identify how specific types of mentoring activities relate to APEA outcomes.[7]

One additional challenge for understanding the effects of mentoring on APEA outcomes is that many factors influence student success in school. When attempting to explain the factors that contribute to (or inhibit) youth success in school, it is common to describe individual and environmental factors (and interactions between the two) as influencing APEA outcomes. A wide range of individual characteristics are associated with APEA development – such as youths' cognitive ability, personality characteristics, and motivation. In addition, variables in the youth's environment – availability of mentors (both formal and informal), family structure, school climate, socioeconomic status, or cultural context or norms – have also been shown to be associated with APEA. Although mentors are thought to be a potentially important resource for APEA outcomes, they are often one of many factors that contribute to APEA outcomes – which can make these outcomes difficult to change over short periods of time.

Research

Meta-analyses – studies that estimate "average" effects across mentoring by aggregating across multiple studies of individual mentoring programs – tend to find that mentoring programs have modest, positive effects on APEA outcomes.[9,10] When synthesizing a large body of research, like research on mentoring and APEA outcomes, meta-analyses are useful because authors use systemic search strategies to identify and summarize findings across a number of studies. In this review, we summarize findings of meta-analyses conducted on mentoring programs targeting APEA outcomes. We also searched the literature of published studies to identify individual studies that can provide further insight into the role of mentoring in promoting APEA outcomes. We review a limited number of high-quality studies – those that experimentally tested specific program conditions or were conducted with national samples – to provide readers with illustrative examples of programs and practices associated with APEA outcomes.

Meta-analyses tend to find that mentoring programs are associated with small to moderate effects on APEA outcomes. One meta-analysis, for example, examined data from approximately 19 individual studies of youth mentoring programs and concluded that formal mentoring services had a small positive effect on youth academic outcomes across APEA outcomes: attendance, grades, test scores, and high school completion.[9] A more recent meta-analysis examined effects of natural mentors (i.e., adults who youth identified as "mentors") on APEA outcomes using data drawn from 5 individual studies of natural mentors.[10] The authors found evidence of "small-to-moderate" positive effects of natural mentors on school outcomes (e.g., graduation, attendance, grades). Unfortunately, because the authors reported overall effects, the results offer little insight into the role of mentoring in promoting different APEA outcomes.

Large randomized controlled trials in which several hundred (or thousands) of youth are randomly assigned to receive a mentor or to a control condition have also been used to estimate the impact of mentoring services on APEA outcomes. Like results from meta-analyses, large randomized controlled trials also tend to find small, and in some cases, no effects of mentoring services on youth outcomes. Wheeler et al.[11] summarized findings from the three largest randomized controlled trials of school-based mentoring (i.e., formal mentoring programs that took place in- or after-school[12,13,14,15]) and wrote "available findings thus suggest that one year of participation in a school-based mentoring program tends to have modest effects on selected youth outcomes." These youth outcomes included school grades, truancy, and attendance.

In contrast to findings from meta-analyses and large randomized trials, some smaller scale studies of formal mentoring have found moderate, positive changes on APEA outcomes. These studies tend to differ from the larger randomized controlled trials of formal mentoring programs in terms of the types of activities mentors are expected to do and the degree to which mentors are expected to adjust mentoring practices. In general, tests of these types of mentoring programs follow either a structured or semi-structured curriculum wherein mentors and youth follow a preselected curriculum or can select from a limited number of mentoring activities. For example, a school-based group mentoring program, *Project Arrive*, provided initial and on-going training for mentors and included semi-structured activities designed to support academic success and group cohesion. Initial training included expectations and responsibilities of mentors and tips on co-facilitation (each group is facilitated by two mentors). Ongoing training and support focused on helping mentors to develop effective relationships with mentees and facilitate positive peer relationships among mentees. The most common activities were academic check-ins, games, and closing reflections. Mentors and mentees spent most of their time discussing academic achievement, goal setting, peer relationships, and transition to high school.[16]

Participation in *Project Arrive* was found to be related to the increases in high-school credits earned and increases in instructional time as compared to youth who did not participate in the mentoring program; however, program participants did not show improvements in grades.[16] Another study of a structured group mentoring program (i.e., a program that followed a curriculum which was based on culturally sensitive principles and emphasized parental empowerment and community support) found positive change in grade point average by the end of the academic year.[17] Within the intervention group, children of parents who were more involved with the program reported greater increases in GPAs than their counterparts. Structured activities included study skills exercises, assistance with homework, exploration of career opportunities, and creative and artistic activities. Mentors and mentees also discussed the importance of African American cultural heritage. The unifying purpose of all these activities was the importance of education.

Evaluations of mentoring with more structured activities have found that, in some cases, these mentors' impact on APEA outcomes have rivaled the effect of other types of evidence-based interventions. McQuillin and Lyons[18] found evidence of moderate positive change in students' average grades and attendance following a brief (12-week) structured one-on-one formal mentoring program which focused on teaching youth skills necessary for success in school (e.g., study skills, coping with stress). Following participation in this program, mentees were observed to have, on average, grades about 4% points greater than those who did not participate and, on average, .2 fewer days absent. Similarly, a randomized controlled trial found that *Quantum Opportunities*, a 4-year mentoring program for high school students vulnerable to dropout, was associated with better GPAs, higher graduate rates, and higher college acceptance rates. Mentors and mentees were matched during freshmen year and were expected to maintain the mentoring relationship throughout high school. Mentees participated in life-skills training such as decision-making, family and personal responsibility, civic responsibility, and job readiness. Mentors also helped mentees with SAT/ACT preparation, college application, financial aids application, and summer employment.[19]

Another example of mentoring that has demonstrated promising effects on APEA outcomes is *Check & Connect Plus Truancy Board* (CandC + TB). The goal of CandC + TB is to improve school attendance and support progress toward high school graduation. The program targets students who have serious truancy issues, who are required to meet with the community truancy board to develop a plan to improve attendance. A court probation counselor serves as the mentor. The counselors "check" students' progress regularly using school data and "connect" with students through home visits, personalized interventions to support school engagement, and advocacy on behalf of the students. The counselors are matched with the students in 9th grade and continue the mentoring relationship until 12th grade. Strand and Lovrich[20] found that students in the mentoring group were more likely to graduate high school and less likely to drop out than students in the comparison group. 84 percent of students in the mentoring group graduated high school in comparison to 64% of students in the comparison group. 18 percent of students with a mentor dropped out of school in comparison to 36% of students in the comparison group.

See the Featured Programs box in this review for additional details on the three programs mentioned above as they illustrate some common models and approaches to applying mentoring to APEA outcomes.

Conclusions

1. Youth mentoring programs tend to show modest positive effects on APEA outcomes.
2. The impact of mentoring varies depending on outcomes — mentoring appears to be associated with larger effects on some outcomes (e.g., attendance and well-being) as compared to others (e.g., grades and test scores).
3. Mentoring programs that integrate evidence-based activities (e.g., setting short term goals, teaching study skills, or use of planner) known to have positive associations with APEA outcomes tend to have moderate-to-large positive effects on APEA outcomes.

What factors condition or shape the effects of mentoring on APEA?

Background

Through positive and trusting relationships with mentors, youth acquire skills and resources necessary for academic success. As such, the mentoring relationship is an important factor that shapes the effects of mentoring on APEA. Research has consistently found that mentoring has a greater positive effect on APEA when the mentoring relationship is high quality.[9,21,22] High quality mentoring relationships are characterized by longer duration, consistent contact, strong emotional connection, and a developmental approach to mentoring.[23] A developmental approach to mentoring places an emphasis on understanding and meeting the needs of the young person. Mentors using this approach focus on developing an emotional connection with their mentees and setting expectations and goals based on the preferences and interests of their mentees.[24]

In addition to developing a strong and positive mentoring relationship, some mentoring programs target specific outcomes (e.g., GPA), typically employing a curriculum and training for mentors that aim to help mentees achieve the targeted outcomes. Because of the relative emphasis placed on goal attainment and skill building, such programs can be described as taking an instrumental approach.[18] To better understand differences between developmental and instrumental approaches to mentoring and their influence on APEA outcomes, some scholars have suggested programs think carefully about the desired goals and the specific needs of the youth participating.[6] In cases where relational outcomes are desired for the purposes of providing general support to mentees, relationally-focused programs may be desirable (sometimes described as *relationships-as-an-end*). In other cases, where programs are interested in targeting specific APEA outcomes (e.g., improving grades, attendance), mentoring programs may regard the mentoring relationship as a conduit for teaching specific skills or evidence-based practices (e.g., study skills) necessary for success in school (sometimes referred to as *relationships-as-a-means*). Both approaches include a strong mentoring relationship and these two approaches are not mutually exclusive.

Extant evidence suggests that instrumental mentoring programs have a greater effect on APEA than programs that are primarily relationally-focused. To help youth to achieve their goals and targeted outcomes, instrumental mentoring programs work to increase self-efficacy and to build competencies and skills.[16,18,19] Instrumental mentoring may have a greater effect on academic outcomes because it includes evidence-based and structured practices (e.g., study skills building, goal setting) that are designed to improve the targeted outcomes.[25] It would also include specific training for mentors to address targeted outcomes. For example, in one school-based brief mentoring program, mentors receive initial and ongoing training on providing feedback and setting measurable and attainable goals with mentees.[25] Mentors also received proactive and as-needed supervision to address any challenges and concerns.

Finally, natural mentoring is an effective approach to mentoring. Natural mentoring relationships develop organically without a formal mentoring program. Given the significance of a positive mentoring relationship, natural mentoring might be advantageous because mentees already know their mentors prior to beginning the mentoring relationship and are likely to have some similarities (e.g., cultural identity, language) as they are often from the same social network. Natural mentoring has been found to be positively associated with APEA outcomes in youth of color,[26,27] youth in the foster system,[28] and LGBTQ identified youth.[29]

Youth Initiated Mentoring (YIM) is a variation of natural mentoring in which mentors are adults whom youth already know. Unlike traditional mentoring programs in which youth are matched with unrelated adults, YIM asks youth to identify and recruit an adult they know to become their mentor. In YIM, the mentoring relationship is structured and organized through a program or an intervention.[10] YIM places an emphasis on leveraging existing social capital and resources from mentees' social network. It also empowers mentees to choose and recruit their own mentors. Finally, when mentors and mentees share similar interests, mentoring appears to be more effective.[9]

Research

Mentoring has a greater impact on APEA when mentees report having high quality relationships with their mentors. In a meta-analysis of one-on-one mentoring, DuBois and colleagues[30] found that mentoring programs that had expectations for frequent contact and duration of relationships between mentors and mentees had stronger effects on mentee outcomes, including academic outcomes, in comparison to mentoring programs that did not have those expectations. Frequent contact between mentors and mentees and longer duration of relationship are characteristics of high-quality mentoring relationships. In a sample of Latino high school seniors, more frequent contact with a natural mentor, longer mentoring relationship, and greater support for education from a natural mentor (e.g., emotional support, informational support, modeling behaviors) were associated with fewer absences.[27] A recent meta-analysis of natural mentoring found that high quality relationship characteristics, such as relatedness, social support, and autonomy support, were more positively associated with academic outcomes than only accounting for the presence of natural mentors.[22] Finally, an evaluation of the school-based Big Brothers and Big Sisters mentoring program found that rematching did not negatively impact the effect of mentoring had on teacher's reported academic outcomes *if* mentees reported a close relationship with their mentor after rematch.[31]

It appears that high-quality mentoring relationships are an important part of effective mentoring programs that seek to improve APEA outcomes. In a study evaluating the effectiveness of the school-based Big Brothers and Big Sisters mentoring program, students reported feeling closer to their mentors when they had opportunities to interact individually and when mentors consistently showed up during meetings.[31] Another qualitative study found that spending time together and participating in shared activities, trust and fidelity, and role modeling were key characteristics of high-quality mentoring relationships.[32] Similarly, mentors and mentees in a group mentoring program described feelings of respect and honesty as important to their mentoring relationship.[33] Finally, a recent mixed methods study of a school-based mentoring program designed for middle school-aged girls found that mentors in more successful mentoring relationships (stable relationships, relationships that progress positively, or relationships that have recovered from challenges) were those who felt personally responsible for developing a close relationship with their mentees and were able to adjust their expectations about their relationships.[34] Research is needed to explicitly investigate the extent to which mentoring can have a greater impact on APEAs if mentors apply these practices to develop high-quality relationships with mentees.

Some mentors may be more prepared to develop strong and positive relationships with young adults. DuBois et al.[9] found that mentoring has a larger effect when mentors were from helping professions (e.g., teachers, counselors). Mentors with training in the helping professions are more likely to have the interpersonal skills necessary to develop supportive relationships with their mentees. Those who work with youth in their profession (e.g., teachers, coaches) could apply their experience working with youth in their mentoring relationship. Regardless of the background of mentors, it is still a best practice to provide ongoing training for mentors.[35,36] Research has found that practices such as proactive supervision, ongoing training, setting clear expectations are associated with mentors feeling prepared for mentorship and mentors persisting in mentoring for longer.[37,38,39]

In addition to having high-quality mentoring relationships, helping mentees to develop competencies and skills to meet their goals is another condition that increases the effectiveness of mentoring on academic achievement. A recent meta-analysis found that instrumental mentoring is more effective than non-specific mentoring (i.e., mentoring that focuses solely on relationship building between mentors and mentees) on improving academic outcomes (e.g., academic performance). The effect size of instrumental mentoring was moderate and three times larger than the effect size of non-specific mentoring.[40]

In this meta-analysis, instrumental mentoring also includes mentoring programs that target a specific population (e.g., trauma exposed youth). Instrumental mentoring programs were twice as effective as non-specific programs for youth who are identified as at risk (i.e., youth from low-income backgrounds, youth from foster care, and youth with multiple risk factors). Similarly, DuBois and colleagues[9] found that mentoring had a larger effect for youth who exhibit problem behaviors (e.g., poor academic performance) and programs that employ specific strategies to help mentees overcome targeted behaviors were most successful. In sum, mentoring programs that include specific and intentional training, curriculum, and activities that are designed to address educational challenges in youth experiencing elevated levels of risk are likely to have the biggest impact on improving APEA.

Although instrumental mentoring programs focus on developing specific skills and achieving target outcomes, a close mentoring relationship remains an important component. A recent randomized control trial found that a school-based mentoring program had the largest impact on middle school student academic outcomes (i.e., grades in Math, English language arts, science, and social sciences, statewide assessment, and attendance) when mentees reported having a close relationship with their mentor and when their mentors set clear goals and gave them feedback.[41] Furthermore, through developing goals and achieving the specific outcomes, mentors and mentees can become closer and develop stronger relationships.[3] It is important to note that a youth-centered approach in which mentees and mentors collaborate to set, modify, and achieve goals is an essential component of instrumental mentoring.[42]

When youth are empowered to identify and recruit natural mentors, mentoring appears to have a positive effect on academic success. Youth-initiated mentoring (YIM) asks mentees to find and recruit a natural mentor from their own social network. Although YIM has gained attention in the scientific literature only in recent years, it has been employed by the National Guard Youth ChalleNGe (NGYCP) Program for over two decades. A longitudinal evaluation of NGYCP found that YIM had a positive effect on participants' long-term academic outcomes (e.g., high school completion, college credits). Furthermore,

the effect on academic outcomes were only sustained in mentees who had maintained a relationship with their mentors for at least 21 months.[43] Interviews with mentees found that mentors were able to better provide social support, instrumental support, and guidance when they had longer relationships with mentees.[43] A meta-analysis of YIM including 11 independent samples found that the average effect size of YIM programs on school outcomes are moderate.[10] All studies included in this meta-analysis are either a RCT or a quasi-experimental study. School outcomes include a combination of school performance measures, such as high school completion, attendance, higher grades, absences, and school attitudinal measures (i.e., school belonging, academic engagement, school importance). The effect size is larger than the average effect size of mentoring programs on academic outcomes found in DuBois and colleagues' meta-analysis.[9] It should be noted that two of the studies in the meta-analysis of YIM are also included in the 2011 meta-analysis. An empirical study that statistically examines the differences in effectiveness of YIM vs. non-YIM mentoring programs is needed to conclusively decide if and the extent to which YIM is more effective.

Conclusions

1. High-quality mentoring relationships are needed for mentoring to have a larger impact on academic performance.
2. In addition, when instrumental mentoring programs include targeted skill building to help mentees to achieve goals in addition to relationship building, mentoring programs have a greater effect on mentees' academic performance.
3. Mentoring programs that ask and empower mentees to identify and recruit their mentors appear to have promising effects on academic outcomes, especially when the relationships are maintained over a long period of time. It is likely that when mentees identify their own mentors, they choose mentors that share their interests and the mentoring relationships are likely to last longer.

What intervening processes are most important for linking mentoring to beneficial effects on APEA?

Background

Research on identifying the intervening processes for explaining the positive effects of mentoring to APEA is limited. Mentoring is hypothesized to influence APEA because mentees are able to acquire skills and resources through positive relationships with mentors. Extant research supports this hypothesis: internal and external skills and resources explain the link between mentoring and APEA.[44,45,46] Internal skills and resources, such as academic self-efficacy, help-seeking skills, and coping skills, have been found to explain the positive effects on APEA.[45,46] Lyons and McQuillin[7] summarized the effects of mentoring on educational attitudes, beliefs, and behaviors (EABBs) in a recent National Mentoring Resource Center Research Review and they found that mentoring has a small effect on improving EABBs. EABBs are examples of internal skills and they have been linked to APEA.[47] In addition, mentoring helps mentees to develop external skills and resources, such as school belonging and positive relationships with adults (e.g., parents, teachers), which in turn are associated with improvement in APEA.[44,48]

Although existing evidence points to some promising intervening processes, there are many unanswered questions about how mentoring influences APEAs. For example, only one study has investigated how internal and external skills and resources together influence APEA.[46] It is possible that internal skills such as helping seeking skills would support the development of external resources (e.g., positive relationships with adults), which in turn, would be associated with better APEA. In addition, studies have only included short-term outcomes such as overall GPAs and grades in specific subjects. The effects of these internal and external skills and resources on longer-term academic outcomes (e.g., high school completion) are unclear.

Research

Research has found that internal skills and resources, such as academic self-efficacy, help-seeking skills, and coping skills, partially explain the relations between mentoring and APEA. In a longitudinal evaluation of Big Brothers and Big Sisters, student-report of academic self-efficacy mediated the effects of mentoring on grades and unexcused absences. The evaluation included a waitlist control group and 18-month follow-up to test the longer-term effects of mentoring.[46] Mentoring has also been found to improve mentees' academic outcomes by targeting specific skills that mentees need to succeed. For example, qualitative studies of mentoring programs working with African American mentees have found that mentors can support APEA outcomes by affirming their racial identity and teaching them skills to handle difficult race-related situations.[45] Finally, in a study of youth-initiated mentoring (YIM) in first-generation college students, students who identified a YIM reported higher GPA and greater levels of help seeking behavior as compared to those who were in the control group. The authors theorized, but did not test, that YIM improved academic performance by increasing help-seeking skills.[49]

Mentoring also improves APEA through increasing mentees' external skills and resources. Recent analyses of the effects of Project Arrive found that school belonging explained the positive effects of mentoring on 10th grade GPAs.[44] Every unit increase in school belonging was associated with a .32-point increase in GPA. In another study of school-based mentoring, Karcher and colleagues[48] found that connection with parents explained the effects of mentoring on grades in spelling in middle school students. Similarly, the longitudinal evaluation of Big Brothers Big Sisters found that mentoring improved mentees' relationships with their parents, which in turn, supported mentees' values in school, which were associated with better grades and fewer unexcused absences.[46]

Conclusions

1. Mentoring programs help mentees to develop internal skills and resources, including self-efficacy, coping skills, and help-seeking, which are associated with improved academic performance in mentees.
2. External skills and resources, such as school belonging and connections with parents and teachers, explain the link between mentoring and improved academic performance in mentees.

To what extent have efforts to provide mentoring to youth with APEA as a priority outcome reached and engaged the intended youth, been implemented with high quality, and been adopted and sustained by host organizations and settings?

Background

Whereas, large studies of youth mentoring tend to show modest, positive associations between mentoring services and APEA outcomes, smaller studies in which mentoring programs align targeted mentoring activities to the particular needs of youth served in these programs often demonstrate larger positive effects. The discrepancies between these findings may be explained, in part, by differences in how mentoring programs identify and engage particular youth, how mentoring programs have been implemented (i.e., integrating research supported practices into the delivery of mentoring services), and the extent to which this model of mentoring persists over time.[6,8]

Researchers have historically approached these discrepancies by advocating for tighter control of the recruitment of youth mentors, selection of mentoring protocols informed by research evidence, and closely tracking if (and how well) programs implement the selected activities. This approach is based on principles from prevention and implementation science which describe processes researchers can follow to develop, implement, and test interventions designed to promote youth outcomes.[50]

At the same time, organizations that develop and implement mentoring programs have cautioned against full adoption of the model described above. Mentoring services were developed and intended to be services that adaptively respond to diverse needs of youth. Tight control over the activities that occur within the mentoring relationships risk damaging core features of mentoring relationships (e.g., those built on empathy, trust, and mutuality), which are often viewed as the keys to effective mentoring. This caution is particularly applicable to mentoring programs seeking to promote APEA outcomes among historically minoritized (i.e., youth, because of the race or ethnicity, have been systematically marginalized because

of racism) or youth deemed "at-risk" for negative APEA outcomes (e.g., dropout, truancy, failing grades). Overly structured or prescriptive mentoring practices intended to promote APEA may have the opposite of their intended effect in that they fail to account for environmental or cultural factors that influence APEA outcomes.[51]

Research

Despite a strong theoretical basis for needing to align mentoring practices to reach intended youth, implement with high quality, and sustain practices, existing research provides limited insight into these practices as related to APEA outcomes.

With respect to reaching and engaging intended youth, A handful of studies have examined the extent to which mentoring programs have reached and engaged targeted youth. On the one hand, several studies have documented that mentoring programs largely serve racial and ethnic minoritized youth or youth deemed "at-risk" for negative APEA outcomes. In addition, a handful of studies have also demonstrated mixed effects between the length and strength of relationship quality on APEA outcomes. In some cases, positive associations between the length of the mentoring relationship and APEA outcomes have been observed.[43,52] Other studies, however, have found this effect to be less robust for some APEA outcomes (e.g., grades and standardized test scores[41]). Furthermore, school-based mentoring programs have been identified as a promising tool for addressing school-related problems that use "early warning systems" or "multitiered systems of support" to identify and provide early intervention services to students.[53]

However, other studies have questioned the extent to which mentoring programs have sufficiently engaged these minoritized youth. Studies that describe youth participants in mentoring programs provide some insight into the processes that facilitate youth engagement in mentoring targeting APEA outcomes. Research on natural mentoring relationships (i.e., youth-adult relationships developed in the absence of formal programs), for example, show that these mentoring relationships may promote youth engagement and facilitate APEA outcomes by preparing youth for, and teaching youth how, to cope with experiences of racism and discrimination that they may face in schools.[26] Summarizing this work for Black boys participating in mentoring programs, one researcher conducted a systematic review and concluded that youth characteristics interacted with mentor characteristics influencing engagement in the mentoring intervention.[54] In particular, Black boys participating in mentoring programs often reported greater engagement when programs provided mentoring supports that recognized, and celebrated, positive aspects of African American culture and history while also acknowledging systemic factors that contribute to ongoing experiences of discrimination and racism.

Other aspects about the implementation of youth mentoring are less studied. Wheeler et al.[11] discussed the implementation of school-based mentoring noting that programs, as typically implemented tend often to vary considerably in terms of how long mentoring relationships are expected to last, what mentors are expected to do with youth, and the extent to which mentors receive programmatic support. These implementation challenges have been noted to occur, in part, because of structural barriers presented in school settings, including a 9-month operating schedule, challenges finding time for mentors and mentees to meet during the school day, and other unexpected disruptions (e.g., snow days, school testing). The authors noted that this variability means that the estimated effects "may be especially useful for indicating what types of program effects can be realistically expected under typical circumstances of implementation" (p. 7). McQuillin et al.[8] also conducted a systematic review of mentoring activities and found considerable variability in how programs were described and the extent to which key features of the mentoring activities were measured. Hale[33] also found that similar limitations exist in much of the work on group mentoring programs. Collectively, this work means that few inferences can be made about relations between specific mentoring practices and APEA outcomes because they are routinely unmeasured.

Conclusions

1. Mentoring programs routinely provide services to underrepresented youth as intended but questions remain about how well programs engage these youth in services that meet desired outcomes.
2. Because the implementation of mentoring practices are infrequently measured, this creates challenges for programs to understand what works (and does not) in mentoring activities.

Implications for Practice

Mike Garringer – MENTOR

This review of the research around mentoring and outcomes related to academic attendance, performance, and educational achievement (APEA) certainly offers practitioners some clues as to the types of considerations they should keep in mind when designing and implementing mentoring services that can support these outcomes. Like most aspects of mentoring research, we see a strong trend here that, overall, mentoring is moderately effective in directly supporting positive outcomes in these areas, but that the evidence is a bit of a mixed bag, with examples of programs that are more effective than others, but scant details in the research about how services are structured and delivered. This leaves practitioners perhaps feeling like they don't have much to build on in doing work that research suggests is a good idea. But there are a few implications for practice that we can note here, while also offering some suggestions for additional reading and resources.

1. If you want to improve grades and academic achievement, remember that the first step might involve improving and attitudes and beliefs first. As noted in this review, poor attendance and lagging academic performance are often the most easily seen presenting symptoms of a broader and more complicated set of educational challenges and disconnection. While we have plenty of evidence that mentoring can help youth improve their academic performance, the first step may often involve addressing some root causes and precursors to those bad grades. Practitioners would be wise to also read the 2020 NMRC review of Mentoring for Enhancing Educational Attitudes, Beliefs, and Behaviors. Some of the main drivers of bad attendance and other academic disconnection and struggle are the negative attitudes and beliefs—and accompanying behaviors—that many young people have about school and their own abilities to learn. These negative attitudes and behaviors are often grounded in well-founded perceptions of educational settings as being unresponsive to their needs or being environments in which they don't feel equipped to succeed or understood by the adults they must work with. A mentoring program that wanted to improve the academic performance of struggling students would be wise to first do some assessment of why those students are struggling in the first place. Some of it might be rooted in poor instruction or in learning disabilities or other factors that make classroom success a challenge—and sometimes this can be a negative feedback loop in which academic struggles strip away feelings of self-competence and perseverance, which in turn leads to disconnection from school and even worse academic performance. In other cases, students may simply not find school enjoyable, or struggle to see how it connects to their future, or are dealing with negative peer or faculty relationships that make being at school intolerable.

Mentoring programs would be well-served to try and identify negative attitudes and beliefs about school and learning, and their root causes, as a first step in trying to improve academic performance. Chances are that the skill-building and more "instrumental" mentoring work promoted in this article will be easier to do if young people are helped to feel engaged in learning and confident in their ability to overcome challenges. In turn, that work to bolster beliefs will get easier if the youth experiences some academic success. So, while this might be a bit of a chicken-egg situation in terms of whether poor performance causes negative attitudes or vice versa, the reality is that research supports both the chicken and egg[i] and thus helps make a case that a mentoring program should try to address both. Determining the reasons behind each students' disconnection and academic struggle will make whatever work the mentor needs to do much easier. As always, many of the measurement tools available in the NMRC's Measurement Guidance Toolkit can help identify areas of negative self-perception and need for the students in a program.

2. Target academic mentoring services to those who really need this kind of support. As noted in the review, mentoring programs tend to be most effective, both in academic contexts and beyond, when they target specific groups of youth and give them mentoring that is specifically designed to offer what they most need. However, many mentoring programs have models that allow for, if not encourage, all comers, offering flexible mentoring that is designed to provide holistic support and meet youth where they are at, whatever their needs. It's worth noting that this flexibility is one advantage

[i] Valentine, J. C., & DuBois, D. L. (2005). Effects of self-beliefs on academic achievement and vice-versa: Separating the chicken from the egg. In H. Marsh & R. Craven (Eds.), *International Advances in Self Research* (Vol. 2, pp. 53-75). Information Age Publishing.

mentoring may have over other, more rigid interventions that might require extreme fidelity to set curricular activities and timelines for delivery. A program that offers academic mentoring to all students might also avoid the stigma that students can sometimes experience with a referral to a school-based mentoring program, often viewed by peers as being a service for "failing" or "low-achieving" learners, which can actually worsen the academic anxiety those mentees are feeling. So, there are advantages offering mentoring to a wide variety of youth across the spectrum of academic performance.

But for programs that really want to emphasize improved academic performance as a key outcome, there may be a need to restrict program participation to students who are struggling, or struggling in particular ways, and could benefit from the additional targeted support. As noted in this review, many school-based mentoring programs are often designed with particular struggling students in mind. But there are prominent examples in the research literature of programs offering mentoring to a whole school or class of students with less-than-expected results—for example, some of the evaluations of Peer Group Connection, offered to all 9th graders in a school, and iMentor, in their recent evaluation of their school-reform-based model. The thinking is that since we know almost all youth can benefit from mentoring, why not just offer it to everyone?

This challenge is even more pronounced in community-based programs in which youth are recruited very broadly from the community, whether they are having academic struggles or not. In these instances, programs will likely have a mix of students achieving at all levels. While mentors working with those who need academic help can be trained to deliver the types of skill-building and academic supports suggested in this review, programs may want to be cautious in how they evaluate the program, perhaps only looking for improved academic performance in mentees that expressed a need for that support when entering the program. Program intake forms and processes in which youth (or their caregivers) can clearly articulate the nature of their academic struggles and goals can really help programs determine what kinds of academic supports mentors need to be prepared to offer.

All this to say that offering academic support *to those who may not need it* does not seem like a recipe for success when it comes to examining the impact on APEA in an outcome evaluation. Programs are encouraged to think about the types of academic needs they can best address, what other services (e.g., tutoring or peer homework help) might work well alongside mentoring, and evaluate academic outcomes in ways that reflect who really needed this APEA support in the first place. No sense in looking for improved grades if many of your mentees had adequate grades in the first place and didn't receive that support from their mentors. A tighter focus, from recruitment through evaluation, might be most effective here.

3. Honor the blend of developmental and instrumental approaches suggested in this review. One of the major false dichotomies in the mentoring movement is the notion that programs, and by extension their matches, naturally fall into models that are either developmental and relational in nature or are instrumental and purposeful. This review discussed instrumental programs as ones that emphasize skill building and goal attainment, but clearly noted that relationship building still matters in these types of programs. For mentors to help youth turn around their academic performance, it's likely going to take a combination of emotional and developmental support (i.e., building confidence, nurturing grit and perseverance, and turning around negative attitudes) and more skill-focused instrumental support (i.e., teaching test-taking tips and study habits, finding solutions to challenges that impact attendance, and providing some extra teaching and tutoring around subject matter). The relational and developmental side seems fairly self-explanatory—helping a young person believe in their abilities and encouraging their commitment to pursuing academic goals, while offering some emotional support and some fun, non-academic moments along the way. But what about that "instrumental" support? That can take many forms, each of which may be further enhanced by training for mentors on topics like:

- *Providing tutoring and direct academic support* – Giving mentors a heads up on what's being studied in class and giving them strategies to support homework completion and studying for tests can go a long way toward improving academic performance.
- *Teaching student skills* – Students may understand the subject matter, but struggle with other factors, such as time management, study habits, keeping work organized or seeking help when they are stuck. Programs that provide mentors with tools and tips to support building these skills may be more likely to move the needle on academic performance, as suggested in this review.
- *Advocacy* – This review notes that meta-analyses of mentoring suggest that mentors with an advocacy background may be more effective in the mentoring role, and certainly direct

advocacy within educational settings may also be beneficial if programs allow it. Mentors who can talk with teachers and help problem-solve student-teacher challenges or advocate for systemic change within the school setting may be particularly helpful to their mentees.

- *Referral to, and monitoring of, other services* – This is an important, if often overlooked one. If a student is really struggling academically, then a mentor will certainly help. But it's also possible that the challenges a young person is facing may be beyond what just a mentor can provide. If mentors, working with program staff, can ensure referrals to services like dedicated tutoring, then the work of the mentor may be maximized. It's also highly likely that many mentees are struggling academically because of learning disabilities, either diagnosed or not. Referrals to special education services may be exactly the type of help beyond mentoring that a young person needs to find more academic success. Mentoring can do a lot, but it is not a cure for dyslexia or other learning disabilities. And of course, once a student has an Individualized Education Program/Plan (IEP) or a 504 Plan (which allows for accommodations in the classroom and during testing), diligent mentors can be major assets in making sure those services are actually delivered by the school. Unfortunately, many children with learning disabilities do not get the full services they are entitled to unless a caregiver or other caring adult ensures they are delivered. This is another way in which mentors, particularly in-school mentors, can ensure their mentees have all the extra-mentoring support they need.

It is worth noting that these types of instrumental activities can also deepen the relationship—spending time doing these more direct forms of support might make a mentee feel truly cared for and that the mentor is looking out for them. The review here notes that sometimes starting from a task-based place allows the relationship to form in an organic way and shows the mentee that a real investment is being made in their success. So, don't think of the developmental-instrumental tension as some kind of either-or situation. Just remember that it can be easy to lose that developmental relationship orientation when faced with a stressful goal like improving poor grades. The best mentoring here will combine effective academic supports with genuine caring relationships.

4. To the degree possible, coordinate mentors' academic support with what's being taught in the classroom. Research on out-of-school-time (OST) programs in general has found that those programs, whether they be after-school programs, sports and recreation, or mentoring programs, can best support academic achievement and student success if they align their work with what is being taught in the classroom. (For a good primer on the research on aligning OST programming with the school day and classroom instruction, see *Structuring Out-of-School Time to Improve Academic Achievement* published by the Institute of Educational Sciences.) Doing this starts by designating mentoring program personnel who can liaison with teachers and others at the school to understand core learning objectives and units of content being delivered over the current and upcoming quarters or semesters, as well as knowing more granularly what is being taught week to week in terms of lesson plans, homework, and upcoming tests. The specificity with which programs will attempt this coordination depends on how deeply the mentors are providing direct academic support. But mentors in your program should generally know what mentees are working on and, perhaps more critically, aspects of what they are being taught that may be challenging or that might need extra help from a mentor. If this information can be provided to mentors on a mentee-by-mentee basis, all the better, since as noted earlier, the reasons for academic struggle are likely to be somewhat unique to each young person.

5. Coordinate and communicate with parents. While mentors can be major assets in helping youth improve their academic performance, there is no doubt that their work will be better received and more impactful if they can also engage parents and caregivers in supporting the mentee's learning. While both America's schools and mentoring programs have long sought better engagement and coordination with parents and caregivers, there are a few things mentoring programs should keep in mind as they try to reinforce the academic skill-building work of the mentoring relationship in the home:

- *Communicate frequently and in ways that reach diverse parents* – It may take a lot of communication between mentors and program staff with caregivers to get them fully on-board with supporting their child's academic needs. Many parents simply aren't as engaged with schools as an institution and it can take a lot of persistent and proactive outreach to get them on board and make them feel like they are part of a team effort to support their child's academic success. There are often language barriers that must be overcome, so make sure

that you have access to individuals who can translate materials and help in direct conversations for the wide variety of languages that may be spoken in mentees' homes.

- *Position mentoring services as distinct from the school itself* – This may be particularly important for reaching students and families who may feel marginalized within the school community, such as youth of color, youth with disabilities, LGBTQ youth, and immigrant youth, among others. Families of these groups may be distrustful of education institutions and might harbor negative feelings about what their child has experienced at school. Positioning the mentoring program as something apart from the institution, but also able to help their child succeed there, may be appealing to parents and caregivers who have felt let down by prior efforts to offer the mentee academic support. To summarize, much like students, caregivers may have negative attitudes about schools that need to be addressed before the work can begin, and positioning your program as somewhat distinct from school itself might be a selling point to some families.

6. Maximize the amount of support during the school year. This last piece of advice for practitioners is borne out of simple realities of doing academic-focused mentoring, particularly if that mentoring is being done in school settings. Unfortunately, the school calendar year often lends itself to less time for mentoring (and thus academic support) than is needed. Many evaluations of school-based mentoring (such as the Bernstein evaluation of the Student Mentoring Program noted in the review) have noted that many students in the program did not receive a very large volume of mentoring within the confines of the school calendar and year. Some of this is just a simple time crunch: Most programs don't start recruiting mentors until school is back in session, and even those that start earlier often can't make matches until some time after the year has started. The calendar then quickly moves into fall and winter breaks. After that, spring break and other "in service" days for teachers, plus random federal holidays, all add up to create a scenario where even an 8-month match has not actually met all that often. While some of those delays and gaps are inevitable, programs are encouraged to find creative ways to keep matches meeting through some of these break periods. Not waiting until almost Halloween to have the services up and running will also help. So, take a look at the calendar each school year and figure out how the program can maximize the mentoring that happens in what is an unfortunately short and choppy window.

Additional Reading and Resources

The NMRC Resource Collection offers a number of implementation resources that can help mentors offer academic support and help young people commit to learning and their educational futures:

- The ABCs of School-Based Mentoring - This guidebook offers strategies for developing a school-based mentoring program, exploring many aspects of program design and implementation.

- College and Career Success Mentoring Toolkit - This toolkit provides guidance on the development of mentoring programs that promote college and career success for youth. It reviews key elements of program design, recruiting and supporting mentors and mentees, and provides examples of relevant programming and data tools.

- College Positive Mentoring Toolkit - This online toolkit for mentors includes ready-to-use activities, checklists, and background information that can support mentees of all ages as they think about, and plan for, postsecondary education.

- Discovering the Possibilities: "C"ing Your Future - This 12-module curriculum and activity guide is designed to assist mentors in working with middle school youth to explore postsecondary education and possible careers.

- Experience Corps Mentor Toolkit - This handbook reviews concepts, skills and activities that mentors can use with their mentees to support academic and life success, with an emphasis on social-emotional growth.

- Growth Mindset for Mentors Toolkit - The Growth Mindset for Mentors Toolkit offers 12 lessons for mentors that apply the principles of growth mindset to their work with youth.

- High School Teen Mentoring Handbook - This mentor handbook, designed for peer mentors, reviews key information and skills for these mentors of high school students.

- Ongoing Training for Mentors: Twelve Interactive Sessions for U.S. Department of Education Mentoring Programs - This training guide offers 12 activities that each address a key topic that can come up as mentoring relationships progress. These trainings are intended to support mentors as they encounter challenges and difficult circumstances while working with their mentees.

- Search Institute's REACH Resources Overview - The REACH Resources Overview offers information and recommendations for schools interested in promoting social-emotional learning among students. It reviews the REACH model and the resources that schools can access through the SEARCH Institute to support students in improving academic motivation and educational outcomes.

Beyond the collection offered by the NMRC, the Alberta Mentoring Partnership (Canada) also offers an excellent array of school-based mentoring materials on their website here: https://albertamentors.ca/resources/mentoring-in-schools/.

References

*Study cited in the research sections of the review.

[1] Garringer, M., McQuillin, S., & McDaniel, H. (2017). Examining Youth Mentoring Services across America: Findings from the 2016 National Mentoring Program Survey. *MENTOR: National Mentoring Partnership*.

[2] Hamilton, S. F., & Hamilton, M.A. (1990). Linking Up project report. Unpublished manuscript, Cornell University.

[3] *Karcher, M. J., Kuperminc, G. P., Portwood, S. G., Sipe, C. L., & Taylor, A. S. (2006). Mentoring programs: A framework to inform program development, research, and evaluation. *Journal of Community Psychology, 34*(6), 709-725. https://doi.org/10.1002/jcop.20215

[4] Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it.* Harvard University Press. https://doi.org/10.4159/harvard.9780674063167

[5] Rhodes, J. E. (2005). A model of youth mentoring. In Dubois, D.L & Karcher, M. (Eds.), *Handbook of youth mentoring* (pp. 30-43). SAGE Publications.

[6] Cavell, T. A., Spencer, R., & McQuillin, S. D. (2021). Back to the future: Mentoring as means and end in promoting child mental health. *Journal of Clinical Child & Adolescent Psychology, 50*(2), 281-299. https://doi.org/10.1080/15374416.2021.1875327

[7] Lyons, M. D., & McQuillin, S. D. (2021). It's not a bug, it's a feature: Evaluating mentoring programs with heterogeneous activities. *Child & Youth Care Forum*. https://doi.org/10.1007/s10566-021-09609-1

[8] McQuillin, S. D., Lyons, M. D., Clayton, R. J., & Anderson, J. R. (2020). Assessing the impact of school-based mentoring: Common problems and solutions associated with evaluating nonprescriptive youth development programs. *Applied Developmental Science*, *24*(3), 215–229. https://doi.org/10.1080/10888691.2018.1454837

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

[10] *van Dam, L., Blom, D., Kara, E., Assink, M., Stams, G. J., Schwartz, S., & Rhodes, J. (2021). Youth initiated mentoring: A meta-analytic study of a hybrid approach to youth mentoring. *Journal of Youth and Adolescence*, *50*(2), 219-230. https:// doi.org/10.1007/s10964-020-01336-5

[11] *Wheeler, M. E., Keller, T. E., & DuBois, D. L. (2010). Review of three recent randomized trials of school-based mentoring: making sense of mixed findings. *Social Policy Report, 24*, 3-21. https://doi.org /10.1002/j.2379-3988.2010.tb00064.x

[12] *Bernstein, L., Dun Rappaport, C., Olsho, L., Hunt, D., & Levin, M. (2009). Impact evaluation of the U.S. Department of Education's Student Mentoring Program (NCEE 2009-4047). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee/

[13] *Herrera, C., Grossman, J. B., Kauh, T. J., Feldman, A. F., & McMaken, J. (2007). *Making a difference in schools: The Big Brothers Big Sisters school-based mentoring impact study.* Philadelphia: Public/Private Ventures. Retrieved from https://ppv.issuelab.org/resource/making-a-difference-in-schools-the-big-brothers-big-sisters-school-based-mentoring-impact-study.html

[14] *Herrera, C., Grossman, J. B., Kauh, T. J., & McMaken, J. (2011). Mentoring in schools: An impact study of Big Brothers Big Sisters school-based mentoring. *Child Development, 82*(1), 346-361. https:// doi.org/10.1111/j.1467-8624.2010.01559.x

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

[16] *Chan, W. Y., Kuperminc, G. P., Seitz, S., Wilson, C., & Khatib, N. (2020). School-based group mentoring and academic outcomes in vulnerable high school students. *Youth & Society, 52*(7), 1220-1237. https://doi.org/10.1177/0044118X19864834

[17] *Hanlon, T. E., Simon, B. D., O'Grady, K. E., Carswell, S. B., & Callaman, J. M. (2009). The effectiveness of an after-school program targeting urban African American youth. *Education and Urban Society, 42*(1), 96-118. https://doi.org/10.1177/0013124509343144

[18] *McQuillin, S. D., & Lyons, M. D. (2016). Brief instrumental school-based mentoring for middle school students: theory and impact. *Advances in School Mental Health Promotion*, *9*(2), 73-89. https://doi.org/10.1080/1754730X.2016.1148620

[19] *Curtis, A., & Bandy, T. (2015). *The Quantum Opportunities Program: A Randomized Control Evaluation*. Washington, D.C.: The Eisenhower Foundation.

[20] *Strand, P. S., & Lovrich, N. P. (2014). Graduation outcomes for truant students: An evaluation of a school-based, court-engaged community truancy board with case management. *Children & Youth Services Review, 43*, 138-44. https://doi.org/10.1016/j.childyouth.2014.05.008

[21] *Raposa, E. B., Rhodes, J., Stams, G. J. J. M., Card, N., Burton, S., Schwartz, S., Yoviene Sykes, L. A., Kanchewa, S., Kupersmidt, J. & Hussian, S. (2019). The effects of youth mentoring program: A meta-analysis of outcome studies. *Journal of Youth and Adolescence, 48*, 423-443. https://doi.org/10.1007/s10964-019-00982-8

[22] *van Dam, L., Smit, D., Wildschut, B., Branje, S. J. T., Rhodes, J. E., Assink, M., & Stams. G. J. J. M. (2018). Does natural mentoring matter? A multilevel meta-analysis on the association between natural mentoring and youth outcomes. *American Journal of Community Psychology, 62*(1-2), 203-220. https://doi.org/10.1002/ajcp.12248

[23] *Deutsch, N., & Spencer, R. (2009). Capturing the magic: Assessing the quality of youth mentoring relationships. *New Directions for Youth Development, 121*, 47-70. https://doi.org/10.1002/yd.296

[24] Brown, R. T., Daly, B. P., & Leong, F. T. L. (2009). Mentoring in research: A developmental approach. *Professional Psychology: Research and Practice, 40*(3), 306-313. https://doi.org/10.1037/a0011996

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

[26] Hurd, N. M., Sánchez, B. Zimmerman, M. A., & Caldwell, C. H. (2012). Natural mentors, racial identity, and educational attainment among African American adolescents: Exploring pathways to success. *Child Development, 83*(4), 1196-1212. https://doi.org/10.1111/j.1467-8624.2012.01769.x

[27] Sánchez, B., Esparza, P., & Colon, Y. (2008). Natural mentoring under the microscope: An investigation of mentoring relationships and Latino adolescents' academic performance. *Journal of Community Psychology, 36*(4), 468-482. https://doi.org/10.1002/jcop.20250

[28] Thompson, A. E., Greeson, J. K. P., & Brunsink, A. M. (2016). Natural mentoring among older youth in and aging out of foster care: A systematic review. *Children and Youth Services Review, 61*, 40-50. https://doi.org/10.1016/j.childyouth.2015.12.006

[29] Burningham, K. L., & Weiler, L. M. (2021). Natural mentoring and LGBTQ youth: A systematic review. *Adolescent Research Review*. https:/doi.org/10.1007/s40894-020-00146-x

[30] *DuBois, D. L., Holloway, B. E., Valentine, J. C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. *American Journal of Community Psychology, 30*(2), 157-197. https://doi.org/10.1023/A:1014628810714

[31] *Bayer, A., Grossman, J. B., & DuBois, D. (2015). Using volunteer mentors to improve the academic outcomes of underserved students: The role of relationships. *Journal of Community Psychology, 43*(4), 408-429. https://doi.org/10.1002/jcop.21693

[32] *Liang, B., Spencer, R., Brogan, D., & Corral, M. (2008). Mentoring relationships from early adolescence through emerging adulthood: A qualitative analysis. *Journal of Vocational Behavior, 72*(2), 168-182. https://doi.org/10.1016/j.jvb.2007.11.005

[33] *Hale, Katherine E., "Evaluating Best Practices in Group Mentoring: A Mixed Methods Study." Dissertation, Georgia State University, 2020. https://scholarworks.gsu.edu/psych_diss/213

[34] *Spiekermann, L., Lyons, M., & Deutsch, N. (2021). A mixed-methods approach to understanding trajectories of mentoring relationship growth. *Journal of Community Psychology*, 1-14. https://doi.org/10.1002/jcop.22648

[35] *Anastasia, T. T., Skinner, R. L., & Mundhenk, S. E. (2012). Youth mentoring: Program and mentor best practices. *Journal of Family & Consumer Sciences, 104*(2), 38-44.

[36] *DuBois, D. L., Neville, H. A., Parra, G. R., & Pugh-Lilly, A. O. (2002). Testing a new model of mentoring. *New Directions for Youth Development, 93*, 21-57. https://doi.org/10.1002/yd.23320029305

[37] *Drew, A. L., Keller, T. E., Spencer, R., & Herrera, C. (2020). Investigating mentor commitment in youth mentoring relationships: The role of perceived program practices. *Journal of Community Psychology, 48*(7), 2264-2276. https://doi.org/10.1002/jcop.22409

[38] *McQuillin, S. D., Straight, G. G., & Saeki, E. (2015). Program support and value of training in mentors' satisfaction and anticipated continuation of school-based mentoring relationships. *Mentoring & Tutoring: Partnership in Learning, 23*(2), 133-148. https://doi.org/10.1080/13611267.2015.1047630

[39] *Spencer, R., Basualdo-Delmonico, A., Walsh, J., & Drew. A. L. (2017). Breaking up is hard to do: A qualitative interview study of how and why youth mentoring relationships end. *Youth & Society, 49*(4), 438-460. https://doi.org/10.1177/0044118X14535416

[40] *Christensen, K. M., Hagler, M. A., Stams, G., Raposa, E. B., Burton, S., & Rhodes, J. (2020). Non-specific versus targeted approaches to youth mentoring: A follow-up meta-analysis. *Journal of Youth and Adolescence, 49*(5), 959-972. https://doi.org/10.1007/s10964-020-01233-x

[41] *Lyons, M. D., McQuillin, S. D., & Henderson, L. J. (2019). Finding the sweet spot: Investigating the effects of relationship closeness and instrumental activities in school-based mentoring. *American Journal of Community Psychology, 63*(1-2), 88-98. https://doi.org/10.1002/ajcp.12283

[42] *Karcher, M. J., & Nakkula, M. J. (2010). Youth mentoring with a balanced focus, shared purpose, and collaborative interactions. *New Directions for Youth Development, 126*, 13-31. https://doi.org/10.1002/yd.347

[43] *Schwartz, S. E. O., Rhodes, J. E., Spencer, R., & Grossman, J. B. (2013). Youth initiated mentoring: Investigating a new approach to working with vulnerable adolescents. *American Journal of Community Psychology, 52*, 155-169. https://doi.org/10.1007/s10464-013-9585-3

[44] *Delbasso, C., Nava, N., & Kuperminc, G. (2019, June). Increasing Connection to Reduce Academic Risk: The Role of School-based Group Mentoring. In L. Berardi (Chair), Youth Mentoring in Academic Settings. Symposium paper presented at the Biennial Meeting of the Society for Community Research and Action, Chicago, IL.

[45] *LaViscount, D. F. (2019). *Inside the black box of mentoring: African-American adolescents, youth mentoring, and stereotype threat conditions.* [Unpublished doctoral dissertation]. University of New Orleans.

[46] *Rhodes, J. E., Grossman, J. B., & Resch, N. L. (2000). Agents of change: Pathways through which mentoring relationships influence adolescents' academic adjustment. *Child Development, 71*(6), 1662-1671. https://doi.org/10.1111/1467-8624.00256

[47] Lyons, M. D., & Huebner, E. S. (2016). Academic characteristics of early adolescents with higher levels of life satisfaction. *Applied Research in Quality of Life*, *11*, 757–771. https://doi.org/10.1007/s11482-015-9394-y

[48] *Karcher, M. J., Davis, C., & Powell, B. (2002). The effects of developmental mentoring on connectedness and academic achievement. *The School Community Journal*, 12(2), 35-50.

[49] *Schwartz, S. E. O., Kanchewa, S. S., Rhodes, J. E., Gowdy, G., Stark, A. M., Horn, J. P., Parnes, N., & Spencer, R. (2018). "I'm having a little struggle with this, can you help me out?": Examining impacts and processes of a social capital intervention for first-generation college students. *American Journal of Community Psychology, 61*(1-2), 166-178. https://doi.org/10.1002/ajcp.12206

[50] Cavell, T. A., & Elledge, L. C. (2014). Mentoring and prevention science. In D. L. DuBois & M. J. Karcher (Eds.), *Handbook of Youth Mentoring* (2nd ed., pp. 29-42). SAGE Publishing.

[51] Albright, J. N., Hurd, N. M., & Hussain, S. B. (2017). Applying a social justice lens to youth mentoring: A review of the literature and recommendations for practice. *American Journal of Community Psychology, 59*(3-4), 363-381. https://doi.org/10.1002/ajcp.12143

[52] *Grossman, J. B., & Rhodes, J. E. (2002). The test of time: Predictors and effects of duration in youth mentoring relationships. *American Journal of Community Psychology, 30*(2), 199-219. https://doi.org/10.1023/A:1014680827552

[53] Hart, M. J., Flitner, A. M., Kornbluh, M. E., Thompson, D. C., Davis, A. L. Lanza-Gregory, J., McQuillin, S. D., Gonzalez, J. E., & Strait, G. G. (2021). Combining MTSS and community-mased mentoring programs. *School Psychology Review*. https://doi.org/10.1080/2372966X.2021.1922937

[54] Sánchez, B., Hurd, N. M., Neblett, E. W., & Vaclavik, D. (2018). Mentoring for Black male youth: A systematic review of the research. *Adolescent Research Review, 3*(3), 259-278. https://doi.org/10.1007/s40894-017-0074-z