A typology of school-based mentoring relationship quality: Implications for recruiting and retaining volunteer mentors

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ABSTRACT

A critical component of successful mentoring programs is the quality of relationships. In school-based settings, relationship quality measures tend to rely on single, unidimensional indicators reported by one informant. Using data from a school-based sample of both mentors and mentees enrolled in Big Brothers Big Sisters of the Greater Twin Cities ($n = 244$), we identified multidimensional profiles of mentoring relationships, factors associated with profiles, and associations between profiles and program-related mentor outcomes. Guided by Positive Youth Development concepts, a latent profile analysis identified three profiles based on multi-informant ratings of closeness, communication, engagement, and compatibility: Tough Matches, Tentative Mentors, and Tight Matches. Profile membership was associated with mentors' attitudes toward youth, match expectations, training received, and perceived program support. Profiles were also distinguished by match length and mentor commitment. Tentative mentors and those in tough matches could benefit from targeted practices to increase mentor capacity to connect and engage with mentees.

1. Introduction

School-based mentoring programs are increasingly being utilized to support the academic and social needs of at-risk or underserved children. Schools provide a natural context for youth development and an ideal setting for facilitation of positive adult-youth relationships. In school-based mentoring programs, volunteers meet one-on-one with children to provide friendship, support, role modeling, and encouragement (Herrera, Grossman, Kauh, Feldman, & McMaken, 2007). In line with a Positive Youth Development framework (PYD; Lerner et al., 2009), school-based mentoring programs may provide an ideal avenue for fostering social connections, developing skills, and promoting school engagement. However, the impact of school-based mentoring programs for youth is mixed. There is some evidence for positive impacts on academic achievement, peer relationships, and reductions in misconduct and truancy (Herrera et al., 2007; Herrera, Grossman, Kauh, & McMaken, 2011; Karcher, 2008; Wheeler, Keller, & DuBois, 2010), but other studies have found little to no effects

(Bernstein, Dun Rappaport, Olsho, Hunt, & Levin, 2009; Wood & Mayo-Wilson, 2012).

For the adults who volunteer to be mentors, school-based mentoring is often attractive because of time-limited commitments (i.e., a school year) and low pressure to structure and organize activities with youth in the school setting compared to community-based mentoring programs where mentors schedule one-to-one outings and activities with youth on weekends or evenings (Herrera & Karcher, 2014). With regard to outcomes for mentors themselves, a positive mentoring experience promotes greater mentoring self-efficacy (Faith, Fiala, Cavell, & Hughes, 2011), persistence in the relationship (Karcher, Nakkula, & Harris, 2005), and civic action (Weiler et al., 2013). A dissatisfying experience, however, may negatively impact commitment to the relationship (Gettings & Wilson, 2014) as well as one's proclivity to volunteer in the future (Stukas & Tanti, 2005).

Although we are only beginning to understand the mechanisms that produce positive outcomes specifically for both school-based mentees and mentors, the quality of the mentoring relationship is generally

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accepted as a critical ingredient in most youth mentoring programs. This hypothesis is supported theoretically (e.g., Rhodes, Reddy, Roffman, & Grossman, 2005) and empirically (e.g., Bayer, Grossman, & Dubois, 2015; Grossman, Chan, Schwartz, & Rhodes, 2012); yet most research on mentoring relationship quality has focused on community-based mentoring and/or contains methodological limitations which constrain the utility of findings. The methodological limitations are understandable given that the science of youth mentoring is relatively young. New research can build on what has been conducted up to this point. However, school-based mentoring occurs in a unique context, may serve different youth populations and/or attract different types of mentors, and is often more structured than community-based mentoring (Herrera & Karcher, 2014). For instance, Karcher and Hansen (2014) described an important distinction between instrumental and developmental relationship styles in mentoring. An instrumental style characterized by a goal-directed (or skill development) focus initially may shift over time to being more relational in nature. An instrumental style may also be more salient in the school-based mentoring context, while a developmental style distinguished by a relational focus that evolves into a goal-directed, problem solving focus might more typically characterize high quality community-based mentoring relationships. Thus, studies that specifically explore mentoring relationship quality within the school context, while also filling methodological gaps, are warranted.

1.1. Positive youth development and relationship quality in school-based settings

Positive youth development (PYD) provides a theoretical grounding for the current study's focus on mentoring. PYD refers to a deliberate process of providing young people with the relationships, experiences, and opportunities needed to become successful and competent adults. A key building block of PYD is the concept of connections, especially relationships with prosocial adults in relevant contexts such as school and community settings (Hamilton, Hamilton, & Pittman, 2004; Lerner, Napolitano, Boyd, Mueller, & Callina, 2014). Indeed, high quality relationships are implicated as the active ingredient across youth settings (Li & Julian, 2012; Sieving et al., 2017) and within most mentoring-based interventions (Rhodes, 2005; Rhodes, Spencer, Keller, Liang, & Noam, 2006). Having healthy relationships with adults has been associated with benefits for youth including academic outcomes, healthy eating behaviors, mental health, social skills, sexual health, and reduced violence (Sieving et al., 2017).

In the context of youth-mentor relationships, most program benefits are derived to the extent that relationships are of high quality and commitment to program expectations for the duration is fulfilled (Herrera et al., 2007; Kanchewa, Yoviene, Schwartz, Herrera, & Rhodes, 2016; Rhodes et al., 2006). Mentoring relationship quality is defined as the characteristics of relationships between adults and youth that are specific to the mentoring experience and thought to directly and substantially influence the mentee's outcomes (Nakkula & Harris, 2014). We contend that mentoring relationship quality may also have potential influences on mentor outcomes. Beyond this definition, the exact conceptualization of the characteristics that constitute a quality relationship varies widely across the mentoring literature.

For instance, many studies characterize quality via relationship closeness and/or match duration (e.g., Bayer et al., 2015), while others consider additional factors such as trust, acceptance, positive communication, and engagement (Nakkula & Harris, 2014). Although rigorous research on mentoring relationship quality is limited, as described below, there have been notable attempts to delineate the types of characteristics considered in theoretical and empirical studies of mentoring. For instance, Nakkula & Harris, 2014 organized three broad types of characteristics: internal match quality (i.e., compatibility, competence, satisfaction, dosage), match structure (i.e., purpose, authorship, and focus), and external match quality (i.e., influences outside

the relationship, such as program support or parental engagement). Theory and research has described the types and roles of relationships in community-based mentoring (e.g., Rhodes, Schwartz, Willis, & Wu, 2014), but relatively less is known about relationships formed in school-based mentoring (Randolph & Johnson, 2008). Gaining a better understanding of relationship quality in school-based settings can inform training and support efforts.

1.2. Need for multi-informant assessment

One of the biggest limitations of the current literature on school-based mentoring relationships is the reliance on a single reporter. Few youth-mentor studies, in general, have included assessments from both mentors and mentees. In a community-based study where both perspectives were included, concordance ranged from no agreement to moderate agreement (Ferro, Wells, Speechley, Lipman, & DeWit, 2014). In two school-based studies, correlations between reports from both mentors and mentees were relatively small (Cavell, Elledge, Malcolm, Faith, & Hughes, 2009; Cavell & Hughes, 2000). Recent studies of school-based mentoring recommend that future research include measures of both mentee and mentor perceptions (Bayer et al., 2015), as excluding half of the dyad or inappropriately combining scores produces an incomplete representation of the relationship (Deutsch & Spencer, 2009).

Mentors' and mentees' perceptions of the relationship may also predict different outcomes. For instance, Herrera (2004) found that school-based mentors who felt less close to their mentee were less likely to commit to an additional year of meetings. Yet, youth-reported closeness was not associated with whether the relationship would continue. Herrera (2004, p.16) concluded, "Assessing the mentor's feelings toward the match may offer important insights into its strength and longevity that the youth's responses alone cannot provide." Mentors and mentees perceptions of the relationship may be influenced by differing initial expectations. From a PYD perspective, a low-quality relationship—even on one side of the relationship—would lessen the chances of optimizing positive outcomes for mentees (Lerner et al., 2014). The current study addresses these recommendations by including measures of relationship quality from both mentors and mentees.

1.3. Need for multidimensional assessment

Existing research on school-based mentoring relationships tends to rely on a single construct to measure relationship quality, despite the availability of a variety of subscales and multidimensional measures (see Nakkula & Harris, 2014 for a complete review). For example, one recent study of children in grades 4–9 participating in the school-based Big Brothers Big Sisters program found that emotional closeness with mentors mediated the effect of school-based mentoring on academic outcomes (Bayer et al., 2015). Relationship quality was only assessed by mentee-report on a single-item: How close do you feel to your mentor? This focus on the construct of emotional closeness is insufficient for explaining the nuances of the mentoring relationship in school-based programs, where mentoring occurs within the context of other adult-youth relationships on school property (as opposed to individual dyads engaged in activities out in the community) and tends to be shorter in duration. Although closeness reflects an important dimension of relationship quality, other aspects are important to assess such as communication, engagement, and compatibility (Karcher et al., 2005; Nakkula & Harris, 2014). For instance, a small study of a 5-month school-based mentoring program for at-risk youth during their transition to high school included a variety of relationship quality subscales, finding that different dimensions of relationship quality (e.g., instrumental support and relational satisfaction) were associated with positive changes in school belonging but negative changes in grades (Holt, Bry, & Johnson, 2008).

Further, most research operationalizes aspects of relationship quality as unidimensional, quantitative measures along a low-high continuum. One exception is a prospective, mixed-method study, which identified four qualitatively-different trajectories of school-based mentoring relationships: progressive, plateaued, stagnant, and breakthrough (Pryce & Keller, 2012). Mentors in both stagnant and breakthrough relationships reported a relative lack of closeness, yet differed on reports of conflict, with breakthrough relationships evidencing high levels of conflict. Presumably, assessing closeness only, or combining reports of relationship conflict and closeness into a single composite score, neglects key distinctions that may be influential to the strength and length of relationships. Research that identifies and preserves qualitative differences across reporters and dimensions of relationship quality is sorely needed not only to improve the precision of theoretical models but also to enhance identification of, and strategies to improve, less effective relationships.

1.4. The current study

Methodological concerns contribute to outstanding questions of what specific factors comprise relationship quality and promote longevity within school-based mentoring. Notwithstanding the significant contributions described above, most studies have relied on the perspective of one respondent, assessed only a single aspect of relationship quality, and/or operationalized relationship quality as a quantitative variable. These limitations are problematic given notable exceptions to generally positive impacts of school-based mentoring (Bernstein et al., 2009). Given limitations and the relative lack of research on quality mentoring relationships within school-based mentoring, studies are needed to ascertain the types of relationships formed in school-based mentoring from multiple perspectives and to what degree they affect relationship commitment (Dutton, Deane, & Bullen, 2018).

The purpose of the current exploratory study was to describe the concept of relationship quality in the school-based mentoring context. We utilized a local evaluation of the Big Brothers Big Sisters program (BBBS) in the Twin Cities of Minneapolis and Saint Paul, Minnesota, which collected online survey data from mentors as well as information from the program itself (including mentee reports). Three research questions structured the analysis. First, how do school-based mentors and mentees rate their matches in terms of relationship quality? We drew on data from both members of the dyad to investigate whether there are distinct profiles of quality mentoring relationships, hypothesizing that we would identify several profiles within the data. Second, what are potential predictors of relationship quality in the school-based setting? We hypothesized that characteristics of the mentors as the school year begins, including their demographics, attitudes and expectations about mentoring, and their experience of training from the school-based mentoring program, would be associated with relationship quality at the end of the school year. Third, are different profiles of mentoring relationships associated with ratings of mentors' experience, program support, match length, and mentors' commitment to the match at the end of the school year? We expected to find associations between these variables to identify strategies for monitoring and supporting weak matches to avoid premature endings, retain mentors to their initial commitment, and promote extended or additional volunteer experiences. These hypotheses are based on the idea that match structure and external match quality are related to internal match quality (Nakkula & Harris, 2014).

2. Method

2.1. The school-based mentoring program

The Big Brothers Big Sisters of the Greater Twin Cities (BBBS-GTC) school-based mentoring program differs from the community-based program in that children are typically referred by teachers, counselors,

and school personnel based on academic, behavioral, or relationship difficulties (Herrera, 2004). In addition, the program attracts a variety of mentors. Some adult mentors ("Bigs") meet with mentees ("Littles") during lunch or breaks during the school day. Other matches are facilitated through an employer, with mentees from one school meeting with mentors at their place of work. Finally, college and high school student mentors most often meet with their mentees after school in a group setting facilitated by a match support coordinator. Potential mentors are screened by BBBS-GTC staff and have to pass a formal screening for criminal history. At the time of this study, Bigs received at least two hours of training. All mentors committed to meeting one hour per week for at least one school year. Some mentors had been with their mentee for multiple years. All matches were supported by a coordinator who conducted at least monthly checks-in with both mentors and mentees.

2.2. Study design

The current study used data from a program evaluation of BBBS-GTC that collected information from two sources after the beginning of the school year (T1) and after the end of the school year (T2): 1) online survey data from mentors who reported on their school-based mentoring experiences during the 2013–2014 school year, and 2) existing program data on both mentors and their mentees collected by BBBS-GTC. Of the 432 mentors in the school-based mentoring program, 77% consented to enroll and complete online surveys, resulting in a sample of $N = 304$ mentors. A comparison of enrolled vs. nonenrolled mentors yielded a few statistically significant results: nonenrollees were more likely than participants to be in high school (40% vs. 18%; $p < 0.01$), African American (21% vs. 6%; $p < .05$), and Asian (30% vs. 12%; $p < .05$).

2.3. Procedure

Existing data routinely collected by the BBBS-GTC program includes basic demographic information and Strength of Relationship surveys (Rhodes et al., 2005) completed by both Littles and Bigs. For these data, informed consent/releases from parents of minor Bigs and informed consent/assent from Bigs were collected by BBBS-GTC as part of their usual enrollment and match processes.

During the fall of 2013, all mentors (and parents of high school-aged mentors) in the school-based mentoring program were notified of the online evaluation study by a letter from the BBBS-GTC program coordinator. Mentors were invited to participate and given the opportunity to opt-out of having their contact information shared with research staff. Research staff emailed a link to the consent form and survey to all eligible adult mentors; mentors under the age of 18 were sent a link upon receipt of a signed parental consent form.

Primary data were collected online at two time points through secure survey links emailed to participants. Upon each survey completion, Bigs received $10 gift cards as compensation. All study procedures were reviewed and approved by the University of Minnesota Institutional Review Board.

2.4. Sample

For this study, the sample is based on 283 Bigs who participated in online survey data collection both at T1 and at T2 (response rate = 93%). An analysis of attrition found few statistically significant demographic differences. Compared to Bigs who took both surveys, nonparticipants at T2 tended to be significantly younger (21 vs. 27 years; $p < .05$) and not working (57% vs. 36%; $p < .05$). Finally, about 14% of resurveyed Bigs were not matched with a mentee during the school year, resulting in a final analytic sample size of 244 matched Bigs.

Mentors were primarily female and white (see Table 1). Although

Table 1
Sample Demographics.

	Mentors (N = 244)
	%
Female	68.9%
Age, Mean (SD)	27.3 (12.8)
Age Group	
High School Student (≤18)	18.0%
Young Adult (19–26)	45.5%
Adult (27 +)	36.5%
Race/ethnicity	
American Indian or Alaskan Native	0.4%
Asian or Pacific Islander	11.0%
Black, African, African-American	3.7%
Hispanic	2.0%
Multiple Races	5.7%
White	77.0%
Working 1 or more jobs	66.4%
New mentor	36.5%
	Mentees (N = 240)
	%
Female	65.8%
Age, Mean (SD)	10.3 (1.9)
Race/ethnicity	
American Indian or Alaskan Native	7.8%
Asian or Pacific Islander	8.2%
Black, African, African-American	47.1%
Hispanic	13.5%
Multiple Races	7.4%
White	15.2%
Other Race	0.8%
Lives with two parents/guardians	43.8%
Receives free/reduced price lunch	66.0%

Note. SD = standard deviation.

the average age of Bigs was 27 years, age varied widely (range = 15–74; SD = 12.8). Eighteen percent were high school students, almost half (46%) were young adults (age 19–26), and 37% were over the age of 27. Just under half of the adult mentors connected with students through the schools but often met at their place of work; although this group was more racially and ethnically diverse than the other adults, no other demographic differences emerged and both training materials and supervision was similar. About a third of mentors were new to the BBBS school-based program. From the BBBS-GTC program data (where demographic information was missing for 4 Littles), the majority of mentees were also female, but Littles were from more diverse ethnic backgrounds than Bigs (see Table 1). The average age of Littles was 10 years, ranging from 6 to 18 (SD = 1.9). Fewer than half lived in a two parent/guardian home; two-thirds were eligible to receive free or reduced-price lunch.

2.4.1. Relationship quality

We used data from both Bigs and Littles to operationalize relationship quality. Items come from the Strength of Relationship surveys (Rhodes et al., 2014) administered by the program and the T2 online evaluation survey of mentors. A preliminary factor analysis indicated that the typology previously identified in a community setting (Rhodes et al., 2014) did not match our school-based sample. Instead, a balance of indicators from both Bigs and Littles was chosen that demonstrated the most variability; Littles in particular, had low variability in their responses, limiting the number of useful items. Indicators were chosen that were conceptually congruent with strong mentoring relationships. Items measure qualitatively different dimensions of relationship quality such as closeness, communication, engagement, and compatibility (see Table 2 for items, response options, means, and standard deviations). Because existing BBBS-GTC program data from SoRs (usually administered in the last 3 months of the school year) were more likely to be missing, available online T2 data from mentors was

prioritized when items were duplicated from both sources.

2.5. Measures

2.5.1. Predictors

Potential predictors of relationship profiles come from the T1 (baseline) of the online evaluation survey

2.5.1.1. Mentors' attitudes about youth. Using a 5-point Likert scale, Bigs rated 7 items regarding baseline attitudes about youth (1 = none or almost none to 5 = all or almost all)—for example, "How many kids participating in the Big Brothers Big Sisters mentoring program do you think work hard at school?" Items were adapted from Herrera et al.'s (2007) scale measuring attitudes toward youth in the community. Internal consistency was α = .79, and the mean was 4.03 (SD = 0.51). Higher scores reflect more positive attitudes.

2.5.1.2. Mentor expectations. Using a 4-point Likert scale, at T2 Bigs rated the degree to which they agreed with statements about expectations for their upcoming match during the school year (1 = strongly disagree to 4 = strongly agree). Five statements reflecting expectations included—for example, "I expect that I will make a difference in my Little's life." A mentoring expectation scale was created by averaging responses (α = .81; M = 3.34; SD = 0.47). High scores reflect higher expectations.

2.5.1.3. Mentor training. Using a 3-point Likert scale, Bigs rated how much training or information they received on specific topics related to relationship quality and program logistics (1 = none to 3 = a lot). Training topics included: "how to work with a Little who is quiet or resistant" (M = 2.20, SD = 0.64), "how to connect with and build a strong relationship with a Little" (M = 2.50, SD = 0.53), and "how long I am expected to be a Big" (M = 2.51, SD = 0.63).

2.5.2. Ratings of mentoring experience, program support, match length, and commitment

Potential factors related to mentoring relationship profiles were measured on the T2 survey

2.5.2.1. Mentor experience. Identical to T1 questions about expectations adapted from Herrera et al.'s (2007) scale, Bigs rated the degree to which they agreed with five statements about experiences of their match (1 = strongly disagree to 4 = strongly agree)—for example, "I made a difference in my Little's life." Averaging responses yielded a mentor experience scale (M = 3.18; SD = 0.40) with good internal consistency (α = 0.79).

2.5.2.2. Ratings of program support. Bigs were asked if BBBS-GTC did a good job matching the Big to their current Little (1 = strongly disagree to 4 = strongly agree; M = 3.45; SD = 0.62). Using a 5-point Likert scale, Bigs rated the effectiveness of their primary match coordinator (1 = not effective to 5 = very effective) in four areas—for example, "regularly checking in." These questions were developed in coordination with program staff for the online evaluation survey. Internal consistency was α = .88 (M = 4.26; SD = 0.77). Finally, Bigs were asked if they had more than one match coordinator during the school year (1 = yes) and (0 = no); 27% had more than one.

2.5.2.3. Additional training desired. At T2, Bigs were asked to reflect on any relationship topics they would have liked more training on and instructed to check all that apply. Topics related to relationship quality mirrored T1 survey options (1 = checked; 0 = not checked): "how to connect with or build a strong relationship" (30.3%), "how children learn and grow" (24.2%), "how to work with a little who is quiet or resistant" (25.0%), "understanding my role as a Big" (7.4%), "expected length of match" (7%). These questions were developed in coordination

Table 2
Indicators of Latent Profiles of Relationship Quality.

Respondent	Item	Response Options	Data Source	Mean (SD)
Little	My Big has lots of good ideas about how to solve a problem.	1 (never true) to 5 (always true)	Youth SoR	4.69 (0.67)
Little	When something is bugging me, my Big listens while I talk about it.	1 (never true) to 5 (always true)	Youth SoR	4.68 (0.83)
Little	I feel close to my Big.	1 (never true) to 5 (always true)	Youth SoR	4.83 (0.55)
Big	I feel close to my Little	1 (strongly disagree) to 5 (strongly agree)	T2 Online Survey (and Mentor SoR)	3.75 (0.73)
Big	I get the sense that my Little would rather be doing something else. (R)	1 (very often) to 5 (never)	T2 Online Survey (and Mentor SoR)	3.86 (0.93)
Big	My Little and I are sometimes at a loss for things to talk about. (R)	1 (strongly agree) to 5 (strongly disagree)	Mentor SoR	3.88 (0.90)
Big	How often was your Little open with you?	1 (never) to 5 (very often)	T2 Online Survey	3.84 (0.92)
Big	How happy are you with your current or most recent match?	1 (not happy at all) to 5 (very happy)	T2 Online Survey	4.49 (0.73)

Note. SD = standard deviation; SoR = Strength of Relationship survey; T2 = Online survey at end of school year; R = reverse-coded.

with program staff for the online evaluation survey.

2.5.2.4. Match length. Bigs were asked, "How long have you been with your current or most recent Little in the school-based program?" We used response options of years and/or months to create a total months variable ($M = 17.69$; $SD = 13.37$; range = 1 to 60).

2.5.2.5. Mentor commitment. A dichotomous variable indicated whether Bigs and Littles continued to meet until the end of the school year or ended the match early (1 = finished school year; 0 = ended early), based on those mentors who checked the option "My match ended before the end of the school year." Another dichotomous variable indicated whether or not Bigs made plans to stay with their same Little next year (1 = made plans to continue, 0 = does not plan to continue match/is unsure); 13% ended the match early, and 62% made plans to continue with their Little. These questions were developed for the online evaluation survey.

2.6. Analysis plan

To detect profiles of relationship quality, a latent profile analysis (LPA) was conducted using MPlus, version 7.3 (Muthen & Muthen, 1998–2012). We compared data fit of 1 to 4 profile solutions. Best data fit was determined based on the lowest Akaike information criterion (AIC), lowest Bayesian information criterion (BIC), significance of the Lo-Mendell-Rubin adjusted likelihood ratio test (LMR-LRT), and significance of bootstrapped likelihood ratio test (Nylund, Asparaouhov, & Muthen, 2007). Entropy close to 1.00 demonstrates acceptable separation between profiles (Collins & Lanza, 2013). In addition, we took into consideration the conceptual meaning of the classes. Posterior probabilities, which indicate the probability of class membership, were extracted and used as observed categorical variables in subsequent analyses.

To address missing data in the LPA, we used full information maximum likelihood (FIML) to estimate parameters based on available data (Johnson & Young, 2011). The advantage of using existing BBBS-GTC program data was that it included the youth perspective on the quality of the match from the Youth SoR. The disadvantage was mentees' low response rate to this program-administered survey (~56%). Cross tabulation and *t*-test analyses revealed that missingness was significantly more likely among boys and younger children; no differences were found by family status (e.g., living with two parents), receipt of free or reduced-price lunch, child race/ethnicity, or mentor characteristics. The mentor SoR data had a response rate of 77%. No differences in mentor response rate were found by mentor or mentee characteristics, with the exception that missingness was more likely among mentors who had younger mentees. The online T2 evaluation survey of mentors yielded the least amount of missing data (~1% at the item level); thus, items from this source were prioritized for inclusion in the LPA.

Next, we investigated what characteristics predicted membership in the different relationship profiles and associations between relationship profiles, mentoring experience, program support, match length, and mentors' commitment to the match. Due to the small sample size for one relationship profile, analyses were conducted in a series of steps to limit the number of parameters in multivariable models. First, bivariate analyses were conducted utilizing Analyses of Variance (ANOVA) for continuous measures and generalized linear modeling (GLM) for categorical measures (in IBM SPSS, version 23). Second, Sidak comparisons were conducted to adjust for Type I error inflation that occurs with multiple tests of different sample sizes. Third, post hoc analysis of covariance (ANCOVA) models and GLMs were also used to determine whether associations remained significant after controlling for mentors' age group and whether they were a new or had mentoring experience from a previous program year. Among predictor variables and program-related outcomes for mentors, the highest rate of missing data was 4.9%. For bivariate and multivariable analyses, missing data (< 1% of items) was handled via list-wise deletion. Resulting p values < 0.05 were considered statistically significant.

3. Results

3.1. Types of school-based mentoring relationships

Using latent profile analyses, we found a 3-profile solution fit the data best (see Table 3); the LMR-LRT and the BLRT were both significant, indicating a better fit than a 2-profile solution. According to their mean indicator scores, profiles were labeled as: Tough Matches, Tentative Bigs, and Tight Matches (see Fig. 1). In the small Tough Match profile ($n = 20$; 8% of matches), Littles reported their Bigs listened less often and felt less close to their mentors compared to Littles in the other two profiles. Bigs in Tough Matches echoed this lack of closeness and happiness with their match and reported lower engagement and openness from their Littles. In contrast, both Bigs and Littles in the largest profile labeled Tight Matches ($n = 148$; 61%) demonstrated concordance in their reports of emotional closeness and communication. Bigs in Tight Matches, in particular, were very happy with their matches, compared to those in other profiles. Finally, relationships categorized into the Tentative Bigs profile ($n = 76$; 31%) were distinguishable by "tentative" Bigs who reported lower levels of closeness with their mentees and happiness with their mentoring

Table 3
Criterion to Assess Model Fit for Relationship Quality Classification.

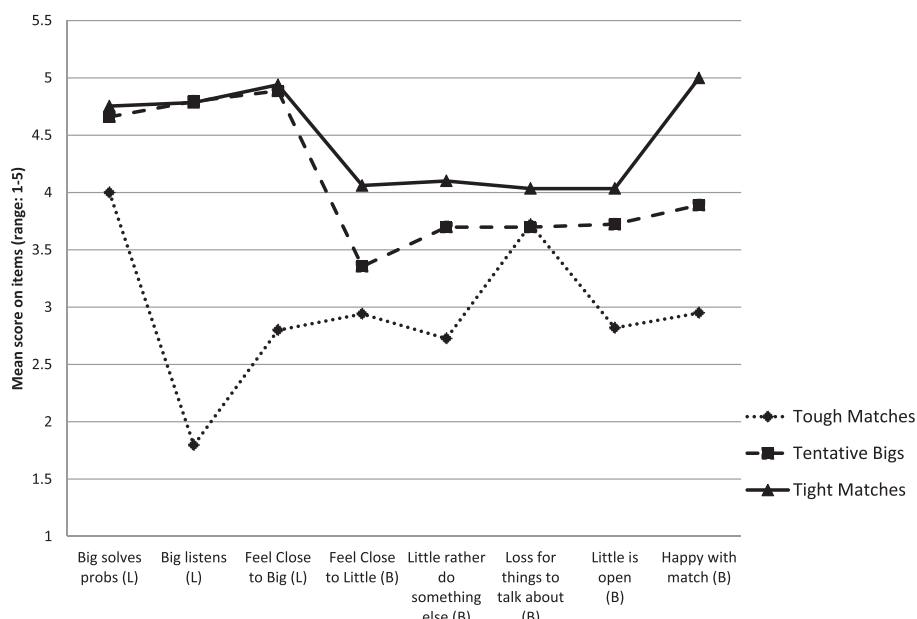| # of classes	AIC	BIC	LMR-LRT	BLRT	Entropy
1	3666.22	3722.17	–	–	–
2	3423.82	3511.25	0.77	0.00	0.92
3	3265.07	3383.98	0.16	0.00	0.99
4	3237.76	3388.14	0.42	–	0.79

Fig. 1. Mean ratings of relationship quality indicators by type of match. L = Little report; B = Big Report.

relationship. These reports were discordant with their Littles' very positive ratings of the Bigs in terms of problem-solving, listening, and feelings of closeness.

3.2. Predictors of relationship profiles

Differences in Bigs' or Littles' demographic variables listed in Table 1 by relationship profile were tested, and no statistically significant results were found. However, we found differences in attitudes about Littles, match expectations, and receipt of training after the start of the school year (see Table 4). All models were adjusted for mentor experience and age group of the participants. Compared to those in Tight Matches, Tentative Bigs' attitudes about children in BBBS mentoring programs were significantly less positive (Est. = −0.24, $SE = 0.07$, $p = .001$). Mentors in Tough Matches reported significantly lower levels of agreement than mentors in Tight Matches about expectations for their relationships (Est. = −0.418, $SE = 0.15$, $p = .005$).

Only one training topic was a significant predictor. Compared to those in Tight Matches, Bigs in Tough Matches reported receiving significantly less training on "how to work with a Little who is quiet or

resistant" (Est. = −0.42, $SE = 0.15$, $p = .005$). Compared to adults, high school students reported higher positive attitudes (Est. = 0.26, $SE = 0.11$, $p = .017$), higher match expectations (Est. = 0.38, $SE = 0.09$, $p = .000$), higher training in how to work with a little who is quiet or resistant (Est. = 0.30, $SE = 0.13$, $p = .024$). College students also reported higher match expectations compared to adult mentors (Est. = 0.21, $SE = 0.07$, $p = .003$).

3.3. Associations between relationship profiles, match experience, and program support

After the school year ended, mentors rated their experiences with mentees (see Table 5). Statistically significant differences were noted for all comparisons between relationship profiles, adjusting for experience and participant age group. Mentors in Tough Matches (Est. = −0.59, $SE = 0.08$, $p < .001$) and Tentative Bigs (Est. = −0.28, $SE = 0.05$, $p < .001$) rated their experience with Littles significantly lower than Tight Matches. Similar differences between relationship types also characterized mentors' ratings of how well BBBS matched them with their Littles: Tough Matches (Est. = −0.80, $SE = 0.14$,

Table 4
Predictors of Relationship Profiles.

	Tough Matches (*n* = 20)	Tentative Bigs (*n* = 76)	Tight Matches (*n* = 148)	*p*[1]	Sidak comparisons[2]
	Mean (SD)	*Mean (SD)*	*Mean (SD)*		
Positive attitudes about Littles:[3]	3.96 (0.44)	3.88 (0.56)	4.12 (0.47)	0.002	Tent < Tight
Match expectations scale[4]	3.09 (0.35)	3.27 (0.48)	3.40 (0.39)	0.002	Tough < Tight
Training received on:[5]					
Building strong relationships	2.35 (0.59)	2.57 (0.53)	2.49 (0.52)	0.213	
How children learn and grow	1.79 (0.63)	1.93 (0.67)	1.98 (0.61)	0.501	
Working with quiet/resistant Little	1.80 (0.62)	2.28 (0.58)	2.22 (0.65)	0.008	Tough < Tent, Tough < Tight
Understanding role as Big	2.85 (0.37)	2.83 (0.38)	2.83 (0.38)	0.974	
Expected length of match	2.45 (0.61)	2.45 (0.69)	2.56 (0.60)	0.406	
Reporting suspected abuse/neglect	2.85 (0.37)	2.69 (0.47)	2.78 (0.46)	0.210	

Note. All models are adjusted for new vs. experienced mentor and for the participant age group. *SD* = standard deviation; Tent = Tentative.
[1] p-values are from overall test of ANOVAs. Significant *p*-values < .05 are bolded.
[2] Significant post hoc differences at p < .05 are noted for Sidak comparisons for ANOVAS.
[3] Response options ranged from 1 = none or almost none to 5 = all or almost all.
[4] Response options ranged from 1 = strongly disagree to 4 = strongly agree.
[5] Response options ranged from 1 = none to 3 = a lot.

Table 5
Ratings of Match Experience, Program Support and Additional Training by Relationship Profiles.

	Tough Matches (n = 20)	Tentative Bigs (n = 76)	Tight Matches (n = 148)	p[1]	Sidak comparisons[2]
	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %		
Match experience scale[3]	2.72 (0.33)	3.03 (0.31)	3.32 (0.39)	0.000	Tough < Tent, Tough < Tight, Tent < Tight
Program Support					
Good job matching me with Little[3]	2.85 (0.49)	3.21 (0.52)	3.66 (0.59)	0.000	Tough < Tent, Tough < Tight, Tent < Tight
Match coord. effectiveness scale[4]	4.12 (0.82)	4.03 (0.82)	4.41 (0.70)	0.002	Tent < Tight
Had > 1 match coordinator	20.0%	39.5%	21.6%	0.015	Tent > Tight
Additional training desired					
Building strong relationships	45.0%	39.5%	23.6%	0.019	Tent > Tight
How children learn and grow	20.0%	25.0%	24.3%	0.881	
Working with quiet/resistant Little	45.0%	32.9%	18.2%	0.006	Tough > Tight, Tent > Tight
Understanding role as Big	5.0%	5.3%	8.8%	0.567	
Expected length of match	10.0%	13.2%	3.4%	0.025	

Note. All models are adjusted for new vs. experienced mentor and for the participant age group. SD = standard deviation; Tent = Tentative.
[1] p-values are from overall tests of unadjusted ANOVAs and GLMs. Significant values < 0.05 are bolded.
[2] Significant differences at $p < .05$ are noted for Sidak comparisons for ANOVAs and GLMs.
[3] Response options ranged from 1 = strongly disagree to 4 = strongly agree.
[4] Response options ranged from 1 = not effective to 5 = very effective.

$p < .001$) and Tentative Bigs (Est. = −0.44, SE = 0.08, $p < .001$) rated their match lower than Tight Matches. Mentors in the Tentative Bigs profile rated the effectiveness of their match coordinator lower than Bigs in Tight Matches (Est. = −0.38, SE = 0.11, p = .001). Perhaps this difference was due to the fact that Tentative Bigs were over twice as likely than those in Tight Matches to have multiple match coordinators during the year (adjusted OR = 2.3 [95% CI = 1.23, 4.31]). No differences were found between high school, college, or adult mentors.

Desire for additional training on four of six specific topics was expressed more often by mentors classified into Tentative Big Matches. For example, Tentative Bigs were significantly more likely than those in Tight Matches to want additional training on how to connect with or build a strong relationship with a Little and work with a Little who is quiet or resistant (respectively, OR = 2.1 [95% CI = 1.15, 3.84] and OR = 2.27[95% CI = 1.19, 4.32]). Tentative Bigs also wanted more training than those in Tight Matches on how long they were expected to be a Big (OR = 4.76 [95% CI = 1.53, 14.87]; however, this association was not robust to the Sidak adjustment (see Table 6). One training topic difference was significant for mentors in Tough Matches. Compared to those in Tight Matches, a higher proportion of Bigs in Tough Matches wanted additional training in how to work with a quiet or resistant Little (OR = 3.78 [95% CI = 1.40, 10.20]). No differences were found in desired training by participant age group.

3.4. Associations between relationship profiles, match length, and commitment

Differences between relationship profiles were also found in match

length and mentor commitment (see Table 6; models adjusted for experience and participant age group). Compared to Tight Matches with an average match length of almost two years, both Tough Matches and those in Tentative Bigs reported shorter match durations (Tough Matches: Est. = −6.45, SE = 2.50, p = .010; Tentative Bigs: Est. = −4.37, SE = 1.48, p = .003). High school and college-age Bigs had shorter matches than adult Bigs (High School: Est. = −8.49, SE = 2.25, $p < .000$; Tentative Bigs: Est. = −6.77, SE = 1.84, $p < .000$).

Most Bigs demonstrated commitment to their matches and reported that they had finished the school year with their Little. However, those in Tough Matches were significantly less likely than Tight Matches to report finishing the school year (OR = 0.15, 95% CI = 0.05, 0.42). Commitment as measured by Bigs' plans for continuing the match also differed by relationship type. Compared to Tight Matches, those in Tough Matches and Tentative Bigs were less likely to report they had made plans to continue the match into the next year (respectively, OR = 0.12, 95% CI = 0.04, 0.38 and OR = 0.46, 95% CI = 0.23, 0.93). High school students were also less likely to continue the match into next year compared to adults (OR = 0.07, 95% CI = 0.02, 0.22).

4. Discussion

Guided by the Nakkula & Harris, 2014 definition of mentoring relationship quality, the overall goal of this study was to explore the multidimensional concept of internal relationship quality in school-based mentoring matches using both mentors' and mentees' reports, and describe predictors of and associations of external relationship characteristics with different relationship profiles. Our study aligns with a PYD framework (Lerner et al., 2009) that reinforces the importance of

Table 6
Match Length and Mentor Commitment by Relationship Profiles.

	Tough Matches (n = 20)	Tentative Bigs (n = 76)	Tight Matches (n = 148)	p[1]	Sidak comparisons[2]
	Mean (SD) or %	Mean (SD) or %	Mean (SD) or %		
Match length					
Total Months	13.40 (8.31)	15.04 (10.79)	19.63 (14.74)	.002	Tough < Tight, Tent < Tight
Min-max	2–36	1–60	1–60		
Mentor commitment					
Finished school year	60.0%	87.8%	90.5%	.002	Tough < Tight
Planning to continue match	25.0%	41.3%	63.3%	.001	Tough < Tent, Tough < Tight

Note. All models are adjusted for new vs. experienced mentor and for the participant age group. SD = standard deviation; Tent = Tentative.
[1] p-values are from overall unadjusted ANOVA and GLMs. Significant values < .05 are bolded.
[2] Significant differences at $p < .05$ are noted for Sidak for ANOVAs and GLM comparisons.

connecting youth with resources to thrive and providing opportunities for youth and adults to connect in meaningful and reciprocal ways. We found three qualitatively different profiles characterized our school-based data on mentors and mentees. Previous studies have also distinguished between different types of school-based mentoring relationships (Langout, Rhodes, & Osborne, 2004; Pryce & Keller, 2012); however, reports from both the mentor and the mentee were not explicitly modeled in creating typologies, or sample size was very small.

In the current study, three out of five relationships were characterized as Tight Matches, consisting of concordant mentor and mentee ratings of closeness, communication, engagement, and compatibility. Program practices and support appear to be meeting the needs of this group. In contrast, a small group of Tough Matches (8% of total) was typified by both mentors and mentees reporting a lack of emotional closeness and poor communication. A sizeable third type (31% of total) was notable for its discordance between mentees' positive ratings and their Tentative Bigs who reported relatively lower levels of closeness and happiness with the match. These relationships might benefit from targeted and improved program practices to increase mentor capacity to connect and engage with mentees.

Results suggest that recruitment and retention of mentors who hold more positive attitudes about youth may result in higher quality relationships. Although most Bigs reported high levels of positive attitudes toward youth participants in mentoring programs, Tentative Bigs expressed significantly lower positive perceptions than those in Tight Matches. In another study, young mentors who held more positive attitudes toward children in the community were more positive influences on their mentees (Karcher, Davison, Rhodes, & Herrera, 2010). Qualitative evidence suggests approaching mentoring with an understanding of the challenges and context mentees face facilitates a focus on the individual strengths of mentees (Lakind, Atkins, & Eddy, 2015). These results support a PYD framework that emphasizes the promotion of strengths and assets rather than only focusing on reducing risks (Lerner et al., 2009).

Relatedly, compared to Bigs in Tight Matches, mentors in Tough Matches reported lower expectations early in the year about how their match would turn out. A good number of Bigs met their Littles prior to completing the T1 survey. Perhaps Bigs in Tough Matches lowered their expectations and recognized a need for more training after being matched with a "tough" Little, and/or these lower expectations resulted in a "self-fulfilling prophesy" of a lower quality relationship and a less positive experience (Karcher et al., 2010; Rosenthal & Jacobson, 1968). From a PYD perspective, connecting mentors in the Tough Matches to resources, such as training, would be important to supporting their success.

With regard to program practices, greater numbers in Tough Matches and Tentative Bigs wanted additional training in how to work with a Little who is quiet or resistant. Findings point to the importance of ongoing training (DuBois, Holloway, Valentine, & Cooper, 2002) and individualized coaching to facilitate strong relationships with children who might have problems connecting with others (Zilberstein & Spencer, 2014). Additionally, although high school and college-aged youth did not report wanting more training, the current study found that college students had higher expectations of the match at the beginning of the school year compared to adults, and high school students had shorter matches (result not shown, but available upon request), indicating that training and support for younger mentors is warranted. Importantly, training for mentors has been found not only to improve match quality, but also was associated with positive values, professional development, and an increase of positive attitudes about youth among college-aged mentors (Bullen, Farruggia, Gómez, Hebaishi, & Mahmood, 2010). Since school-based mentoring programs tend to have a relatively high level of high school and college mentors (Bernstein et al., 2009), viewing mentors as resources that can be developed is also consistent with a PYD perspective (Roth & Brooks-Gunn, 2003). The PYD perspective emphasizes the plasticity of relational capacity in

young mentors (Lerner et al., 2014), and this is especially important because mentors often bear most of the responsibility for the mentoring relationship (Doty, Weiler, McMorris, & Mehus, 2017).

4.1. Strengths and limitations

This study has several strengths including collection of longitudinal data paired with secondary use of program data from both Bigs and Littles. The strength of using existing program data for evaluation is that it reflects realities in the field, such as a focus on program delivery and training processes. Additionally, we utilized information from both mentees and mentors to form latent profiles based on multiple, qualitative dimensions of relationship quality. This approach allowed a deeper understanding of concordance and discordance nuances in mentoring relationships.

Additionally, limitations must be noted. First, program data were missing with regard to SoR surveys. To address missing data, we used FIML procedures and included items from mentors with a high response rate from the online evaluation survey. Nonetheless, the typology may not be generalizable to other school-based samples. Second, because the study design was a program evaluation of the BBBS-GTC program, mentors were not randomly assigned to different mentees or conditions, and there was high variability in program implementation. As such, we were limited to collecting data on matches during one particular school-year in one particular geographic location, from mentors who self-selected to be in this program, which may also limit the generalizability of this study. Additionally, using questions from two different data sources can introduce error. Third, statistical power to detect differences was limited by the small Tough Matches profile. Future research is needed to confirm the relationship types and to investigate whether these relationship profiles are associated with outcomes for youth mentees. Previous studies suggest that youth perceptions of relationship quality, in particular, are essential in shaping their outcomes (Zand et al., 2009). The addition of the outside perspective of program staff may also be an additional important input to understand match quality (Dutton et al., 2018).

5. Conclusion

In sum, understanding characteristics of different profiles of match quality in school-based mentoring can identify areas of support that are needed for matches that may struggle. The current study underscores the importance of recognizing the mutual perceptions of mentees and mentors by including multidimensional reports from both sides of the mentoring experience. Delineating types of school-based mentoring relationships that promote desired benefits and perseverance of volunteer mentors remains an important goal for the field, as it seeks to close the mentoring gap by promoting access to caring adults as a positive youth development strategy (Bruce & Bridgeland, 2014).

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