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I expect it to be great... but will it be?

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I EXPECT IT TO BE GREAT…BUT WILL IT BE?" AN INVESTIGATION OF OUTCOMES AND MEDIATORS OF A SCHOOL BASED MENTORING PROGRAM

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Introduction

After its original use in Homer's *The Odyssey*, the word "mentor" did not find its way into modern languages until 1699 (Roberts, 1999). It was not until the early 20th century that organizations such as Big Brothers-Big Sisters and The Navigators began strategically organizing support relationships between mature adults and young people (Clinton & Stanley, 1992). The last three decades, however, have seen increasing practice of mentoring, especially formal programs for youth (DuBois, Portillo, Rhodes, Silverthorn & Valentine, 2011), as well as empirical studies evaluating effectiveness. Although much is yet to be learned, studies, including two meta-analyses (DuBois, Holloway, Valentine & Cooper, 2002; DuBois et al., 2011), have produced much evidence and theory regarding the outcomes and mechanisms of youth mentoring. This article contributes to this growing literature by reporting outcomes and mediators of the initial phase of a school-based mentoring program.

School-Based Mentoring Programs

Although youth mentoring traditionally took place in the context of families (e.g. godparents) and community (e.g. the original version of Big Brothers-Big Sisters), formal mentoring programs have been increasingly administered in school settings (for overview, see Herrera & Karcher, 2013). Such school-based mentoring [SBM]) programs use mentors who are not trained in teaching or helping professions (Walter & Petr, 2006) and their role is to befriend protégés and create environments that offer "support, trust, confidence, risk-taking, and visible positive transformation through dialog" (Irby, 2013, p.333). Unlike community-

based mentoring, SBM is not characterized by a variety of locations and activities for the mentors and protégés, but typically involves regular one-on-one conversations in supervised school environments (Herrera & Karcher, 2013). Because of this, protégés may feel less engaged in the relationships, but this opens the possibility of SBM becoming especially instrumental in particular areas, such as academic development (Darling, 2005). Studies have also shown that relationships between students and school staff can be developmental similarly to mentoring relationships (Bernstein-Yamashiro, 2004; Li & Julian, 2012), and that young people often identify teachers as influential non-parental adults in their lives (DuBois & Silverthorn, 2005a; Erickson, McDonald & Elder, 2009). This has been the rationale for establishing mentoring programs in schools.

Outcomes of SBM

Positive outcomes associated with school-based mentoring include increases in self-esteem and peer connectedness (Karcher, 2008), improvements in relationships with teachers and parents (Chan, Rhodes, Howard, Lowe, Schwartz & Herrera, 2013), better academic performance and participation in ongoing education (Grossman, Chan, Schwartz & Rhodes, 2012; Herrera, Grossman, Kauh, Feldman, & McMaken, 2007), and more positive school attitudes and stronger feelings of school engagement (Black, Grenard, Sussman & Rohrbach, 2010; DuBois, & Silverthorn, 2005b; Holt, Bry & Johnson, 2008). Among these, school engagement may be particularly relevant, as it has been associated with long-term academic achievement (Wang & Holcombe, 2010; Johnson, McGue & Iacono, 2007), extracurricular involvement (Portwood & Ayers, 2005), and responsible conduct (Chapman, Buckley, Sheehan, Shochet & Romaniuk, 2011).

Although there is substantial evidence that in these areas SBM programs can have and have had effects considered beneficial, this has not consistently been the case. In an analysis of three large randomized control trials of formal SBM programs (N=4228), Wheeler, Keller

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& DuBois (2010) reported mostly positive but very modest effects (d=.07 to d=.18) of mentoring on school engagement and social outcomes, but null effects on academic outcomes. Null to small effect sizes have also been reported in a more recent SBM meta-analysis (Wood & Mayo-Wilson, 2012) as well as meta-analysis of formalized mentoring programs in general (DuBois et al., 2011). Moreover, re-examining the Wheeler et al. (2010) study, Herrera and Karcher (2013) noted that for specific outcomes, the significant effect sizes ranged from d=.38 to d= -.35, showing considerable variety in mentoring outcomes, with some mentoring doing as much apparent harm as others did good, to put it bluntly. This suggests that school-based mentoring might not be a 'magic pill' which always works for everyone, and that critical consideration of its moderators is vital.

When Is Mentoring Beneficial?

First, mentoring success is moderated by program characteristics. In their meta-analysis, DuBois et al. (2002) identified program practices related to better social, academic and attitudinal mentoring outcomes. SBM programs can take advantage of the structure of school environments to implement these practices personally as well as institutionally (e.g. providing mentor supervision and training alongside other staff support). This, however, has not always been done effectively (Herrera & Karcher, 2013).

Within programs, relationship characteristics associated with higher-quality mentoring were higher frequency and consistency of contact, shared activities, and more frequent discussions of social issues and protégés' personal relationships (DuBois et al., 2002). Further, successful mentoring outcomes were associated with youth-chosen, rather than program-assigned mentors (Schwartz, Rhodes, Spencer & Grossman, 2013) and with relationships lasting the whole academic year rather than terminating earlier (Grossman et al., 2012).

Although most studies did not find gender differences in mentoring effectiveness (DuBois et al., 2011), in some SBM studies, high-school girls reported better mentoring relationships and more frequent interactions (Zand et al., 2009; Herrera et al., 2007). Even though most programs target socially and academically at-risk students (DuBois et al., 2011), there is evidence suggesting that students with lower social and academic resourcefulness tend to benefit from SBM programs less, therefore, those who need most benefit least (Schwartz, Rhodes, Chan & Herrera, 2011). A reason for this may be that school disengagement, prevalent among at-risk students, may extend to the mentoring program and reciprocally evoke negative responses from mentors, thereby reinforcing student resistance and further blocking mentoring benefits (Bonny, Britto, Klostermann, Hornung & Slap, 2000; Karcher, Nakkula & Harris, 2005; Raposa, Rhodes & Herrera, 2016). Overall, however, studies of protégés' characteristics as moderators within programs are scarce, as most programs target specific populations of youth who are either self-selected or referred by social services or teachers because of a particular (mostly academic) need that they have (Herrera & Karcher, 2013). In school-based programs, higher later educational attainment was more strongly associated with having experienced relationship with teacher-mentors rather than kin-, community- or friend-mentors (Fruiht & Wray-Lake, 2013), which Darling (2005) ascribes to the likely more instrumental orientation of teachers.

Evaluating Mentoring: The Importance of Perceptions

The gold-standard procedures for evaluating treatment programs are randomized control trials (RCTs). Due to the aforementioned within-program variation, likely caused by participant characteristics and extent of involvement in assigned group, RCT evaluation of overall program effectiveness may benefit from being complemented by consideration of differences among individual mentoring relationships, for example in contact frequency and/or protégé perceptions associated with good mentoring outcomes (DuBois et al., 2002;

Nakkula & Harris, 2005). This approach, however, is potentially confounded by a variety of factors. For example, protégés may rate their mentoring as more helpful than it really is due to affection for their mentors, or protégés who are more receptive to mentoring going into it may schedule more frequent meetings.

However, considering perceptions of process in addition to perceptions of outcome could help to identify perceptions to foster in mentoring programs as well as possible confounding of outcome effects with overall perception tendencies. In fact, previous research found associations between perceptions of process measures and outcomes. Perceived quality of mentoring relationship, for example, was associated with improved self-disclosure and better friendships with adults at 8-month and 16-month follow-ups (Chan et al., 2013; Thompson & Zand, 2010). Similarly, measures of protégé perception of quality of the mentoring environment, which included perceived levels of mentor kindness and helpfulness and whether the protégés felt judged, were associated with improvements in attitudes towards future participation in such programs (Fagenson-Eland, & Baugh, 2001), youth psychosocial competency (Zand et al., 2009), and school engagement (Holt et al., 2008). What is scarce, however, is examination of quality of the mentoring environment as a mediator of academic benefits, benefits of discussing academic themes as perceived by protégés, and critical consideration of what affects these perceptions.

Student Expectations: An Additional Mediator?

One potential mediator that has largely been neglected is expectations. Early studies showed associations between mentors' initial program expectations and the types of relationships they formed (Hamilton & Hamilton, 1992; Morrow & Styles, 1995). However, most recent studies have only involved mentoring of children by high-school and university students (Goldner & Mayseless, 2009; Karcher, Davidson, Rhodes & Herrera, 2010) and university mentoring of post-graduates (Young & Perewé, 2004). Lack of research attention

to this is particularly surprising in the school context, where teachers' initial impressions of students have been found to influence their classroom interactions with these students, contributing independently to academic performance (De Boer, Bosker & van der Werf, 2010; Lavy & Sand, 2015). It has been suggested that such 'self-fulfilling prophecies' are likely present in youth mentoring as well (Darling, 2005; Herrera & Karcher, 2013; Keller, 2005), and may flow in both directions, but few studies have addressed this. An exception is Spencer (2007), who reported an association between unfulfilled student expectations and premature termination of mentoring. This, however, was a qualitative study of a community- rather than school-based program, likely characterized by different outcome expectations than for school-related programs on the parts of participants, mentors, and program organizers. The study was also limited by only interviewing participants whose relationships ended early.

Protégé expectations have also been associated with outcomes in other types of intervention programs. For example, Iannotti et al. (2006) found that expectation of positive outcome measures was associated with better self-managed adherence with treatment and treatment outcomes among adolescents with Type 1 diabetes. The placebo effect, a physical response of the body to a person's psychological expectations, well-evidenced throughout medicine (e.g. Price, Finniss & Benedetti, 2008), is also relevant. Protégés with low expectations of mentoring may meet their mentors less and/or behave detrimentally to the relationship, evoking negative mentor responses and triggering downward process and outcome spirals. Conflict in mentoring – or expectations of it - could also reinforce tendencies toward insecure attachment (Noam, Malti & Karcher, 2013), contributing to the negative loop. Therefore, consideration of mentor training and management of student expectations may be crucial.

Proposed Causal Chain

To summarize, we propose the following causal chain of mentoring. First, quality of

mentoring environment contributes to academic and personal mentoring outcomes. Second, mentor and student characteristics contribute to the quality of mentoring environment, thus suggesting quality of mentoring environment as an outcome mediator. Third, student expectations also contribute to mentoring environment quality; however, through self-fulfilling prophecy, they may also be affecting the relation between QME and outcomes, and thus serve as moderator of the relations.

QME and student expectations could also have reciprocal relations. That is, over time, QME could affect school engagement and emerging expectations. This possibility should be considered carefully.

The Present Study

Overview

This study reports the initiation phase of a SBM program. The program is compulsory, intended to benefit students holistically and not just academically, and its mentors are almost solely teachers. We provide an overview and analysis of the characteristics of the program and an assessment of the causal chain we proposed above.

Program Characteristics

The ongoing program was inspired by a series of programs run by College of Tutors at secondary schools in Wroclaw, Poland. Depending on individual needs, the mentoring focus is on personal growth, strengthening particular academic interests, and/or helping students cope with personal or academic problems. To achieve this, the College facilitates extensive training and provides financial compensation for participating teachers who form mentoring relationships with their students (Drozd & Zembrzuska, 2013).

The program we studied is based at an exam-selective private high school in

Bratislava, Slovakia (N=250), and is part of the school's broader emphasis on personal development of students and good student-teacher relationships. The school is bilingual (English and Slovak), has five years of study serving students aged 14-20, and has a very high (90%) rate of graduates going on to higher education. All freshmen and sophomores are required to participate in the program. Older students are encouraged to continue informally with their former mentors or take initiative in forming similar (new) relationships (approximately one third do). The few mentors not teaching at the school are outside formally trained counselors who know the school well (e.g. former students). All mentors in the program receive approximately 15 hours of training in non-directive support, regularly meet with supervisors, and have monthly peer-support group meetings. Unlike many other programs, the school does not match protégés with mentors; rather, protégés select their mentors based on personal preferences and mentor availability, with the most popular mentors selected on a first-come-first-serve basis. Selection of mentors and first meetings occur three weeks into the first semester. This allows time for to manage expectations through explanation of the program purpose and mechanisms (e.g. through testimonials of sophomores and previously mentored older students). Subsequently, mentors and protégés are expected to arrange approximately 30-minute meetings every two weeks throughout the academic year. In these meetings, students are asked about their grades and attendance, and are welcome and encouraged to discuss any personal issues or themes.

Based on these characteristics, it can be concluded that this program fulfills the best practices for youth mentoring as described by DuBois et al. (2002). Further, characterizing the program using the TEAM framework (Karcher & Nakkula, 2010), mentoring within this program could be categorized as developmental, that is, having relational focus and collaborative authorship/initiative, with potential to become more instrumental (goal-oriented), if the mentee so chooses. However, Li & Julian (2012) posit that for relationships to be truly

developmental, a gradual shift of power from mentor to mentee is required. This program formally only supported such a shift through making participation voluntary after the second year.

Quality of Mentoring and Mentoring Outcomes

No relevant control group was available for this program; instead, we used a previously suggested continuous process indicator, perceived quality of mentoring environment (QME; Fagenson-Eland, & Baugh, 2001; Thompson & Zand, 2010), to evaluate outcomes after a semester. Since the program included all the 'best practices' defined by DuBois et al. (2002), we hypothesized that higher QME would be our key mediator associated with better grades, more engaged attitudes, and greater perceived benefits of discussing academic and personal themes.

Mentor and Student Characteristics as Contributing Variables

The program included characteristics with potentially confounding effects. Based on Darling (2005), we hypothesized that protégés who were in their mentors' classes would have lower reported QME. Based on Karcher et al. (2005), we hypothesized that stronger initial student engagement in school would be associated with higher QME. Based on Zand et al. (2009) and Herrera et al. (2007), we hypothesized that girls would have higher QME than boys.

Expectations as an additional mediator and/or moderator

Based on Herrera and Karcher (2013) and studies of expectations from other contexts (Dovidio et al., 2002; Iannotti et al., 2006; Noam et al., 2013; Price et al., 2008), we hypothesized that higher expectations would foster higher later QME. Furthermore, based on the concept of self-fulling prophecy, we hypothesized that higher initial expectations would strengthen the association between QME and mentoring outcomes (i.e. moderation).

Methods

Participants

Study participants were high-school freshmen and sophomore students who voluntarily participated in two evaluations, before the start of the first semester and just before its end. Responses of 103 students were recorded for at least one of the two data collections. However, some students failed to complete both waves (mostly because they were not present at school on one of the days of administration) or did not provide identification data that could be matched across waves; they were thus excluded from the main analyses. The matched sample included 81 students. Consistent with the school's average enrollment of 3 males for every 5 females, 30 males and 51 females in the age range of 14-17 years (M = 14.85, SD = .81) at time 1 participated. Forty-eight (59%) were freshmen who had not experienced the program before and 33 (41%) were sophomores who had participated in their first year. Response rate based on the matched sample and total number of enrolled freshmen and sophomores, including those not present at school when the questionnaires were administered, was 76.4%.

Measures

Parallel sets of questionnaires in Slovak were administered to students at the beginning (September) and at the end (December) of the Fall 2014 semester. The questions were identical in content, except where referring to expectations for or actual experience with the program, as relevant. Each included an item asking whether the students were currently being taught by their mentors (No/Yes), a self-report of sex (Male/Female), and other student characteristics relevant as contributing variables or potential outcomes. The second part of each questionnaire focused on the mentoring program itself, addressing student expectations for it at time 1 and experience with it at time 2. The following measures were included, the

data for which are available from the first author.

Student and mentor characteristics

School engagement (at both times). This was measured using a forward-backward Slovak translation of the 12-item school engagement questionnaire developed by the Minnesota Twin Family Study (MTFS; Johnson et al., 2007). This included items about being interested in school work, enjoying attending school, and being liked by teachers, and was rated on a 4-point scale ranging from "1. Definitely false of me" to "4. Definitely true of me." School engagement was computed as mean of items coded so that high scores reflected high engagement. The scale had good internal consistency (Cronbach's α = .78) and served as a contributing variable at time 1 and outcome variable at time 2.

Academic achievement (at time 2). This was measured using reports of grades in Mathematics, Slovak Language, English, Biology, History, Physics, Chemistry and Geography. We were not able to identify students and collect their grade reports; thus we used student self-reports. Some of the students had not taken all the courses targeted for assessment, so we computed mean grades for both times using whatever course grades were available. The computed Grades scale had good internal consistency (Cronbach's α = .89). Consistent with the Slovak system in which participants' grades were reported, the questionnaire response options ranged from 1 to 5, where 1 represented excellent academic achievement. We reversed these so that higher Grades scale scores indicated higher achievement.

Mentoring

Perceived benefit of discussing personal and academic themes (at time 2). These were measured through student reports of benefits of discussing specific themes during mentoring meetings. Benefit of Personal Themes was computed using the mean of 11 items (e.g. students' feelings, values and relationships with friends, teachers and parents) with good

internal consistency (α = .91) while Benefit of Academic Themes was computed using the mean of 2 items (grades and attendance) that were moderately consistent (α = .58). We developed the items for these scales based on themes identified in the youth mentoring literature (e.g. Karcher and Hansen, 2013). They were formulated as: "*I think that mentoring was helpful to me in __'theme'__*" and were rated using a 6-point Likert scale ranging from "1. Definitely unhelpful" to "6. Definitely helpful."

Quality of mentoring environment (at time 2; QME). This was measured using 7 items we developed using three sources: 1) Rhodes' (2005) Youth Mentoring Relationship Quality Inventory that focuses primarily on negative aspects of mentoring relationships; 2) the Mentor Youth-Alliance Scale created by Zand et al. (2009), which focuses on positive aspects of mentoring interactions; and 3) the questionnaire used at some schools in the Wroclaw tutoring program, which focuses specifically on meeting atmosphere rather than meeting content (A. Horyza, A. Cwik-Modrzejewska & J. Kwiatkowska, personal communication, September 11, 2014). The items, such as: *"I have conflicts with my mentor"*, "*My mentor attempts to understand my problems*," and *"The atmosphere of mentoring meetings is pleasant"*, were measured using a 6-point Likert scale ranging from "1. Absolutely disagree" to "6. Absolutely agree". These had good internal consistency (α = .81), and w computed the QME measure as the mean of these scores (ranging 1-6), with higher score indicating higher student-perceived quality of mentoring environment.

Expected quality of mentoring environment (at time 1; eQME). Expected quality of mentoring was computed as mean scores for the aforementioned items about quality of mentoring environment, phrased in anticipatory terms to measure expectations for future mentoring meetings (e.g. "*Mentor will not give me set advice but will help me come up with solutions myself*").

Other measures.

Lastly, at both times we gathered two types of additional data. Some measures were used to test for nonrandom missing data and non-participation. These included fear and excitement about mentoring and whether students considered mentoring a good part of school, and were measured using a 6-point Likert scale ranging from "1. Definitely no" to "6. Definitely yes". At time 2, students also reported how many times they met with their mentors and other characteristics and perceptions about school and their mentoring that were beyond the scope of this study.

Administration Procedure

The questionnaire was administered electronically in the school's computer lab to groups of approximately 14 students, during special times scheduled by the school (students who were not present at school did not participate). Prior to starting the questionnaire, each participant was briefed and gave informed consent.

Data Analytic Procedure

To test the study's hypotheses, we used multiple hierarchical regressions to analyze the relations between mentoring outcomes and variables involved in the mentoring process during the initial three months of the mentoring program.

To test the hypothesized association between higher later QME and better mentoring outcomes, we set up hierarchical regressions with each outcome (e.g. Grades) as dependent variable. To control possible confounds and test consistency of variables over time, Model 1 included variables measured at time 1 which were most likely to predict outcome variables at time 2. This meant using the baseline values of the variables for Grades and School Engagement and expected benefit for the Benefit of Discussing Academic Themes and Benefit of Discussing Personal Themes. This was followed in Models 2-4 by consecutively adding Expected Quality of Mentoring Environment (measured at time 1), Quality of Mentoring Environment (measured at time 2), and their interaction. To test hypothesized

contributors to mentoring quality, we ran an additional regression with Quality of Mentoring Environment as the dependent variable and mentor and student characteristics as predictors.

These analyses enabled us to explore associations between the dependent variables (later grades, later school engagement, benefit of academic and personal themes) and their hypothesized predictors (mentor and protégé characteristics, process measures and expectations) whilst controlling inter-correlations among them. We used Sobel's method for testing the hypothesized mediating role of Quality of Mentoring Environment on the effect of baseline values and expectations on the later outcomes, and did moderation analyses of the roles of expectations (Expected Quality of Mentoring Environment).

We computed estimates of effect sizes using Cohen's d and Bonferroni-corrected for family-wise error in regressions with the same predictors but different dependent variables. Given the observed probability levels, number of predictors, observed R-squared values and sample size, the estimated power of the tests used was mostly above the recommended level of 80% (Cohen, 1992). For some of the smaller effects, however, the estimated power dropped below 80%, indicating need for awareness that they may not be robust.

Results

Matched vs non-matched participants.

Analysis of sample attrition, summarized in Table 1, indicated that participants whose data could be matched at the assessments significantly differed from those who could not. Participants whose responses could not be matched had what could be considered worse , academic aspiration, fear and excitement towards mentoring, and whether they considered mentoring a good part of school.

Descriptives

MTFS has suggested that the School Engagement scale has two factors, which they

labeled achievement problems and achievement motivation. We tested whether this held in our sample that originated in a very different country. Principal Axis Factoring indicated similarity in the present factor structure to that of MTFS. Nevertheless, considerable discrepancy existed as well, with loadings on items 1, 8, 9, 11, 12 not corresponding to the proposed factors at one or both times. Because of this and the possibility of cultural differences from the American MTFS sample, we used the factor solution that seemed most appropriate for these data. This had one factor, a general variable of school engagement at time 1 and time 2, with loadings from all items except 1, 9 and 11. We thus excluded these to maximize scale consistency. The resulting scale had good internal consistency in September (α= .70) and December (α= .78). The mean score was 3.04 (SD = .41) at time 1 and 3.07 (SD = .49) at time 2, which on the 1-4 range means that students were rather engaged with school at both times. This was consistent with the high rate of students going on to further education in the school.

At time 1, students had high expectations for quality of mentoring environment (M=4.94, SD=.60), did not expect many conflicts (M=2.48, SD=1.08), expected to meet every two weeks, and considered organizing meetings as much their responsibility as that of their mentors. Their expectations appeared largely to have been met.

While the students rated their mentoring as beneficial, there was higher reported benefit of discussing personal rather than academic themes. Further, students consistently reported very high quality of mentoring environment, with a mean score of 5.14 (SD = .73) on the 1-6 scale. These findings are summarized in Table 2.

Mentoring Outcomes

Later Grades and school engagement were predicted by their baseline values (Model 1), but not by eQME (Model 2). QME was associated with greater later school engagement but not with grades (Model 3). All effect sizes, except for the correlations of grades and

engagement across time, were rather small. These results, summarized in Table 3, partially supported our hypothesis that higher QME would be associated with better mentoring outcomes.

Perceived benefit of discussing both academic and personal themes was predicted by the student expectations of these benefits (Model 1). Adding eQME was associated with additional variance in personal, but not academic, themes (Model 2). Similarly, adding QME revealed no significant effect on benefit of academic themes, but a relatively large change in the benefit of personal themes, as each additional point of protégé score on QME was associated with .77 point increase in reported benefit of discussing personal themes (Model 3). At the same time, the effect of eQME became nonsignificant. These results, summarized in Table 3, partially supported the theme-based part of the hypothesized predictive value of expectations and quality of mentoring on mentoring outcomes.

Finally, contrary to our hypothesis, mentoring outcomes were predicted neither by mentor nor student characteristics.

Quality of Mentoring Environment

The process variable QME was predicted neither by mentor (Model 1) nor student characteristics (Model 2). In contrast, adding eQME resulted in a relatively large change in QME, as each additional point of protégé score on eQME was associated with .67 point increase in QME (Model 3). These results, summarized in Table 4, supported the hypothesized role of expectations, but not of mentor and student characteristics, in predicting mentoring process quality.

For a variable to function as mediator, the independent variable must predict the mediator and the dependent variable, the mediator must predict the dependent variable, and the link between the independent and dependent variables must decrease significantly when

the mediator is introduced (Baron & Kenny, 1986). In our study, we found mediating relations between A) baseline school engagement, QME, and later school engagement (Sobel test = 2.34, $p < 0.01$), B) expected benefit of discussing personal themes, QME, and reported benefit of discussing them (Sobel test = 3.02, $p < 0.01$), and C) eQME, QME, and benefit of discussing personal themes (Sobel test = 4.41, $p < 0.01$). In cases A and B, the IV's effects dropped but they continued to predict the DVs significantly, so QME served as partial mediator, whilst in case C, eQME became nonsignificant, suggesting full mediation by QME. These results supported the hypothesized mediating role of QME between baseline values and/or expectations and some of the later outcomes.

Mentoring expectations as a moderator?

Adding interaction terms between eQME and QME to implement Model 4 generated no additional significant effects (not shown in the tables). Therefore, whilst expectations contributed to the mentoring processes and outcomes, our results suggest they did not moderate either.

Discussion

Overview

We evaluated the initial phase of a school-based mentoring program and addressed literature-based mediators and the recently hypothesized moderating role of protégé expectations. After 3 months, protégés who reported higher QME tended to have greater school engagement and greater perceived benefit of discussing personal themes. No such association was found for grades or perceived benefits of discussing academic themes. Additionally, QME partially mediated the relation between baseline and later school engagement and fully mediated the relation between expected and experienced benefit of discussing personal themes. Student sex, initial school engagement and whether protégés were

taught by their mentors did not predict mentoring outcomes. In contrast with this, expectations contributed to, but did not moderate as hypothesized, mentoring processes and outcomes.

Limitations

Before we discuss these results in greater depth, we note some methodological limitations of this study. First, participants who could not be identified as participating in both assessments had on average worse academic performance and expectations for the mentoring program. Thus the sample evaluated likely did not include some of the program participants most disaffected with the school environment more generally. Second, despite their statistical significance, many of the reported effects were small. This is consistent with the youth mentoring literature (DuBois et al., 2011), but it raises questions of importance of the most frequently studied variables in contrast to others not considered, for example socio-economic status of protégés or the number of non-parental adults already providing support. Third, we relied on student reports and broad perceptual measures that could be subject to bias. However, as described earlier, self-reports can serve as good indicators of relationship quality and have been associated with mentoring outcomes in other studies (Fagenson-Eland, & Baugh, 2001; Zand et al., 2009). Fourth, the one-time measurements of expectations and experience could have been affected by immediately recent events, such as negative interactions with adults on the day of measurement. Fifth, we did not have a randomized control group, thus limiting ability to draw causal inferences about program effects. However, considering reported variability within individual programs (DuBois et al., 2002) and effects ranging from positive to negative (Wheeler et al., 2010), it could be argued that having a bad mentoring experience may sometimes be worse than having none. Therefore, examining differences among relationships and their outcomes may be complementary to randomized control trials (RCTs), though this too should be tested. Sixth and perhaps most importantly, we studied one specific program. Among other characteristics, this program is compulsory, it

doesn't specifically target socially and academically at-risk students, and its mentors are almost solely teachers rather than community volunteers. Thus, the program differed from most other youth mentoring programs (DuBois et al., 2011), so discernment is needed in what should and should not be generalized.

Mentoring Outcomes and QME

Our results showed that even an initial phase of a SBM mentoring program can be associated with intended outcomes. One avenue through which this took place appeared to be perceived quality of the mentoring environment. Protégés who perceived this more positively tended to have higher later school engagement and perceived benefit of discussing personal themes. Although the causality of these associations was unclear, at face value, these results were consistent with theory and evidence linking mentoring and improvements in social competency and school engagement (Black et al., 2010; DuBois, & Silverthorn, 2005b). These findings also replicated those from a similar program. In an RCT study of a 5-month program led by school personnel, Holt et al. (2008) found that mentored students exhibited more positive school attitudes and behaviors, and more importantly, that there was an association between being "mentored as intended" (i.e. meeting at least 6 times before terminating the relationship) and increases in school engagement.

Further, contrary to our hypothesis, we did not find associations between QME and grades or perceived benefit of discussing academic themes. This lack of association has several possible interpretations. First, given that most mentors were teachers and most students relatively high-achieving and engaged, need may be generally low and the kind of mentoring offered relatively uniform for academic issues. That is, regardless of whether they had strong personal connections with their protégés or not, they knew the protégés' academic standings, how the school works, and what the protégés could do to do well in it academically. Second, it may be that in this program, mentoring meetings as such are not academically

beneficial. At face value, such an interpretation would be surprising, as the program mirrored practices previously linked to mentoring outcomes considered positive (DuBois et al., 2002) as well as those specifically linked to better academic outcomes, namely use of teachers as mentors (Fruiht & Wray-Lake, 2013; Simões & Alarcão, 2014), and having mentors chosen by students rather than assigned by the program (Schwartz et al., 2013). On the other hand, it would be in line with the findings of Wheeler et al. (2010), who in a meta-analysis of school-based mentoring programs identified effects considered positive on school attitudes and school-related behaviors, but not on academic achievement.

An additional possibility is that during the first semester examined here, mentors and protégés were mostly getting to know each other. The quality of this process might have started to be associated with the more subjective personal benefits and increased school engagement, but not yet on the measured academic outcomes. Moreover, even if the program was not academically beneficial per se, it could still be beneficial indirectly, as greater maturity and engagement have previously been associated with later relational, school-related and academic outcomes considered beneficial (Chan et al., 2013; Chapman et al., 2011; Wang & Holcombe, 2010; Johnson et al., 2007; Portwood & Ayers, 2005). Therefore, it might be that rather than not being academically beneficial at all, the program was not beneficial yet, an assertion in line with evidence of mentoring duration as a moderator of its outcomes (Grossman et al., 2012).

Finally, the reported personal benefits may be valuable in themselves as indications of mentor-protégé connections that helped students become more mature and socially competent (Karcher, 2008; Zand et al., 2009) or could lead to improvements in other relationships (Chan et al., 2013). In previous studies, teacher-student relationships showed potential for such holistic developmental goals in conjunction with conventionally educational ones (Bernstein-Yamashiro, 2004). Our findings of high reported benefits of discussing

personal themes, irrespective of who brought them up, suggested that teacher-based mentoring may have bolstered such personal growth, since discussing personal themes is not only a sign of trust between mentee and mentor, but also potentially better enables mentees to understand their present situations (e.g. their feelings), and take steps towards more desirable situations (e.g. learning to manage disruptive emotional expressions). This is consistent with stated aims of this and similar programs (Drozd & Zembrzuska, 2013) and some fields of educational research, such as that of character education (Berkowitz & Bier, 2007).

Other characteristics

Contrary to our hypothesis, no difference was found in student-perceived quality of mentoring environment offered by those who taught them and those who did not. This could have been either because the non-teaching mentors were mostly employees of the school and had similar relationships with the students as did the teachers (Darling, 2005) or because all the mentors received extra training in non-directive personal support. The reported personal benefits of the program suggest the latter.

Neither sex nor initial school engagement predicted perceived quality of mentoring environment. This contrasted with studies of school-based mentoring in which females tended to have better relationships with mentors (Zand et al., 2009; Herrera et al., 2007), as did highly resourceful and engaged students (Schwartz et al., 2011). There are many potential reasons for this, including different program practices and participant demographics. Although this program is compulsory for everyone regardless of background or ability, the school's entrance exams and bilingual nature likely result in the presence of a largely motivated and engaged student population. This is in contrast with the aforementioned programs targeting at-risk students, where mentoring effectiveness may be mediated by environmental stress at the youth's home (Raposa et al., 2016).

The lack of association between initial school engagement and QME in this study was in contrast with evidence that disengaged students tend to evoke negative responses from mentors and thus experience fewer mentoring benefits (Bonny et al., 2000; Karcher et al., 2005). This does not mean that there was no tendency for this to happen per se; nevertheless, it was not yet a visible issue in this program. This could have been because there were relatively few such students or such tendencies may have been minimized by training in non-directive personal support.

Student expectations: An additional variable for consideration.

We proposed that one possible contributor to protégé-perceived mentoring outcomes, previously largely unexamined, is their own expectations. Mentoring interaction is always dyadic (Nakkula & Harris, 2005); high expectations may foster greater receptivity and responsiveness to mentor interaction and thus later both perceived and objective benefit. Such self-fulfilling prophecy, reported in other contexts (Dovidio et al., 2002; Price et al., 2008; De Boer et al., 2010; Lavy & Sand, 2015), has been mentioned as a possibility in youth mentoring (Keller, 2005; Herrera & Karcher, 2013), but previous studies have not assessed it empirically. Our results supported this hypothesis since students who expected an environment lacking in trust, respect and care tended to report lower quality of mentoring environment 3 months later. At the same time, however, these expectations did not moderate the relations between perceived mentoring environment and the outcome measures, suggesting that expectations did not change the effectiveness of mentoring itself. Therefore, good mentoring environment, even when experienced by students with low expectations, can be associated with positive outcomes. While this finding could be encouraging for all proponents of mentoring, its generalizability should be made with caution, as all students in the present program reported rather high mentoring expectations, which may not be the case at all in programs working with disengaged at-risk students. Still, however, it is telling that a

relation between expectations and quality existed even within the present sample, where expectations did not vary so greatly as they might elsewhere.

Implications and Future Research

If quality of mentoring relationships mediates the success of mentoring over time and protégé expectations predict its quality, as this study suggested is the case, this may have major implications for this program as well as for practitioners and researchers in the broader field.

The identified importance of personal topics in perceived benefits of mentoring in a school-based mentoring program calls for more conceptual and research work on appropriate goals for such programs and what can be done to fulfill and measure attainment. Broadly speaking, this touches on the importance of intervention programs and education in general, asking not only "What should our students know?" but also "What kind of people should they be?"

Our expectations-related findings provide evidence that practitioners should carefully consider setting realistically positive expectations, e.g. through introduction, training and peer sessions (as was the case in the present program), so that students play their parts in making the mentoring effective. At the same time, lack of moderation of expectations on the associations between process and outcomes suggests that even if program organizers fail in this and protégés do enter with low or unrealistically high expectations, mentoring may still benefit them. Mentee expectations are likely to be linked to student characteristics and environmental factors over which mentoring programs have no control (except through selective recruitment). For example, more positive expectations may be linked to higher openness to experience, lack of rejection sensitivity which would lead one to negative interpretations of ambiguous interactions (Levy, Ayduk & Downey, 2001), or the number of and quality of relationships with other non-parental adults in youths' lives. However,

expectations are probably also influenced by other, more dynamic factors, such as the context of learning about the program (e.g. who explains the program and how), which can be varied rather easily. By informing the students and setting their expectations well, it may be more likely that students will play their parts in making mentoring beneficial. From a systemic perspective, this could be done by using established guidelines and outlining a clear vision of mentoring prior to program start (Frels, Zeintek and Onwuegbuzie, 2013). The identified importance of student expectations opens multiple avenues for future research. First, it would be beneficial to continue collecting longitudinal data to understand and utilize the likely changing roles of expectations over time. Second, researchers could test and compare different approaches of practitioners towards expectation management (e.g. class introduction, meetings with potential mentors, presentations of past participants). Additionally, we could focus on analyzing the association between protégé program expectations and the types of relationships they build as has been done with mentor expectations (Hamilton & Hamilton, 1992; Morrow & Styles, 1995). Further, it would be beneficial to investigate the potential frustrations that could come from unmet expectations, as these were found to be a theme in a qualitative study of prematurely terminated relationships (Spencer, 2007). This raises the question of whether there are thresholds over which high expectations become unhelpful.

Lastly, we argued that considering individual relationships augments RCTs. If the research and practice of youth mentoring programs continue to increase as they have over the past two decades, opportunities may arise to study mentoring effectiveness through a combination of this approach with RCT, thus considering the effectiveness of the programs as well as moderators of quality of individual relationships.

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Table 1

Descriptive Statistics of the Comparison of Matched and Non-Matched Participants at Time 1 and 2. Results of t-tests and effect sizes of the difference between the two groups.

Measure	N	Total M	SD	EM Total M	SD	Skew ness	Kurto sis	N	Matched M	SD	N	Non-Matched M	SD	t-test	Effect size Cohen's d
Grades_1[a]	96	1.56	.58	1.49	.56	1.18	.80	81	1.49	.56	15	1.91	.61	2.60**	-.71
Grades_2	88	1.75	.58	1.71	.58	.84	.16	81	1.71	.58	7	2.20	.41	2.21**	-.99
Aspiration_1 [b]	90	3.23	.70	3.30	.69	-.76	.80	77	3.30	.69	13	2.85	.69	-2.18**	.65
Aspiration_2	87	3.29	.76	3.34	.73	-1.02	1.03	80	3.34	.73	7	2.71	.95	-2.12*	.74
Fear_1 [c]	95	2.59	1.48	2.60	1.41	.70	-.33	80	2.60	1.41	15	2.53	1.81	-.16	.04
Fear_2 ~	88	1.51	1.18	1.56	1.23	2.56	6.21	81	1.56	1.23	7	1.00	.00	-4.08**	.65
Excitement_1 [d]	96	4.74	1.32	4.90	1.23	-1.09	.88	81	4.90	1.23	15	3.87	1.46	-2.90**	.76
Excitement_2	88	5.02	1.21	5.11	1.20	-1.19	1.20	81	5.11	1.20	7	4.00	.82	-2.38**	1.08
MGPS_1[e] ~	96	5.16	1.28	5.32	1.08	-1.51	1.60	81	5.32	1.08	15	4.27	1.87	-2.12*	.69
MGPS_2	88	5.05	1.45	5.16	1.37	-1.57	1.61	81	5.16	1.37	7	3.71	1.80	-2.60**	.91

[a] grades (ranging 1-5) were computed as means of reported grades from multiple subjects, with lower score = better grade.
[b,] academic aspiration (ranging 1-5) was measured using an item about highest desired level of education, with higher score= higher aspiration
[c, d, e] fear and excitement towards mentoring, and considering mentoring a good part of school (MGPS) were measured using a 6-point Likert scale ranging from ("1. Definitely no" to "6. Definitely yes")
~ indicates not assumed equality of variances.
*, **, indicates significance at the p< .05 and .01 respectively

Table 2

Descriptive statistics (N, M, SD, Skewness, Kurtosis) for Outcome Measures, Process Measures and Protégé Expectations (e)

	N	M	SD	Skewness	Kurtosis
Grades_1 [a]	96	3.44	.58	-1.18	.80
Grades_2	88	3.25	.58	-.84	.16
School Engagement_1 [b]	96	3.04	.41	-.70	.92
School Engagement_2	88	3.07	.49	-.76	.95
Theme Initiative [c]	85	3.87	1.38	.04	-.24
BT_AcademicThemes [d, e]	88	2.55	1.40	.55	-.61
BT_PersonalThemes	88	3.35	1.22	-.09	-.61
Quality of mentoring environment [f]	88	5.14	.73	-1.76	4.85
eQME [g]	96	4.94	.60	-.90	1.06
eConflicts [h]	96	2.48	1.08	.60	.01
eMeetingFrequency [i]	95	3.20	.68	-.06	.87
eMeetingInitiative [j]	95	2.31	.91	.07	1.69

[a] grades (ranging 0-4) were computed as means of reported grades from multiple subjects, with higher score = better grade.

[b] School engagement (ranging 1-4) was computed as mean of engagement scale, with higher score = more engaged with school).

[c] Theme Initiative was measured using a 7-point Likert scale ranging from "1. Only me", through "4. Both equally" to "7. Only mentor"

[d, e] BT= Benefit of discussing theme. BT (ranging 1-5) was computed as means of scores for the respective scales, with higher score = higher benefit.

[f] Quality of mentoring environment (ranging 1-6) was computed as mean of scores for the mentoring environment scale at time 2, with higher score = higher quality of mentoring environment).

[g] eQME = Expected quality of mentoring. Ranging 1-6, eQME was computed as mean of scores for the mentoring environment scale at time 1, with higher score = higher expected quality of mentoring environment

[h] eConflicts was measured using a 6-point Likert scale about whether the student expects to have conflicts with mentor, ranging from ("1. Definitely no" to "6. Definitely yes")

[i] eMeetingFrequency was measured using a multiple-choice question about how often students expect to meet with their mentor, with the following answers: ("1. Multiple-times per week", "2. Once per week", "3.Twice per month", "4. Once per month", "5. Once per two months")

[j] eMeetingInitiative was measured using a 5-point Likert scale of who is expected to initiate meetings, ranging from "1. Only me" to "5. Only mentor"

Table 3

Hierarchical Regression Models for Grades, School Engagement, Benefit of Discussing Academic and Personal Themes, as Predicted by Variables at Time 1 and QME.

Predictor	Grades[a]						School Engagement[b]					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	.97	.32	1.34	.59	1.48	.59	.58	.28	.27	.38	.12	.38
Baseline	.66**	.09	,66**	.09	.67**	.09	.83**	.09	.78**	.10	.75**	.10
eQME[c]			-.07	.10	.02	.11			,.09	.08	.01	.08
QME[d]					-.12	.08					.13*	.06
R²	.41		.41		.43		.51		.52		.55	
F for R² Change	54.37 (1, 79) **		.55 (1,78)		2.35 (1,77)		81.42(1,79) **		1.54(1,78)		5.39 (1,77) *	

Predictor	Benefit of Academic Themes[e]						Benefit of Personal Themes					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Constant	.83	.53	-.13	1.50	-.54	1.53	.89	.56	.1.43	1.12	.2.6	1.02
Expected	.43**	.13	.41**	.13	.39**	.13	.63**	.13	.45**	.15	.36**	.13
eQME			.20	.30	-.01	.34			.60*	.26	.12	.25
QME					.30	.24					.77*	.16
R²	.13		.13		.15		.22		.27		.44	
F for R² Change	11.48 (1,79) **		0.47(1,78)		1.56(1,77)		22.66(1,79) **		5.51(1,78) *		22.81(1,77) **	

Note. B = unstandardized coefficients; SE = Standard error. Degrees of freedom for change in F are reported in parentheses.

[a] grades (0-4), higher = better grade

[b] School engagement (ranging 1-4), higher = more engaged

[c] eQME= Expected Quality of mentoring environment (1-6), higher = higher expectations

[d] QME= Quality of mentoring environment (1-6), higher = better quality

[e] Benefit of discussing academic / personal themes = (ranging 1-5) as computed by means of scores for the respective scale, with higher score = higher perceived benefit

*, **, indicates significance at the p<0.05 and 0.01 respectively

Table 4

Hierarchical Regression Model for the Quality of Mentoring Environment, as Predicted by Teacher and Protégé Characteristics and Protégé Expectations.

Quality of Mentoring Environment	Model 1		Model 2		Model 3	
	B	SE	B	SE	B	SE
Constant	5.26	.25	3.41	.72	2.01	.90
Mentor characteristic						
TM [a]	-.06	.17	-.02	.16	.00	.14
Student characteristics						
Sex [b]			.00	.17	.05	.15
SE_1 [c]			.58**	.21	.03	.22
Student expectations						
eQME [d]					.67**	.15
R^2	.00		.10		.33	
F for R² Change	.13 (1,78)		3.92(2,76)*		13.18 (2,74)**	

Note. B = unstandardized coefficients; SE = Standard error. Degrees of freedom for change in F are reported in parentheses.
[a] TM = whether the mentor taught their protégé, 1=no, 2=yes
[b] 1=male, 2=female
[c] SE_1 = School engagement at time 1 (1-4), higher = more engaged
[d] eQME= Expected quality of mentoring environment (1-6), higher = better quality
*, **, indicates significance at the $p< 0.05$ and 0.01 respectively