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Mentor response to youth academic support-seeking behavior: Does attunement matter?

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Abstract

Mentoring-based interventions for adolescent offenders are promising strategies for reducing the likelihood of academic underachievement, truancy, and school dropout. Program effectiveness, however, varies widely. Investigation into factors that strengthen the impact of mentoring on academic-related outcomes is warranted. One factor might be academic attunement, or the degree to which a mentor's emphasis on academics is consistent with youth's academic support-seeking behavior and desire for academic help. This within-group study examined the relationship between mentor attunement and academic outcomes among youth (*N*=204; ages 11-18; 54.5% male) who participated in a time-limited mentoring program. Latent profile analysis identified three distinct groups: attuned mentors, over-focused mentors, and under-focused mentors. In general, youth with attuned mentors reported better post-intervention scores as compared to youth with misattuned (i.e., over-focused or under-focused) mentors on perception of school usefulness and importance, academic self-efficacy, and truancy, but not grade point average. Findings suggest the importance of monitoring academic attunement.

Keywords

Role models/Mentors; Delinquency; Education

Juvenile delinquency and academic underachievement are intimately intertwined. Delinquent youth tend to have lower grades, poorer school attendance, and greater grade retention than their non-delinquent peers (Foley, 2001; Forsyth, Asmus, Stokes, & Forsyth, 2010). Without successful intervention, at-risk youth may initiate a negative life trajectory that often begins with high school dropout (Henry, Knight, & Thornberry, 2012), followed by increased criminal behavior (Harlow, 2003), low socioeconomic status (Chen & Kaplan, 2003), and poor health (Topitzes, Godes, Mersky, Ceglarek, & Reynolds, 2009). There is a dynamic interplay of risk factors, including individual (e.g., self-regulation), familial (e.g.,

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parent-child attachment), and environmental (e.g., community violence) factors, associated with these poor outcomes. Relationship-based preventive interventions, however, may attenuate the impact of such risk factors, while promoting social support and resilience (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011; Rhodes, 1994).

Mentoring is one such intervention, and can be defined as a "relationship between an older, more experienced adult and an unrelated, younger protégé – a relationship in which the adult provides ongoing guidance, instruction, and encouragement aimed at developing the competence and character of the protégé" (Rhodes, 2002, p.3). Mentoring is a common intervention strategy. Over the last twenty years, MENTOR: The National Mentoring Partnership estimates that according to a nationally representative survey and U.S. Census data, the number of formal mentoring relationships for at-risk youth in the United States has increased from 300,000 to 4.5 million (Bruce & Bridgeland, 2014, p. 1). Despite the extensive use of mentoring, evidence of the academic benefits has been mixed. In some studies, participation in community-based mentoring programs has been associated with greater scholastic competence, attendance and grades (Grossman & Tierney, 1998; Rhodes, Grossman, & Resch, 2000). Other evaluations of school-based mentoring programs have similarly found improvements in school attitude (Converse & Lingugaris Kraft, 2008), school connectedness (Portwood, Ayers, Kinnison, Waris, & Wise, 2005), and academic efficacy (Herrera, Grossman, Kauh, Feldman, & McMaken, 2007). Yet some evaluations, including meta-analyses, have found few to no significant effects on academic achievement including grades, promotion, and standardized aptitude test scores (Bernstein, Dun Rappaport, Olsho, Hunt, & Levin, 2009; DuBois et al., 2011; Karcher, 2008; Wood & Mayo-Wilson, 2012). Because of the mixed findings regarding efficacy, there remains a need to study factors (e.g., program structure, mentor and mentee characteristics) that weaken or enhance the impact of mentoring on academic-related outcomes. Such research may also shed light onto the factors that influence the impact of mentoring on different types of academic variables (e.g., ability versus attitude).

Theoretical Frameworks

The most widely embraced model of youth mentoring positions the mentoring relationship as the active ingredient in eliciting positive change among youth (Rhodes, 2005). A recent exploration of school-based Big Brothers Big Sisters (BBBS) programs found that a close mentoring relationship, in fact, is key to better academic outcomes; the mediating role of emotional closeness was evident across relationships of various lengths (Bayer, Grossman, & Dubois, 2015). It remains unknown, however, what factors matter most for close mentoring relationships, especially in an academic context. Rhodes' model of youth mentoring suggests quality mentors are able to recognize needs and appropriately scaffold educational material to facilitate academic success (Rhodes, Spencer, Keller, Liang, & Noam, 2006). The success of the mentoring relationship, therefore, relies in part on mentor behavior. As described by Larose and Tarabulsy (2014), a productive mentor for academically at-risk youth is theorized to be one who establishes clear guidelines, appropriately discusses goals, accepts and validates youth choices without judgment, and promotes feelings of competency.

Literature on mentor behavior, more broadly, also informs our understanding of what makes strong mentoring relationships. Mentoring relationships that are unilaterally determined by mentors, such as prescriptive relationships (i.e., problem-oriented focus without youth collaboration) or laissez-faire relationships (i.e., lack of focus or direction), fail to develop a shared purpose (Karcher & Nakkula, 2010; Morrow & Styles, 1995). The degree of prescription is particularly relevant as mentors make decisions about how and when to incorporate academics or other growth-focused activities (Karcher & Nakkula, 2010). An overly prescriptive mentor is likely to push an agenda or over-focus on a particular problem without youth input, thereby potentially limiting the strength of the relationship.

In contrast, youth-centered mentors (i.e., developmental) who determine shared goals with mentee's input appear to have more success (e.g., Herrera, Sipe, & McClanahan, 2000; Larose, Chaloux, Monaghan, & Tarabulsy, 2010). They are flexible in their expectations of the relationship and activities, and take cues about the focus of activities from the youth themselves (Jekielek, Moore, Hair, & Scarupa, 2002). Within the "Theoretically Evolving Activities in Mentoring" (TEAM) framework (Karcher & Nakkula, 2010), an effective mentoring experience is characterized by mentor and mentee alignment on three dimensions within the relationship – focus (i.e., target of the interaction and structure imposed), purpose (i.e., whose agenda is being served by the interaction), and authorship (i.e., how interactions are negotiated; Karcher & Nakkula, 2010). Difficulty can arise when discrepancies exist within these dimensions.

Attunement

Underlying the above theoretical frameworks and relationship dimensions is "attunement", a concept that has emerged in the mentoring literature to characterize a set of qualities of strong mentors that facilitate connection with a mentee across settings and youth characteristics (Pryce, 2012). Pryce (2012) defines attunement as the "mentor's capacity to respond flexibly to youth's verbal and nonverbal cues by taking into account youth needs and desires" (p. 292). As such, attunement is characterized by a mentor's ability to read these cues, interpret their meaning, flexibly adapt expectations, and respond contingently to the youth's bids for support. Rhodes et al. (2006) posited that attunement "may be a key contributor to the quality and nature of the mentoring relationship" (p. 696). Mentors who do not exhibit and employ these characteristics fail to build a strong connection with their mentee (Pryce, 2012); for the purposes of this study, these mentors are considered "misattuned".

Misattunement, in the context of mentoring in academic settings, can result in a mismatch of emphasis and focus on academics between the mentor and mentee. Mentors may impose an academic agenda consistent with adult- or program-identified goals, even when the youth is not seeking such support. Even well intentioned mentors can find themselves here because of the desire to help youth avoid the consequences of poor academic performance. Mentors who focus heavily on academics may experience resistance or disappointment if their mentees do not share the same focus or purpose. Alternatively, a mentor may not encourage clear goals or may neglect to meet the youth's academic needs, even when the youth is seeking this type of support.

Despite strong theoretical support, few studies have empirically evaluated attunement. Notably, one study found that youth who reported that their mentors provided moderate levels of activity, structure and conditional support had greater perceived school competence when compared to youth with mentors who were unconditionally supportive, active, or low-key (Langhout, Rhodes, & Osborne, 2004). Similarly, a small study examined the role of a working alliance between teacher mentors and student mentees on academic functioning, and found that students in which there was mutual agreement on goals and positive bonding evidenced greater academic competence, class participation, academic perseverance, and help-seeking behavior (Larose et al., 2010). A mixed-method study of school-based mentoring relationships suggests that those mentors who balance attention to both a close connection and fun experience were rated by their mentees as most positive and supportive (Keller & Pryce, 2012). Finally, an in-depth qualitative study of children participating in a BBBS school-based program underscored the importance of mentors' abilities to read and identify youth preferences and cues in order to flexibly meet their needs (Pryce, 2012).

These studies help to clarify the conceptual nature of attunement and its impact on select outcomes. In order for the concept of attunement to contribute toward our understanding of mentoring relationship quality, however, an extension of the limited quantitative research in this area is required. This study accomplishes this by focusing on the role of attunement on academic outcomes within a preventive mentoring-based intervention. Based on limited research, it is likely that some mentors were more attuned than others and it was hypothesized that youth with attuned mentors would fare better academically than youth with misattuned mentors.

Method

Participants

The sample consisted of adolescents and their mentors who participated in a previously published evaluation of a preventive intervention for high-risk youth known as Campus Connections (CC), formerly Campus Corps (Weiler, Haddock, Henry, Zimmerman, Krafchick, & Youngblade, 2015). Youth were referred by the Office of the District Attorney, the Probation Department, and restorative justice and diversion programs through the Department of Human Services and two local agencies. The current sample consisted only of youth in the intervention condition because the comparison condition did not include a mentoring component. Of the 382 youth enrolled in the intervention, 74.7% (n = 286) participated in the research study. The remaining youth did not participate due to being 10 years old at the time of the baseline survey, lack of parental consent, and/or choosing not to participate in the research study. Four youth were lost to follow-up. Of the 204 adolescents with complete mentor-report data, 54.5% were male and were 11 to 18 years old (M = 14.9, SD = 1.9). Over half of youth self-identified as White non-Hispanic (52.9%), 28.9% as Hispanic or Latino, 6.4% as American Indian or Alaskan Native, 2.0% as Black or African American, 1.5% as Native Hawaiian or other Pacific Islander, and 7% as other.

Mentors (n = 204) were undergraduate university students who were selected after an application process, which included passing a background check, specifying reasons for becoming a mentor, and previous coursework or experience relevant to working with youth.

Mentors were recruited to the CC program via university-based announcements and word of mouth. After acceptance into the program, mentors were recruited to participate in the study. Most mentors identified as White non-Hispanic (79.9%) and female (87.3%); male mentors were only matched with male mentees. Mentors ranged in age from 17 to 50 (M = 20.73, SD = 3.46); younger mentors were appropriately matched to younger youth. The majority (57.5%) were majors in the Psychology or Human Development and Family Studies departments. A number were Health and Exercise Science majors (10.9%) and fewer than 10% were from other disciplines. About 80% of mentors reported previous volunteer experience.

Procedure

This study was approved by the Institutional Review Board at a university in the Western United States. Informed consent and assent for participation were obtained for all adult mentors, youth participants, and at least one youth guardian. Data were collected in two waves (a baseline survey (T1) completed up to one month prior to the program start and a second survey (T2) during the final week of the program). Each survey took approximately 30-45 minutes to complete.

Intervention

CC is a time-limited mentoring program for high-risk youth who are either at risk of entering the juvenile justice system or formally charged with an early offense (see Weiler et al., 2015 for a complete program description). The 12-week program occurs entirely on a university campus and matches meet one night per week at the CC facility from 4pm to 8pm. CC mentors are undergraduate university students enrolled in a service-learning course that provides training, supervision, and support from family therapist supervisors. To facilitate the matching process, youth choose from a select group of mentor profiles (appropriate for the youth's age and gender). Mentors complete profiles by sharing their interests, college major, and reasons for becoming a mentor. All one-to-one matches are also organized into small groups of four matches known as "Mentor Families" to further facilitate connection with similarly aged peers and additional adult mentors (Weiler, Zimmerman, Haddock, & Krafchick, 2014). Matches prioritize and maintain their one-to-one relationship while also building relationships and receiving support from others in the "family." A qualitative study of the experience of "Mentor Families" highlights the promise of this approach to not only elevating the mentee's experience and sense of belonging, but also the mentor's perception of programmatic support (Weiler et al., 2014).

Prior to program start, mentors participate in 18 hours of training, which focuses on relationship building skills, mentoring best practices, and developmental approaches to mentoring. Further training and support occurs formally before and after each of the weekly mentoring sessions. During these times, supervisors offer personalized encouragement, feedback, and guidance for the mentoring relationships. Mentors also spend time reflecting on the relationship in weekly journals and discussions with other mentors through the service-learning course.

Activities are designed to further facilitate the relationship between youth and their mentors while supporting the development of new interests, skills, and competencies. Throughout the evening, mentors serve as role models, and aim to empower youth while fostering a sense of agency and life purpose. Mentors are coached to prioritize their mentor-mentee relationship over the program-specified activities described below, when deemed appropriate. This program flexibility allows mentors to uniquely meet the needs of mentees, as is typical of many mentoring-based interventions. For instance, if a mentee is struggling with a difficult situation at home, the mentor is trained to attend to this distress even if that means passing on a program activity.

The semi-structured schedule is as follows. The first 30-minutes include a walk on campus. During the walk, youth and mentors build connection through conversation, laughter, and quality time. This time is also intended to help youth feel welcome on a college campus. The next hour is set aside for matches to work together on academic-related tasks, from homework and studying to resolving conflict with peers or teachers. Matches negotiate with one another to determine the focus of this hour and can prioritize other, non-academic topics when warranted. After dinner, the last half of each program night includes two 1-hour blocks during which matches engage in prosocial activities (e.g., art projects, sports, writing, music, and games). Because youth frequently share highly personal and sometimes concerning information with their mentor (e.g. suicidal ideation, bullying, depression, abuse), which is indicative of high levels of trust, closeness, and self-expression within the mentoring relationship, family therapists provide supervision, monitoring, and support throughout the evening.

Measures

Demographic and risk variables (assessed at T1).—Participants' age, gender, and race/ethnicity were gathered through self-report items. Referring agency workers completed 6 items of the Arizona Risk/Needs Assessment instrument (Krysik & LeCroy, 2002) to assess youth's level of risk. The assessment has been used in juvenile justice settings to determine risk of recidivism. Items include questions such as "Has the child used or been suspected of using drugs within the past year?" and "Has the juvenile ever been assaultive?" Agency workers responded by selecting "yes" or "no" to each response. The sum of all responses was calculated; higher scores indicated higher risk ($M = 2.15$, $SD = 1.45$).

Attunement (assessed at T2).—The mentor-report Match Characteristics Questionnaire (MCQ; Harris & Nakkula, 2008) and complementary youth-report Youth Mentoring Survey (YMS: Harris & Nakkula, 2010) were used to assess degree of attunement at the end of the program. Two subscales of the MCQ were used – *academic support-seeking behavior* and *academic focus*. Mentors responded to statements using a Likert scale that ranged from 1, "never" to 6, "always." Scores for each subscale were calculated by taking the means of responses to subscale items. The *academic support-seeking behavior* subscale ($\alpha = .88$) includes two items assessing mentor's perception of the degree to which his or her mentee was seeking academic support. For example, "my mentee seems to want my help with his/her academics." The average score across all mentors was 3.31 ($SD = 1.83$). The *academic focus* subscale ($\alpha = .78$) includes four items assessing the extent to which

mentors' focused their time on academic-related activities. For example, "involving academics in the time you spend together." The average score across all mentors was 4.29 (*SD* = 1.36). One item from the YMS was used to determine *mentee desire for academic help*: "I want my mentor to help me do better at school." Mentees responded to statements using a Likert scale that ranged from 1, "not at all true" to 4, "very true." The average score across all mentees was 2.48 (*SD* = 1.28). Mentor-reported *academic support-seeking behavior*, mentor-reported *academic focus*, and mentee-reported *desire for academic help* were used in a latent profile analysis to determine categorical latent variables corresponding to attunement.

Although academic prescription (i.e., the degree to which the mentee perceived the mentor as prescriptive in academic focus) differs conceptually from attunement, literature suggests that mentees in a misattuned mentoring relationship may be more likely to perceive their mentor as prescriptive. Thus, academic prescription was assessed to corroborate the resultant latent variable for attunement. Youth-reported *academic prescription* was assessed via two YMS items: "I just want my mentor to be fun, not someone who helps with schoolwork or problems" and "my mentor focuses too much on school." Response choices ranged from 1, "not at all true" to 4, "very true." Scores were averaged (Spearman-Brown coefficient = .66). Higher scores represented greater academic prescription (*M* = 2.59, *SD* = 1.28).

Academic variables (assessed at T1 and T2).—The School Value Scale (Berndt & Miller, 1990) was utilized to assess youths' perception of the value of school through two subscales with 6 items each, *perceived usefulness of school* (α = .79) and *perceived importance of school* (α = .82). An example item from the *perceived usefulness of school subscale* is, "how useful is what you learn in school for the job you want to have as an adult?" An example item from the *perceived importance of school subscale* is, "how upset would you be if you got a low grade for one of your subjects?" Responses range from 1, "not much at all" to 5, "very much."

Mentees' *academic self-efficacy* was assessed using the 4-item self-efficacy subscale of the Student Motivation and Engagement Scale (Martin, 2009). An example item reads, "If I try hard, I believe I can do my school work well." Responses range from 1, "disagree strongly" to 7, "agree strongly" (α = .89). Finally, youth reported their grades on a scale ranging from 0, "mostly Fs" to 9, "mostly As". Responses were recoded as scores on a typical *grade point average* (GPA) scale (0.0 to 4.0). A single, open-ended item, "How many unexcused absences have you had in the past month?" assessed *truancy*.

Analytic Approach

To categorize mentor attunement, latent profile analysis (LPA), a person-centered approach, was employed. This approach allowed for multiple perspectives related to attunement to be considered simultaneously (Bergman & Trost, 2006) while revealing categorical latent variables from continuous observed variables. LPA was conducted using mentor perception of academic-support-seeking, mentor focus on academics, and youth desire for academic help variables within a mixture model in Mplus, Version 7 (Muthén & Muthén, 2012). Models were tested with a single profile, two profiles, and three profiles. Fit indices that

included the Bayesian information criteria (BIC) and sample-size-adjusted BIC, entropy statistics, and average probabilities for most likely latent variable memberships were compared.

After grouping youth by the categorical latent variable revealed by the LPA (attunement profile), Chi-square and ANOVA tests were used to determine whether the groups differed by attunement variables, youth demographics, level of risk, academic prescription or baseline scores of the academic variables. Bivariate correlations were used to determine relationships among study variables and to determine model covariates. Paired sample t-tests were used to evaluate change across time within each group.

A series of linear regression models was specified to assess the group differences as related to youths' GPA, truancy, academic self-efficacy, perception of school usefulness, and perception of school importance. For each academic variable, (a) covariates (i.e., those variables significantly related to the outcome at baseline), (b) the baseline score of the associated measure, and (c) group membership served as predictors of the post-intervention measure. Continuous variables were centered at the mean. Group membership was dummy coded such that the attuned group served as the reference. Regression results were used to calculate adjusted mean scores, 95% confidence intervals, and effect sizes (Cohen's *d*). Bonferroni correction was applied to limit error as a result of multiple comparisons.

Results

Profile Results

A three-profile model was the best fit to the data with a BIC of 1511.26, sample-size-adjusted BIC of 1447.91, and entropy score of .99 (see Table 1). The average probabilities for profile membership were high (.99 for each profile), revealing high level of certainty in membership profiles. Three distinct groups were identified: attuned mentors, over-focused mentors, and under-focused mentors. Profile 1 (attuned) was characterized by relatively high academic support seeking behavior, academic focus, and mentee desire for academic help (*n*=57; 28%). Profile 2 (over-focused) was characterized by relatively low academic support-seeking behavior and mentee desire for academic help, and high academic focus (*n*=115; 56%). Profile 3 (under-focused) was characterized by relatively high academic support-seeking behavior and desire for academic help, and low academic focus (*n*=32, 16%). See Figure 1. Mentor perception of youth academic support-seeking behavior and youth report of the desire for academic help were relatively consistent with one another. In other words, mentors seem to perceive support-seeking behavior at a level consistent with youth's desire for academic help. Notable differences, however, were observed in mentors' subsequent degree of focus on academics. Youth in the under-focused group appear to be seeking and wanting a relatively high level of academic support, but the mentors focus on academics is considerably less than desired. In contrast, mentors focus on academics in the over-focused group is higher than what youth appear to be seeking. Mentors in the attuned group not only perceive the academic support-seeking behavior consistent with what youth are wanting, but they also provide a degree of academic support reflective of youth's needs. See Table 1 for complete information on how the profiles differed from one another on each attunement-related variable.

Baseline Differences among Profiles

Table 2 presents the demographic and baseline characteristics of mentees within each of the three mentor response groups. The groups did not differ in regards to gender, race/ethnicity, age, and risk. As expected, significant differences were observed between groups on level of academic prescription, such that youth in the over-focused group reported higher levels of academic prescription than the under-focused group. No statistically significant differences among groups were observed on baseline outcome scores.

Bivariate Correlations between Study Variables

Gender was unrelated to outcomes of interest. Minority status was positively related with truancy ($r = .20$, $p < .01$). Age was negatively correlated with school usefulness ($r = -.27$, $p < .01$) and positively related to risk ($r = .14$, $p < .05$). Risk was negatively correlated with school importance ($r = -.23$, $p < .01$) and usefulness ($r = -.24$, $p < .01$) and positively correlated with truancy ($r = .23$, $p < .01$). As expected, correlations among the outcomes of interest were found (rs = −.16 to .61, $p < .05$). However, truancy was not significantly related to academic self-efficacy ($r = -.14$, $p > .05$).

Testing Relationship between Attunement Groups and Academic Outcomes

A series of linear regression models were used to test whether post-intervention differences were observed between groups, while accounting for baseline scores and covariates. However, in order to contextualize the linear regression results, paired sample t-tests were first used to describe change from T1 to T2 within each group. Youth in the attuned group reported a significant increase in perception of school usefulness, $t(55) = -3.19$, $p < .01$, and academic self-efficacy, $t(55) = -2.37$, $p < .05$. Youth in the attuned group also reported a significant decrease in truancy, $t(45) = 3.23$, $p < .01$. Youth in the over-focused group reported significant decreases in perception of school importance, $t(109) = 2.56$, $p < .05$. Youth in the under-focused group did not demonstrate significant change across time on any of the outcomes.

Linear regression models were specified to test the hypothesis that youth with attuned mentors would report more desirable academic scores post-intervention relative to youth with misattuned mentors (i.e., over-focused or under-focused). Each of the five models was significant. The overall model statistics were as follows: perception of school usefulness, $R^2 = .36$, $F(6,186) = 17.72$, $p < .001$; perception of school importance, $R^2 = .51$, $F(5,187) = 38.22$, $p < .001$; academic self-efficacy, $R^2 = .29$, $F(3,188) = 26.02$, $p < .001$; GPA, $R^2 = .20$, $F(3,158)=12.98$, $p < .001$; and truancy, $R^2 = .41$, $F(5,164) = 22.67$, $p < .001$.

Adjusted mean scores, 95% confidence intervals of the mean difference between groups and estimates of effect size were calculated from the regression models. These results are presented in Table 3. On average, participants in the attuned group scored significantly higher than participants in the over-focused and under-focused groups on perception of school usefulness and perception of school importance. The youth with attuned mentors also demonstrated higher academic self-efficacy and lower truancy as compared to youth with over-focused mentors. No group differences were noted between over-focused and under-

focused profiles on any variables. No group differences were observed among groups on GPA.

Discussion

The present study examined the relationship between mentor attunement and youths' GPA, truancy, academic self-efficacy, perception of school usefulness, and perception of school importance. A latent profile analysis revealed three distinct groups based on mentor attunement, including one attuned group and two misattuned groups (i.e., over-focused and under-focused mentors). Mentors in all three groups appeared to appropriately read the cues of youth's desire for academic support, such that their perception of academic support-seeking behavior was consistent with that of youth-reported desire for academic help. Mentor's response to youth's bids for support, however, varied. As a result, some mentors were categorized as misattuned, with a larger percentage over-emphasizing academics and a smaller percentage under-emphasizing academics in response to youth's needs.

Post-intervention differences were observed between the attuned and misattuned groups. Relative to youth matched with an over-focused or under-focused mentor, youth matched with an attuned mentor were more likely to perceive school as important and helpful. Youth with attuned mentors also reported higher academic self-efficacy and less truancy as compared to their counterparts in the over-focused group. These findings are consistent with literature that suggests misattuned mentors are less effective than youth-centered and collaborative mentors (Herrera et al., 2000; Karcher & Nakkula, 2010; Langhout et al., 2004; Larose et al., 2010; Morrow & Styles, 1995; Pryce, 2012). No significant post-intervention mean differences were observed for GPA. It is possible that the improvement in academic self-efficacy and attitude towards school as a result of the attuned mentoring relationship will lead to improvements in GPA over time, or that a longer program would be more effective. YouthFriends, a school-based mentoring program, for example, found a significant improvement in GPA over the course of a year (Portwood et al., 2005). Alternatively, GPA may be more difficult for mentoring programs, in general, to improve. There is some support for this, as meta-analyses have found mentoring programs to have no to little effect on GPA (Wood & Mayo-Wilson, 2012).

As we consider the findings, it is important to first note the higher number of over-focused than attuned or under-focused mentoring relationships. It is common for mentoring programs to identify a specific goal, be it academic achievement (frequently a focus of school-based programs), improved self-esteem, or vocational development, to identify a few. While an explicit purpose can focus and prioritize important outcomes of the program, it also runs the risk of detracting from or obscuring the importance of a close relationship as foundational to positive youth outcomes (Bayer et. al., 2015). This tension may be particularly relevant in the case of the program featured here, CC, and others that are similar. The mentees in this program were at high risk of dropout and poor academic performance, and mentors were informed of this risk via grade and attendance monitoring. This information, while important, may result in a felt urgency of mentors to focus on academics, whether or not the mentee was ready to do the same. Within these contexts, it may be critical that programs attend to the balance of dual foci, including program purpose (e.g., academic

support) and relationship development (Bayer et al., 2015; Karcher & Nakkula, 2010). This may ensure a strong bond upon which mentoring relationships are often predicated (Rhodes, 2005).

Other studies that examine the impact of mentoring relationships on academic outcomes can help us understand these alternative explanations further. Keller and Pryce (2012), in their examination of assumed role among mentors in school-based settings, highlighted a subset of those who assumed a "Teaching Assistant/Tutor" approach to their relationship. These mentors focused on academic support and achievement at the expense of relationship connection; youth in relationships with those mentors reported significantly less relationship closeness. Larose et al.'s (2015) findings in part echo this insight; data suggested that a higher frequency of tutoring activities weakened the relationship between mentees' perceptions of received support and relationship quality with their mentor (Larose et al., 2015). Similarly, in their recent large scale study of BBBS school-based mentoring relationships, Bayer et al. (2015) highlight that "unless a mentorship pair formed a relationship that the protegé would rate as "somewhat close" or better, program participation had no discernable effect on a student's end-of-school-year academic outcomes. We thus posit that this relationship is the "active ingredient" of this mentoring in the school setting" (p. 425). These studies continue to support the role of attunement and connection. They remind the field of the importance of supporting mentors in relationship building prior to, or at least alongside of, pursuing goals (Karcher & Nakkula, 2010).

In the case of under-focused mentors, it is possible that they were attending to other challenges presented by the mentee rather than the academic needs sought. This may be due to myriad reasons, including responsiveness of these mentors to other needs (e.g., emotional, instrumental) presented by the mentee, or that these students may present with a greater number of needs (including academic). It may also be that some mentors are less comfortable focusing on academics, lack motivation for their own academic success or that the mentoring relationship lacked closeness and connection, resulting in a general lack of attention to youth needs. These possibilities require exploration, and suggest that the current metric of attunement should continue to be developed to consider more broadly a general capacity of mentors to perceive and respond to mentee needs across domains.

A few limitations are noteworthy. Although we sought to examine attunement as it relates to focus on academics, it is possible that mentors were more attuned to other domains of youth functioning. It could be the case that some youth were seeking high levels of support in many areas, and mentors were compelled to triage needs. Another limitation of the study was the quasi-experimental design. Because youth were not randomly assigned and because some mentors did not complete the survey, it is possible that extraneous or confounding factors account for some of the group differences. Relatedly, because of the quasi-experimental design, the size of the groups was not adequately powered to detect small effects, which are typical of mentoring programs (DuBois et al., 2011). Although it would be unethical to randomly assign youth to mentors were are misattuned given the limited literature suggesting null or possibly iatrogenic effects, future research should strive for larger samples, so that the groups may be larger in size. Finally, caution should be taken in generalizing the findings to other populations or program formats. The current sample

includes high-risk youth who may be more or less likely to benefit from an attuned mentoring relationship relative to other samples. The intervention was also time-limited with high weekly dosage; academic attunement in longer term or less intensive mentoring programs may operate differently.

In light of limitations, these findings have important implications to consider. Given the well-recognized importance of supporting the academic success of at-risk youth, many preventive mentoring programs focus on improving academic outcomes. Supervisors and support staff need to pay careful attention to the way in which mentors apply this focus. Through monitoring and support, staff may be able to coach mentors to more appropriately respond to youth's cues. In fact, Pryce (2012) suggests behaviors that characterize an attuned mentoring relationship, such as active listening, maintaining eye contact, identifying verbal and non-verbal cues, responding to cues, and maintaining flexibility, can be learned. Role plays and other experiential activities may be avenues for teaching and encouraging mentors to be more attuned. Findings also speak to the need for programs to evaluate their logic models to determine the mechanisms by which they propose academic change. For example, programs with activities listed as proposed mechanisms should consider the role of mentor behaviors in eliciting change.

Lastly, research should investigate how mentors may behave differently based on mentee characteristics (e.g., perceived risk) or based on match characteristics (e.g., same-gender matches). Theories that stress the importance of attunement and similar constructs relating to the mentoring relationship should continue to be tested. It remains widely assumed that the quality of the relationship is the core to the intervention itself (Bayer et al., 2015; Rhodes, 2005). However, research is still nascent in studying the approach of the mentor to the relationship, and how well that approach and related behaviors link to the needs of the young person. Attunement offers a way to consider that link; as we study the relationship itself, findings can inform the core to mentoring programs and contribute to more robust effects.

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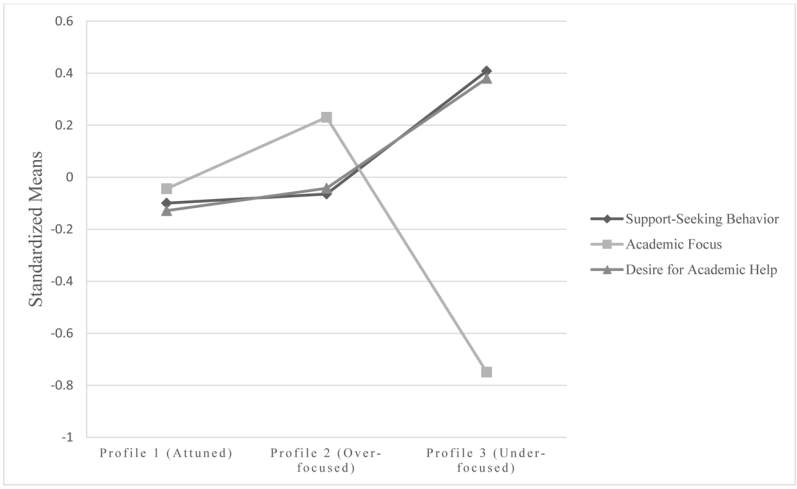

Figure 1.
Standardized Means for Attunement Variables by Profile

Table 1

Unstandardized Means (and Standard Deviations) for Academic Attunement for the Three-Profile Latent Profile Analysis Solution

Variable	Profile 1: Attuned (*n* = 57)	Profile 2: Over-focused (*n* = 115)	Profile 3: Under-focused (*n* = 32)	Profile differences: *F*(2, 201)
Academic Support Seeking Behavior	3.13 (1.89)	3.20_{a} (1.77)	4.06_{b} (1.84)	3.26^{*}
Academic Focus	4.23_{a} (1.35)	4.61_{a} (1.00)	3.27_{b} (1.92)	13.59^{***}
Desire for Academic Help	2.32_{a} (1.24)	2.43_{a} (1.28)	2.97_{b} (1.31)	$2.94^{\dagger}$
Fit Indices				
BIC	2069.94	1546.43	1511.26	-
Sample-size Adjusted BIC	2050.93	1505.26	1447.91	-
Entropy		.99	.99	-

Note.

$^{*}p < .05$;

$^{***}p < .001$;

$^{\dagger}p < .10$. BIC = Bayesian information criteria. Means with different subscripts differ significantly by profile based on Fisher's least significant difference post hoc tests.

Table 2

Descriptive Statistics for Demographic Characteristics of Mentees and Outcomes at Baseline (T1) by Attunement Group

Variable	Total sample	Attuned (*n* = 57)	Over-focused (*n* = 115)	Under-focused (*n* = 32)	Profile Differences
	% or M (SD)	*% or M (SD)*	*% or M (SD)*	*% or M (SD)*	***Chi-square or F* test**
Gender					$\chi^2 = 3.95$
Male (*n* = 112)	54.9%	45.6%	60.9%	50.0%	
Female (*n* = 92)	45.1%	54.4%	39.1%	50.0%	
Race/Ethnicity[a]					$\chi^2 = 16.28$
White (non-Hispanic) (*n* = 108)	53.2%	57.9%	54.8%	38.7%	
Hispanic (*n* = 59)	29.1%	22.8%	28.7%	41.9%	
American Indian/Alaskan Native (*n* = 13)	6.4%	7.0%	6.1%	6.5%	
African American (non-Hispanic) (*n* = 9)	4.4%	3.5%	6.1%	0.0%	
Asian American (*n* = 4)	2.0%	3.5%	1.7%	0.0%	
Native Hawaiian/Pacific Islander (*n* = 3)	1.5%	0.0%	0.9%	6.5%	
Other (*n* = 7)	3.4%	5.3%	1.7%	6.5%	
Age (years)	14.96 (1.97)	15.11 (1.86)	14.84 (1.96)	15.16 (2.23)	$F(2, 201) = 0.51$
Risk	2.15 (1.45)	2.43 (1.45)	1.94 (1.42)	2.37 (1.50)	$F(2, 200) = 2.66$
Academic prescription	2.59 (1.28)	2.48 (1.30)	2.78 (1.24)$_a$	2.09 (1.27)$_b$	$F(2, 202) = 3.98^*$
School importance	3.81 (0.80)	3.77 (0.83)	3.84 (0.81)	3.76 (0.75)	$F(2,198) = 0.20$
School usefulness	3.67 (0.82)	3.57 (0.93)	3.71 (.079)	3.72 (.66)	$F(2,197) = 0.64$
Academic self-efficacy	5.77 (1.19)	5.75 (1.25)	5.83 (1.13)	5.59 (1.29)	$F(2,176) = 0.47$
GPA	2.54 (1.04)	2.51 (1.08)	2.50 (1.05)	2.76 (0.90)	$F(2,172) = 0.70$
Truancy	2.87 (5.41)	4.29 (6.78)	2.31 (4.43)	2.25 (5.44)	$F(2,179) = 2.55$

Note. Standard deviations are presented in the parentheses. GPA=Grade Point Average. Truancy refers to the number of days missed in the previous 30 days. Means with different subscripts differ significantly by profile based on Fisher's least significant difference post hoc tests.

[a] Caution should be taken in interpreting percentages regarding race/ethnicity due to small sample size in some of the cells.

$^*p < .05$

Table 3

Post-Intervention Adjusted Means and Group Differences for Academic-Related Variables

	Post-intervention Adjusted Means			Adjusted Mean Difference					
	Attuned	Over-focused	Under-focused	Attuned vs. over-focused		Attuned vs. under-focused		Over-focused vs. under-focused	
Outcome	***M (SD)***	***M (SD)***	***M (SD)***	**95% CI**	***d***	**95% CI**	***d***	**95% CI**	***d***
School usefulness	3.99 (.72)	3.61 (.72)	3.57 (.72)	[−.65, −.09]	.53	[−.82, −.01]	.58	[−.32, .41]	.06
School importance	4.04 (.60)	3.65 (.61)	3.69 (.61)	[−.80, −.31]	.64	[−.85, −.17]	.58	[−.36, .27]	.07
Academic self-efficacy	6.21 (1.12)	5.64 (1.15)	6.01 (1.14)	[−1.01, −.12]	.50	[−.83, .44]	.18	[−.96, .22]	.32
GPA	2.75 (.88)	2.51 (.86)	2.57 (.88)	[−.63, .16]	.28	[−.73, .37]	.20	[−.56, .45]	.07
Truancy	1.08 (2.83)	2.65 (2.79)	2.00 (2.82)	[.34, 2.80]	.56	[−.73, 2.57]	.33	[−.80, 2.12]	.23

Note. Models are adjusted for baseline scores of the variable of interest, age, minority status, and level of risk (based on bivariate associations). Cohen's *d* is calculated as the difference between the adjusted means divided by the pooled standard deviation. Significant differences are indicated by confidence intervals that do not include zero in the range. Bonferroni correction was applied.