The Role of Program-Supported Mentoring Relationships in Promoting Youth Mental Health, Behavioral and Developmental Outcomes

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Abstract This study examined the relationship between youth mentoring status and behavioral, developmental, and emotional outcomes for 859 youths aged 6–17 participating in a national survey of Big Brothers Big Sisters community mentoring relationships (MRs). Youth self-reported behaviors and mental health occurred at the baseline assessment (before being paired to a mentor) and at 18 months follow-up. Youth mentoring status was categorized as follows: (1) continuous MR less than 12 months ($n = 131$); (2) continuous MR 12 or more months ($n = 253$); (3) dissolved MR less than 12 months ($n = 110$); (4) dissolved MR 12 or more months ($n = 70$); 5) MR with a second mentor (re-matched; $n = 83$); and (6); never mentored ($n = 212$). Structural equation model results at 18 months revealed that mentored youths, especially those in MR lasting 12 or more months (continuous or dissolved), reported significantly fewer behavioral problems and fewer symptoms of depression and social anxiety than did non-mentored youths. They also reported stronger coping skills and emotional support from parents. Mentored girls and boys in long-term relationships experienced positive outcomes. Re-matched girls displayed better outcomes than did never-mentored girls while there was some evidence of harmful outcomes for re-matched boys. Threats to internal validity are examined including the possibility of pre-existing baseline differences between mentored and non-mentored youths. Implications for mentoring programs are discussed.

Keywords Emotional problems · Behavioral problems · Developmental outcomes · Youth mentoring programs

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Background

Meta-analyses of youth mentoring programs have found that youths paired to an adult mentor experience significant improvements in behavioral and psycho-social outcomes compared to non-mentored youths (DuBois, Portillo, Rhodes, Silverhorn, and Valentine 2011; Meyerson 2013; Tolan, Henry, Schoeny, Lovegrove, and Nichols 2014). Mentoring theorists (e.g., Rhodes, Spencer, Keller, Liang, and Noam 2006) suggest that these improved outcomes occur through several mechanisms of change. By, for example, modeling effective adult communication and pro-social behavior, mentors may help youths express and regulate emotions and choose adaptive coping strategies for managing environmental stressors. In addition, close and secure attachments with mentors may help youths to develop positive internal working models that improve their perceptions of the value of interpersonal relationships (e.g., parents, peers). Mentors may also enhance youth self-esteem through praise and educational and recreational activities that allow for the discovery of unique abilities and improve cognitive functioning by

teaching skills, offering intellectual challenges, and promoting positive attitudes toward learning.

While mentoring appears to be a promising approach for improving youth well-being, program effect sizes have been low to moderate at best with little evidence of sustained impact (DuBois et al. 2011). One possible explanation for the modest impact of mentoring is that most community evaluations compare mentored versus non-mentored youths. Unfortunately, these comparisons risk masking potential variation in program impacts possibly due to variability in the stability and longevity of the mentoring relationship, attributes considered to be important benchmarks for defining successful mentoring outcomes (Rhodes 2008).

Mentoring stability and longevity are central to Keller's (2005) theory of mentoring relationship development. According to this theory, the mentoring relationship is a dynamic and evolving entity marked by phases of development including a contemplation phase (i.e., a period of anticipation and preparation before a relationship is formed), an initiation or getting acquainted phase, followed by a growth and maintenance phase in which aspects of the relationship become solidified, and ending with a phase of decline where mentors and mentees retreat from the relationship and end contact altogether. Some youths may enter their relationship only to have it close within a few months while others continue uninterrupted for months if not years under the guidance of the same mentor. Still, others who have experienced an unplanned closure may enter a new relationship with a second mentor. Finally, some youths may wait months before receiving a mentor and remain in the contemplation phase for an indefinite period.

Keller (2005) asserted that the extent to which youths realized health and social benefits would depend on the stage of their mentoring relationship. He reasoned that youths who had reached the growth and maintenance phase would generally benefit the most because they had sufficient time to solidify fundamental aspects of their relationship (i.e., expectations for shared activities and regular contact, self-disclosure of personal feelings, trust, affection, and emotional support). Rhodes and colleagues (2006) suggest that many of these mentoring relationship qualities lie at the core of successful relationships and therefore must be in place before positive gains in youth development occur. These ideas underscore the need for a mentoring status variable capable of predicting with greater accuracy the degree to which youths at different phases of their mentoring relationship experience positive developmental outcomes. Using data from a large national study of Big Brothers Big Sisters community mentoring relationships, the current study will seek to quantify the association between various categories of youth mentoring status (broadly aligned with Keller's stages of mentoring relationship development) and selected aspects of youth health and social functioning.

Stability and Longevity of Mentoring Relationships

Despite the emphasis placed by Keller on the heterogeneous nature of youth mentoring relationships (i.e., phases of relationship development), research that has unpacked the mentoring relationship into categories reflective of its stability and longevity and related those categories to youth developmental outcomes has been slow to emerge. In terms of stability, previous work has shown that up to half of all program-supported community mentoring relationships between youths and adult mentors end before the standard 12-month period of commitment (Grossman and Rhodes 2002; Lymburner 2006). Evidence suggests that these early relationship endings may be psychologically damaging to the youths (Grossman and Rhodes 2002), possibly because of mentee feelings of rejection (Grossman and Rhodes 2002), abandonment (Spencer, Basualdo-Delmonico, Walsh, and Drew 2014), or unfulfilled expectations of a deepening of the relationship (Goldner and Mayseless 2009). Mentoring relationships that end prematurely have been identified as one reason why some mentoring programs fail to reach their objectives or even backfire by producing unintended negative effects (Rodriguez-Planas 2014).

Longer mentoring relationships, especially those lasting 12 or more months, have been associated with increased health and social benefits for youths (Grossman and Rhodes 2002; Dolan, Brady, O'Regan, Russell, Canavan, and Forkan 2011). For example, Grossman and Rhodes' (2002) study of mentoring duration and youth development in American Big Brothers Big Sisters (BBBS) community-based programs found that youths who were mentored early and remained in their relationship for at least 12 months benefited the most in terms of improved self-worth, scholastic and social competencies, and reduced truancy and substance use. Importantly, for some outcomes, youths mentored less than 3 months were worse off than non-mentored controls.

Other investigations, however, have failed to find an association between mentoring longevity and positive youth outcomes (e.g., Eddy et al. 2015; Herrera, DuBois, and Grossman 2013). These conflicting results may be due to differences in the way mentoring longevity is constructed. A rigorous study of program-supported mentoring in the US northwest (Herrera et al. 2013) did not find that longer relationships were more beneficial. In that study, each of the defined mentoring longevity categories included youths in ongoing and dissolved relationships. In contrast, in the study conducted by Grossman and Rhodes (2002), it appears that youths in ongoing and dissolved relationships lasting 12 or more months were combined, while the shorter duration categories only contained youths whose relationships had dissolved.

Less is known about the mentoring experiences of re-matched youths. Research has shown that up to one third of youths in closed mentoring relationships are re-matched to a

second mentor within an approximate 1-year period (Herrera et al. 2013). Whether or not re-matching mitigates harmful effects associated with early mentoring relationship closures is unclear. Herrera and colleagues (2013) found no evidence that re-matching was associated with better youth outcomes and that re-matched youths were worse off than were youths in first time relationships because of the greater amount of time they were mentored. A study of BBBS school-based mentoring programs found that re-matched youths demonstrated significantly poorer academic functioning compared to non-mentored controls despite having been mentored for an average of 25 weeks (Grossman, Chan, Schwartz, and Rhodes 2012). Compared to re-matched youths, youths in ongoing mentoring relationships with the same mentor were mentored for a shorter period (23 weeks) and achieved the greatest academic success.

Correlates of Youth Mentoring Status

Characteristics of the mentee and the mentee's immediate environment may impact both the formation and maintenance of program-supported mentoring relationships and youth development (Rhodes 2002). Consequently, research aimed at establishing a link between youth mentoring status and various outcomes must adjust for these factors. Studies have shown that the pace with which mentoring relationships develop is influenced by mentee demographics with boys and racial minority youths waiting significantly longer to be mentored than other groups (Furano, Roaf, Styles, and Branch 1993; Moodie and Fisher 2009). Mentored girls have been found to experience longer mentoring relationships than boys do (Rhodes, Lowe, Litchfield, and Walsh-Samp 2008). There is also evidence that relationships involving older youths tend to be shorter (Grossman and Rhodes 2002; Rhodes, Schwartz, Willis, and Wu 2014). Mentored youths whose mentoring relationships end prematurely are also more likely to suffer from mental health and behavioral difficulties and exposure to negative environmental factors (e.g., physical or sexual abuse, unstable family relationships, parent mental illness) (Grossman and Rhodes 2002; Lymburner 2006; Rhodes 2002) that place them at greater risk of experiencing poor outcomes. Herrera and colleagues (2013) reported that youths in closed mentoring relationships were least likely to be re-matched if they scored high on an index of personal risk (e.g., behavioral difficulties) and low on environmental risk (e.g., family stressors). However, none of the other factors in their models (e.g., youth demographics) emerged as significant predictors.

Gender, Mentoring Status, and Youth Outcomes

Gender-based theories pertaining to youth mentoring suggest that girls may exhibit a more favorable response to mentoring than boys might because they are more likely to derive their sense of identity from social relationships, demand greater intimacy, and when confronted with stressors, turn to significant others for emotional support (Liang, Bogat, and Duffy 2013). Spencer (2007) has however challenged these assumptions noting that they have been based mostly on research from non-mentored samples of youths. Drawing on qualitative interviews with adult male mentors and adolescent boys paired in one-to-one BBBS community mentoring relationships, the author concluded that boys are just as likely as girls to value emotional closeness in their mentoring relationships and that the traditional societal norms and stereotypes of male masculinity may not operate where mentors are trained to give mentees emotional and instrumental support. To date, a systematic study of youth gender as a potential moderator of the impact of mentoring on youth developmental outcomes has not been conducted.

Current Study

This study will examine the association between categories of youth mentoring status (broadly reflective of Keller's stages of mentoring relationship development) and aspects of youth health and social functioning. A secondary objective is to examine the role of youth gender as a possible moderating factor. These objectives will be met using the responses of 859 youths participating in a national study of BBBS one-to-one community mentoring programs.

Program Description

BBBS community one-to-one mentoring programs (BBBS of Canada 2014) are designed to give youths a one-to-one mentoring relationship with a caring and responsible adult. The programs assume that upon developing close and nurturing relationships with their mentees, mentors will cultivate protective factors that promote positive youth development. To qualify for the program, parents/guardians must have a youth applicant between the ages of 6 and 17, permanently resides in the BBBS agency's catchment area, and they must agree to agency rules. Mentors must be at least 18 years old with no prior criminal record, provide three personal references, and complete an assessment interview. For a minimum of 1 year, they are expected to commit an average of 2–4 hours each week with their mentee engaging in recreational, leisure, or skill-based activities. Qualified mentors must undergo training delivered by program staff on child safety, application and assessment procedures, roles and responsibilities, match closure, caseworker support and supervision, recognizing abuse, and optimizing match quality. To determine a match, BBBS caseworkers conduct interviews with families and mentors to assess common interests, mentor ability to meet the needs of the youth, and personal preferences. A meeting is

held with the parent, youth, mentor, and agency caseworker allowing families and mentors time to become acquainted. For a match to occur, all parties must be in agreement. BBBS caseworkers provide ongoing support to the mentoring relationship (e.g., information on BBBS events and advice on handling match difficulties). Mentors, youths, and parents are contacted at least once a month for the first 6 months and bi-monthly thereafter until 12 months. After 12 months, contact is reduced to every 3 months. Unmatched youths are assigned to a waiting list until a mentor is found. Waiting times vary from just weeks to several months.

Method

Participants

Sample Selection and Recruitment

Between 2006 and 2008, 21 BBBS agencies across Canada were recruited by Big Brothers Big Sisters of Canada (the national umbrella organization) to participate in the study. Agencies were chosen on the basis of having large annual caseloads, a long history of operation, and cultural diversity of clients. All but one chose to participate. The majority (80 %) served metropolitan centers and accounted for about half of all matches made on a year-to-year basis. In 2006, there were over 120 agencies nationwide. Agencies were assigned a quota of families to recruit based on their normal client caseload. Over a 30-month period, 1,279 families were approached by BBBS caseworkers to participate. To qualify for the study, families had to be new admissions and passed the agency's qualifying assessment. Youth applicants had to be 6–17 years old. In families with more than one eligible youth, one was randomly selected to participate. Study parents/guardians had to have primary parenting responsibility for the study youth. For joint custody or shared living arrangements, the parent/guardian spending the most time with the youth was enrolled. Among the families approached, 997 (78 %) agreed to participate and completed a baseline questionnaire. A comparison of participants with a sample of nonparticipants (n =105) on selected demographic characteristics (i.e., parent gender, age, education, marital status) revealed no significant differences.

The sub-sample for the current study consists of 859 youths with information on their mentoring status at the 18-month follow-up. For youths who did not complete an 18-month follow-up (n=224/859), data on the duration and stability of their mentoring relationship was obtained from the 24- and 30-month follow-ups and used to fill in the missing 18-month values. The 18-month follow-up was chosen for assessing youth outcomes because most youths had already been mentored and many had been in a relationship for at least

12 months, the minimum period of mentor commitment required by BBBS. Non-completion of the 18-month follow-up occurred because of scheduling difficulties (71 %) or study drop out (29 %), the latter occurring primarily as a result of family withdrawal from BBBS (43 %), a family move (22 %), or lack of parent or youth interest/time (11 %). Excluded from the sub-sample were 138 youths without an 18-month follow-up and information on their mentoring status. These youths were compared to the sub-sample of 859 on baseline demographics, perceived supports, and behaviors included in the multivariate models (see below). Excluded youths had a mean cognitive behavioral coping score (M=11.61, SD=4.65) less than the score for included youths (M=12.54, SD=5.08) (F (1, 995)=4.12, p=.043) and were less likely to report a chronic health condition (21.7 % vs. 30.5 %) (χ^2 (1, N=996)=4.41, p=.036).

Sample Description

The sample (n=859) consisted of slightly more boys than girls (50.6 vs. 49.4 %). The average age of youths was 9.74 years (SD=2.20). Most (93 %) resided in urban areas. Seventy percent were living with a single biological parent (usually the female parent); 10.8 % with both biological parents; and 19.4 % in other arrangements (e.g., step or foster parents, grandparents). Thirty-three percent did not have any siblings at home. Nearly one third (31.9 %) were from visible ethnic/racial minority groups (non-Caucasian and non-White in color) (e.g., 84 African Canadian, 108 Aboriginal, 64 Asian, 18 Hispanic). Forty-three percent were White European, 10.9 % identified themselves as having a Canadian nationality but with no specified ethnicity/race, and 15.4 % fell in the category of "other unspecified" (combination of multiple ethnic/racial backgrounds). Families moved an average of 1.66 times in the past 5 years (SD=2.86); 33 % had not moved while 24.9 % moved three or more times. Parents or guardians were mostly female (93.1 %). The average age of mentee guardians was 40.28 years (SD=8.75). Most were divorced, separated, or widowed (46.3 %) or never married (34.8 %). Nearly two-thirds (65.0 %) indicated at least some post-secondary education; 15.9 % had not received a high school diploma. Nearly 40 % (39.3 %) reported an annual gross household income of less than $20 K; one third were in receipt of government social assistance, and under one third (28.8 %) were living in a subsidized dwelling.

Procedures

To recruit families, BBBS agency caseworkers followed a standardized script describing study objectives, types of questions asked of participants, and expectations concerning participant roles and responsibilities. Families were informed that

their participation was completely voluntary and that a refusal to take part would not affect the quality of the service received (i.e., the agency would proceed as usual with matching the youth to a mentor). Interested parents/guardians signed the script and recorded contact information authorizing a baseline assessment. Families received an in-home baseline assessment prior to a match to a mentor consisting of a 40-min parent self-administered questionnaire and a 2-hour youth face-to-face interview in a private room conducted by a trained interviewer. Informed consent to participate was obtained from youths and parents before the baseline assessment. In-home follow-up assessments were conducted every 6 months until the last follow-up at 30 months. Youths reported on their behavioral and psychological functioning. Parents reported on their children in each of these areas and their own social relationships and mental health outcomes. Matched families also reported on the match determination process, parent and agency match supports, and match characteristics (e.g., quality and weekly contact). Youths received two movie passes after each assessment and parents received a US$5 fast food gift certificate. Study procedures were approved by the Centre for Addiction and Mental Health research ethics board.

Measures

Youth outcomes were assessed using youth self-reports of behavioral problems, poor mental health, perceived social support, self-esteem, and coping strategies at the study baseline and 18-month follow-up assessments.

Behavioral Problems Behavioral problems were assessed using the conduct problems (5 items; $\alpha = 0.50$–0.60), hyperactivity-inattention (5 items; $\alpha = 0.65$–0.72), and pro-social behavior (5 items reverse coded; $\alpha = 0.60$–0.64) sub-scales of the Strengths and Difficulties Questionnaire (SDQ) (Goodman and Scott 1999). The SDQ was developed as a brief measure of psychological adjustment in children and youths. Item response options range from "not true" to "certainly true." Good reliability and validity of the SDQ sub-scales has been reported in ethnically diverse samples of youths across a broad age span (Achenbach et al. 2008; Muris, Meesters, Eijkelenboom, and Vincken 2004). In the current study, items on each sub-scale were summed. The resulting indices were used as indicators of youth behavioral problems in the SEM models.

Mental Health Youth mental health was measured using the Generalized Social Anxiety and Distress sub-scale (SAD-G) (four items; $\alpha = 0.60$–0.64) of the Revised Social Anxiety Scale for Children (SASC-R) (La Greca 1999) and eight items ($\alpha = 0.76$–0.83) from the Center for Epidemiology Studies Depression Scale (CES-DC) (Weissman, Orvaschel, and Padian 1980). Four response options on the SAD-G items range from "not at all" to "all the time." Four response options on the CES-DC range from "not at all" to "a lot or all the time." The SAD-G has been administered to youths aged 7–15 years and possesses moderate to good internal consistency and test-retest reliability and good construct and criterion validity (La Greca 1999; Myers and Winters 2002). The CES-DC indicates good internal consistency and retest stability in 12–18 year olds and moderate support for concurrent validity (Myers and Winters 2002).

Coping Behaviors Coping behaviors were measured using the Cognitive-Behavioral Problem-Solving (eight items; $\alpha = 0.82$–0.89) and Assistance Seeking (four items; $\alpha = 0.57$–0.67) sub-scales of the Coping Scale for Children and Youth (CSCY) (Brodzinsky et al. 1992). Youths completing the CSCY rated how frequently they adopt a certain coping strategy to handle a problem. Four response options range from "never" to "very often." Previous research using the CSCY has shown good internal consistency and test-retest reliability (Dry et al. 2015). Evidence of construct validity was reported in the original study of scale development (Brodzinsky et al. 1992). Due to a low item-total correlation, the item "I kept my feelings to myself" was dropped from the Assistance Seeking sub-scale.

Peer self-esteem Peer self-esteem was measured using a six-item abbreviated version of the peer sub-scale ($\alpha = 0.62$–0.73) of the HARE Self-Esteem Scale (Shoemaker 1980). Five response options range from "strongly agree" to "strongly disagree".

Perceived social support Peer and teacher support were measured using items from the Peer Support (five items; $\alpha = 0.68$–0.74) and Teacher Support (five items; $\alpha = 0.77$–0.83) sub-scales of the Social Support Appraisal Scale (SSAS) (Dubow and Ullman 1989). The SSAS was developed to gauge children's perceptions of family, peer, and teacher support. Five response options range from "never" to "always." Sub-scales of the SSAS have demonstrated good reliability ($\alpha = 0.78$–0.83) and construct validity (Dubow and Ullman 1989). Emotional support from parents was measured using the Perceived Emotional Support sub-scale (six items; $\alpha = 0.83$–0.90) of the 15-item Wills Parental Support Scale (WPSS) (Wills, Vaccaro, and McNamara 1992). Four response options range from "not at all" to "very much." The WPSS was created as a short measure of functional support for children and adolescents. Youths indicate their level of agreement with statements pertaining to perceived support availability from parents. High internal consistency ($\alpha = 0.88$) has been reported elsewhere (Wills and Shinar 2000).

Independent Variable Youth mentoring status reflected the stability and longevity of the mentoring relationship in the interval between the baseline assessment and the 18-month follow-up. Dummy-coded categories included the following: (1) continuously mentored less than 12 months; (2) continuously mentored 12 or more months; (3) dissolved mentoring relationship less than 12 months; (4) dissolved mentoring relationship 12 or more months; and (5) re-matched to a second mentor. Never-mentored (un-matched) youths served as the comparison group.

Covariates Study covariates in the multivariate models (see below) were chosen based on previous theory and research on youth mentoring (e.g., Rhodes 2002). Youth characteristics were gender (1 = boys 0 = girls), age (continuous), living arrangements (two dummy-coded categories: living with a single biological parent and living in other arrangements vs. a reference group of both biological parents), ethnic/racial minority status reported by the parent/guardian (1 = Aboriginal, African, Asian, and Hispanic Canadian 0 = all others), number of siblings at home (continuous), number of family moves (past 5 years) (continuous), presence of a chronic health condition (1 = yes 0 = no), and sought help from a mental health or social service professional in the past 12 months (1 = yes 0 = no). Parent/guardian characteristics included age (continuous) and education (1 = <high school; 0 = other). Parent-reported gross annual household income (1 = <20 K; 0 = other), receipt of government social assistance (1 = yes; 0 = no), and living in a government subsidized dwelling (1 = yes; 0 = no) were combined into a count variable to capture the depth of family poverty. Other covariates reported by parents included family functioning ($\alpha = 0.86$), measured using the 13-item general functioning sub-scale of the McMaster Family Assessment Device (Byles, Bryne, Boyle, and Offord 1988); parent depression ($\alpha = 0.93$), measured using the 20-item Center for Epidemiological Depression Scale (Radloff 1977); parent social anxiety ($\alpha = 0.92$), measured using the 17-item Social Phobia Inventory ($\alpha = 0.92$) (Connor et al. 2000); and neighborhood problems ($\alpha = 0.92$), measured using 6 items from the revised Simcha-Fagan Neighborhood Questionnaire (McGuire 1997).

Analytic Approach

Structural equation modeling in M-plus (Muthen and Muthen 2011) was used to examine the relationship between mentoring status and youth mental health, behavioral, and developmental outcomes. At the 18-month follow-up, each outcome was treated as a latent endogenous construct represented by three or more indicators and simultaneously regressed on (1) youth mentoring status (five dummy-coded categories); (2) scores for the same outcome measured at the baseline assessment (latent exogenous construct represented

by three or more indicators); and (3) potential baseline confounders or model covariates (e.g., youth demographics, personal and environmental factors) measured without error and treated as single observed indicators. Confounders were allowed to co-vary with the mentoring status variable. To enhance statistical power and reduce skewness on the latent construct indicators, items on the outcome measures were parceled. SEM multiple groups was performed to assess the plausibility of the model for male and female youths. To establish measurement invariance, equality constraints were imposed on the factor loadings and intercepts of the latent constructs across time and gender groups. Cross group equality constraints were imposed to assess statistically significant differences between boys and girls in the magnitude and direction of the pathway linking mentoring status to youth outcomes. Standard errors were adjusted for nesting of youths within mentoring agencies. Full Information Maximum Likelihood (Graham 2009) was used for handling missing data on outcomes at baseline (2 %) and follow-up (26 %).

Results

Table 1 (top portion) provides a percentage breakdown of the youth mentoring status construct for the total sample and then separately by gender. To validate the construct, the first five categories were cross-classified with mentoring relationship characteristics (quality, weekly contact, and number of mentoring activities) identified as important benchmarks for defining successful mentoring relationships (Herrera, Sipe, and McClanahan 2000). The means and standard deviations associated with these variables are reported in the bottom portion of Table 1. Results showed that youth mentoring status accurately discriminated between two of the three benchmark indicators. Statistically significant associations occurred between relationship quality and youth mentoring status. Consistent with previous research showing a strong positive association between mentoring relationship quality and longevity (Rhodes et al. 2014), post hoc comparisons revealed significantly higher mean quality values on the long-term mentoring categories relative to the short-term dissolved and re-matched categories. A statistically significant association in the expected direction was also found for number of monthly activities with a higher mean activity value for youths in continuous long-term versus short-term dissolved relationships. There was no association between weekly contact and mentoring status.

Prior to estimating the SEM models, differences across categories of youth mentoring status for each baseline outcome were explored. Statistically significant group differences in the estimated mean values were found for prosocial behavior (F (5, 853) = 4.10, p = .001), parent emotional support (F (5, 853) = 4.93, p = .001), and peer

Table 1 Description and validation of youth mentoring status construct

	Con < 12 (Cat A)	Con 12 + (Cat B)	Dis < 12 (Cat C)	Dis 12 + (Cat D)	Rematch (Cat E)	No match
Total[1]	15.3	29.5	12.8	8.1	9.7	24.7
Girls[1]	8.0	34.4	17.9	10.6	12.5	16.5
Boys[1]	22.3	24.6	7.8	5.7	6.9	32.6
Quality MR (PR)[2]	13.93[c,e]	14.21[c,d,e]	11.42[a,b,d]	13.34[b,c,e]	12.19[a,b,d]	–
	(1.52)	(1.34)	(3.21)	(2.09)	(2.65)	
	$F(4, 582) = 38.50, p < .001$					
Quality MR (CR)[2]	14.5[c,e]	14.61[c,e]	12.70[a,b,d]	14.33[c,e]	13.22[a,b,d]	–
	(1.31)	(.89)	(2.56)	(1.10)	(2.27)	
	$F(4, 588) = 32.37, p < .001$					
Contact MR[2]	.81	.83	.76	.83	.76	–
	(.40)	(.43)	(.45)	(.36)	(.43)	
	$F(4, 587) = 0.87, p = .48$					
Activities MR[2]	7.49[b]	8.76[c]	6.69[b]	7.93	7.68	–
	(3.74)	(3.90)	(3.92)	(4.19)	(3.38)	
	$F(4, 532) = 4.42, p = .002$					

Note: Mentoring relationship quality was assessed on the basis of youth and parent global feelings of relationship closeness, warmth, trust, respect, and happiness ($\alpha = 0.86$–0.88). Scale items were summed to form separate indices, one for youth and one for parents, each with a minimum value of 5 and a maximum value of 15. Weekly contact was measured by the number of days in a typical week youth reported doing things with their mentor. Number of activities reflected the number of different mentoring activities in the past month youth reported sharing with their mentor (e.g., playing a sport). Gender comparisons. Category A: (χ^2 (1, $N = 859$) = 33.80, $p < .001$), Category B: (χ^2 (1, $N = 859$) = 9.99, $p = .002$), Category C: (χ^2 (1, $N = 859$) = 19.65, $p < .001$), Category D: (χ^2 (1, $N = 859$) = 6.79, $p = .009$), Category E: (χ^2 (1, $N = 859$) = 7.72, $p = .005$), Category F: (χ^2 (1, $N = 859$) = 30.07, $p < .001$). Superscript letters means post-hoc comparisons using the Games-Howell test ($p < .05$).

PR Parent Report, CR Child Report

[1] Percentages

[2] Means with standard deviations shown in parentheses

support (F (5, 853) = 4.41, $p = .001$). Post hoc comparisons revealed significant differences between non-mentored youths and youths in the long-term mentoring categories (with lower mean pro-social and social support values for non-mentored youths). These variables were included as covariates in the SEM models.

Table 2 presents standardized structural coefficients in each of the SEM models for the pathways leading from the dummy-coded mentoring status variable to the youth behavioral, social support, and mental health outcomes (latent endogenous constructs). Estimates are compared against a comparison group of never-mentored youth and adjusted for the corresponding baseline outcomes along with demographic and environmental covariates. Details of the measurement and structural components of the model are provided in an addendum. For the total sample, results showed that youths in long-term stable or dissolved mentoring relationships experienced better outcomes than did never-mentored youths with statistically significant negative relationships occurring for behavioral problems and symptoms of depression and social anxiety and positive relationships occurring for coping strategies and parent emotional support. Entering a second mentoring relationship was also beneficial. Specifically, statistically significant positive relationships occurred between the re-matched category and cognitive behavioral coping and perceived

parent support. Membership in short-term dissolved mentoring relationships was not a statistically significant correlate in any of the models.

Turning to gender, girls in long-term relationships (ongoing and dissolved) did relatively better than did never-mentored girls with statistically significant negative relationships occurring for behavioral problems and depressed mood and positive relationships for self-esteem. For girls and boys, involvement in long-term dissolved relationships was negatively associated with symptoms of depressed mood and social anxiety relative to never-mentored youth. Unlike girls, boys in long-term mentoring relationships were more likely than never-mentored boys to report stronger perceptions of emotional support from peers and parents. Girls re-matched to a second mentor performed better than never-mentored girls did on several outcomes with statistically significant negative relationships occurring for depressed mood and social anxiety and positive relationships for peer self-esteem, coping, and parent emotional support. In contrast, re-matched boys either showed no difference or for some outcomes (e.g., peer self-esteem) did significantly worse than never-mentored boys did. Statistically significant cross-gender comparisons in the magnitude of the estimated parameters occurred for re-matched youths for peer self-esteem (χ^2 (1) = 13.91, $p = <.001$) and depressed mood (χ^2 (1) = 4.85, $p = .03$).

Table 2 Mentoring status and youth psychosocial outcomes

	Mentoring status[a]				
Outcome	Con < 12	Con 12 +	Dis < 12	Dis 12 +	Rematch
Behavioral problems					
Total	−0.09 (0.05)	−0.13 (0.05)*	0.05 (0.07)	−0.06 (0.04)	0.02 (0.03)
Girls	−0.04 (0.06)	−0.22 (0.10)*	−0.01 (0.13)	−0.15 (0.06)*	−0.12 (0.10)
Boys	−0.10 (0.07)	−0.07 (0.07)	0.09 (0.08)	−0.01 (0.06)	0.12 (0.07)

Total model: $X^2 = 192.67$; *df = 97*; *p = .000*; *RMSEA = 0.034*; *CFI = 0.92*; *TLI = 0.88*

Gender model: $X^2 = 307.16$; *df = 194*; *p = .000*; *RMSEA = 0.037*; *CFI = 0.92*; *TLI = 0.87*

Depressed mood					
Total	−0.10 (0.04)*	−0.12 (0.05)**	−0.06 (0.05)	−0.18 (0.03)***	−0.06 (0.04)
Girls	−0.13 (0.07)	−0.18 (0.05)***	−0.12 (0.09)	−0.19 (0.04)***	−0.15 (0.05)**
Boys	−0.07 (0.07)	−0.06 (0.08)	0.05 (0.04)	−0.20 (0.05)***	0.03 (0.06)

Total model: $X^2 = 168.86$; *df = 159*; *p = .281*; *RMSEA = 0.008*; *CFI = 0.99*; *TLI = 0.99*

Gender model: $X^2 = 326.22$; *df = 318*; *p = .32*; *RMSEA = 0.008*; *CFI = 0.99*; *TLI = 0.99*

Social anxiety					
Total	−0.08 (0.04)	−0.05 (0.04)	−0.08 (0.04)	−0.13 (0.02)***	−0.05 (0.04)
Girls	−0.02 (0.06)	−0.07 (0.07)	−0.12 (0.07)	−0.14 (0.05)**	−0.10 (0.04)*
Boys	−0.10 (0.06)	−0.07 (0.06)	−0.02 (0.05)	−0.13 (0.04)***	−0.01 (0.05)

Total model: $X^2 = 222.43$; *df = 159*; *p = .001*; *RMSEA = 0.022*; *CFI = 0.96*; *TLI = 0.94*

Gender model: $X^2 = 436.91$; *df = 318*; *p = .000*; *RMSEA = 0.030*; *CFI = 0.92*; *TLI = 0.90*

Peer self-esteem					
Total	0.02 (0.05)	0.05 (0.06)	0.06 (0.08)	0.02 (0.04)	0.04 (0.06)
Girls	−0.01 (0.08)	0.19 (0.06)**	0.13 (0.11)	0.09 (0.04)*	0.23 (0.06)***
Boys	0.01 (0.08)	−0.02 (0.08)	0.03 (0.07)	−0.01 (0.04)	−0.12 (0.06)*

Total model: $X^2 = 153.12$; *df = 101*; *p = .001*; *RMSEA = 0.025*; *CFI = 0.95*; *TLI = 0.92*

Gender model: $X^2 = 274.01$; *df = 202*; *p = .001*; *RMSEA = 0.029*; *CFI = 0.93*; *TLI = 0.90*

Coping (cognitive)					
Total	−0.01 (0.04)	0.11 (0.05)*	0.02 (0.07)	0.04 (0.04)	0.09 (0.04)*
Girls	0.10 (0.07)	0.17 (0.09)	0.12 (0.12)	0.05 (0.07)	0.17 (0.06)**
Boys	−0.07 (0.06)	0.09 (0.07)	−0.05 (0.06)	0.04 (0.07)	0.05 (0.05)

Total model: $X^2 = 217.21$; *df = 159*; *p = .002*; *RMSEA = 0.021*; *CFI = 0.98*; *TLI = 0.97*

Gender model: $X^2 = 398.75$; *df = 318*; *p = .001*; *RMSEA = 0.024*; *CFI = 0.97*; *TLI = 0.97*

Coping (assistance)					
Total	0.01 (0.06)	0.12 (0.05)*	0.05 (0.06)	0.10 (0.04)*	0.06 (0.04)
Girls	0.02 (0.10)	0.12 (0.09)	0.14 (0.11)	0.12 (0.07)	0.14 (0.05)**
Boys	−0.03 (0.06)	0.15 (0.06)**	−0.06 (0.08)	0.06 (0.06)	−0.02 (0.05)

Total model: $X^2 = 151.70$; *df = 101*; *p = .001*; *RMSEA = 0.024*; *CFI = 0.94*; *TLI = 0.90*

Gender model: $X^2 = 266.89$; *df = 202*; *p = .002*; *CFI = 0.92*; *TLI = 0.88*

Parent emotional support					
Total	0.10 (0.04)*	0.09 (0.04)*	0.06 (0.06)	−0.01 (0.04)	0.07 (0.035)
Girls	0.10 (0.05)	0.08 (0.07)	0.11 (0.11)	−0.01 (0.05)	0.11 (0.04)**
Boys	0.10 (0.06)	0.12 (0.05)**	−0.03 (0.04)	−0.01 (0.07)	0.03 (0.05)

Total model: $X^2 = 102.31$; *df = 97*; *p = .336*; *RMSEA = 0.008*; *CFI = 1.00*; *TLI = 0.99*

Gender model: $X^2 = 215.87$; *df = 194*; *p = .063*; *RMSEA = 0.016*; *CFI = 0.99*; *TLI = 0.98*

Peer social support					
Total	0.13 (0.05)*	0.12 (.07)	0.06 (0.06)	0.04 (0.06)	0.04 (0.05)
Girls	0.08 (0.05)	0.06 (.09)	0.08 (0.08)	0.01 (0.10)	0.06 (0.09)
Boys	0.15 (0.07)*	0.20 (.09)*	−0.04 (0.08)	0.11 (0.05)*	0.03 (0.07)

Total model: $X^2 = 190.26$; *df = 97*; *p = .000*; *RMSEA = 0.033*; *CFI = 0.91*; *TLI = 0.86*

Gender model: $X^2 = 350.18$; *df = 194*; *p = .000*; *RMSEA = 0.043*; *CFI = 0.86*; *TLI = 0.79*

Table 2 (continued)

	Mentoring status[a]				
Teacher support					
Total	0.10 (0.05)	0.07 (0.06)	0.08 (0.08)	0.01 (0.03)	0.01 (0.05)
Girls	0.12 (0.07)	0.09 (0.10)	0.10 (0.14)	0.02 (0.05)	0.12 (0.07)
Boys	0.07 (0.08)	0.09 (0.07)	0.05 (0.06)	0.02 (0.04)	−0.15 (0.08)

Total model: $X^2 = 143.99$; $df = 101$; $p = .003$; RMSEA = 0.022; CFI = 0.97; TLI = 0.95

Gender model: $X^2 = 240.68$; $df = 202$; $p = .032$; RMSEA = 0.021; CFI = 0.97; TLI = 0.96

Note: results are standardized structural path coefficients with standard errors shown in parentheses

*$p < .05$; **$p < .01$; ***$p < .001$

[a] Comparison group: never-mentored or unmatched youths

Discussion

This study moved beyond a simple comparison of mentored versus non-mentored youths to create a mentoring status variable with a range of different mentoring categories broadly corresponding to the stages of mentoring described in Keller's theory of mentoring relationship development. It was expected that these mentoring categories would differentiate youths achieving positive developmental outcomes from those who did not. A secondary objective was to explore the role of youth gender as a moderator of these relationships.

In general, this study provided support for a more refined mentoring construct. After adjusting for potential confounders known to influence the development of mentoring relationships and positive youth outcomes (i.e., personal and environmental factors), youths in mentoring relationships lasting 12 or more months experienced health and social benefits compared to never-mentored youths. This result supports existing models of youth mentoring (e.g., Rhodes et al. 2006) which posit that the processes of change through which mentoring influences youth social-emotional, identity, and cognitive development (e.g., changes in the way youth view themselves or approach relationships with others) take time to fully develop such that positive changes in development are not likely to surface until well into the growth and maintenance phase of the mentoring relationship.

Why youths in dissolved long-term relationships faired just as well as those in ongoing long-term relationships is unclear. To explore this question, a close examination of the study data revealed that two thirds of the dissolved relationships ended exactly at 12 months. This finding could mean that the BBBS policy of a minimum 12-month commitment may have had the unintended effect of leading some mentors and mentees early in the program to anticipate, expect, or even plan for relationships to close at the end of the 12-month period. If many of these mentors and mentees parted on good terms, it might explain why youths in the dissolved long-term category benefited just as much as youths in the ongoing category. Unfortunately, it is not possible to test this hypothesis. The current study did not collect information on mentor or mentee

expectations around relationship continuity or possible pre-arranged informal agreements for relationships to end to coincide with the minimum 12-month period of commitment.

The absence of health and social benefits associated with youth involvement in short-term dissolved relationships is also an important finding. The null findings may simply reflect youth disappointment with mentoring relationships gone awry, as suggested by the lower quality ratings for this group in the descriptive results, or negative feelings associated with unplanned endings. Several authors (e.g., Goldner and Mayseless 2009; Spencer, Basualdo-Delmonico, Walsh, and Drew 2014) have suggested that mentoring relationships that dissolve early may be damaging to youths because of feelings of rejection or abandonment or unfulfilled expectations.

Re-matched youth did not experience health and social benefits on most outcomes. This finding is somewhat consistent with previous investigations (e.g., Grossman et al. 2012; Herrera et al. 2013) showing that being paired to a second mentor had either no effect and in some instances negative effects on youth outcomes. One explanation for these findings is that many re-matched youths may have recently left unpleasant relationships with their first mentor and were in the process of getting acquainted with their new partner. However, due to the small sample, comparing re-matched youths in short- versus long-term relationships was not possible.

Finally, youth in ongoing relationships lasting less than 12 months also experienced positive outcomes relative to never-mentored youth. Youth in this category started their mentoring relationships later and were still being mentored at follow-up. Given the shorter duration of their relationships, it possible that some were still experiencing the excitement and euphoria often associated with meeting someone new for the first time (Keller's get acquainted phase) and therefore had developed an exaggerated sense of satisfaction reflective of a "honeymoon" effect that gave rise to their better standing relative to never-mentored youth. The positive benefits may have also occurred because many of the youth in the ongoing short-term mentoring category had been in a mentoring relationship lasting 10 or 11 months allowing for sufficient time

for bonding to develop between the mentor and mentee. At least some of these youths would have continued beyond the 12-month mark following the 18-month interview.

Gender differences in the relationship between youth mentoring status and development varied by the category of the mentoring status variable and the developmental outcome. Girls in long-term relationships experienced fewer behavioral problems and higher self-esteem while boys experienced greater emotional support from peers and parents. Moreover, re-matched girls did relatively better than never-mentored girls did. In contrast, re-matched boys did not experience benefits and for some outcomes did more poorly than never-mentored boys did. These results support Spencer's (2007) position that the traditional gender-based stereotypes applied to non-mentored samples of youth do not necessarily apply to mentoring relationships and that boys are just as likely as girls to value emotional closeness in their mentoring relationships resulting in positive outcomes. The varied findings could also mean that boys and girls have different expectations of what they hope mentoring will achieve or possibly that mentoring fulfills certain needs related to gender at different times in the evolution of the relationship (Pryce, Kelly, and Guidone 2013). Investigating these possibilities will require careful study of the motivational factors and relational processes influencing the development of the mentoring relationship tied to youth gender and that might be responsible for the observed differences in this study.

The finding that re-matched girls experienced positive outcomes and not re-matched boys could mean that girls expect more out of their mentoring relationships than boys do and therefore are less willing to settle for relationships that fall short of satisfying their needs for intimacy. If true, girls who leave their first mentoring relationships may be more highly motivated than boys are to enter a second relationship, choosing a mentor that is a better fit with their interests, and consequently, demonstrating a greater commitment to making the relationship work. An alternative explanation is that re-matched girls left their first relationship sooner than boys did providing more time to become fully acquainted with their new mentor. These explanations, however, are speculative and do not explain why re-matched boys demonstrated worsened behavior on some outcomes. Further study is needed to explain this finding.

The results of this study are consistent with previous studies (e.g., DuBois et al. 2011) showing statistically significant weak to moderate-sized positive associations between mentoring and youth health and social functioning. However, the magnitude of the associations was less than expected. One possible reason for the absence of stronger relationships is that mentees and mentors who reach or surpass the 12-month period of commitment may make downward adjustments to their time commitments to closely conform to what they perceive to be desirable or realistic. DuBois and

Neville (1997) reported that contact between mentors and their mentees became less frequent the greater the longevity of the relationship. The weak relationships could also be due to reduced program supports. In most Canadian BBBS programs, ongoing support to mentoring relationships is provided by BBBS caseworkers but is reduced after 12 months. Last, the results could have been due to low scores on the baseline outcomes that created a floor effect limiting any improvement associated with having an adult mentor. To explore this possibility, the baseline means of several outcomes were compared against those reported in general population samples (e.g., La Greca 1999; Murris et al. 2004; Stopa, Barrett, and Golingi 2010). For the most part, youth in this study recorded similar or higher means for problem behavior and mental health outcomes and lower means for coping behavior ruling out a floor effect.

Limitations

This study benefited from a good response rate and a large ethnically diverse sample of youths. However, there were also some limitations. First, the sample was comprised primarily of youths from metropolitan centers and thus should not be viewed as representative of all BBBS community applicants. Second, the finding that youths in long-term mentoring relationships experienced positive outcomes may have occurred if they were well-adjusted to begin with, making it less likely that sustained mentor support was a contributing factor. Preliminary analyses found that these youths demonstrated higher levels of baseline parent and peer support and pro-social behavior than other groups did. Although these factors were included as model covariates, it is possible that youths in this category benefited more because they received at the outset encouragement and support from parents that enabled them to continue their relationships or because they reported pro-social attitudes and behaviors reflecting a greater readiness for change and that contributed to greater mentor satisfaction with the relationship. Third, it is possible that youths in long-term mentoring relationships did better because they expected to do so or because of similar expectations by parents. These reporting biases may have impacted the results. Fourth, while this study found positive benefits associated with youths in long-term mentoring relationships, it did not examine how benefits were achieved. Keller (2005) suggested that long-term mentoring relationships allow for vital aspects of relationship quality (e.g., affection) to mature and that relationships that possess these qualities are likely to have the greatest impact on youth development. Future investigations are required to test these mediational pathways. Finally, this study's reliance on youth self-reports may be problematic since youths may exaggerate behaviors or withhold sharing personal feelings (Brener, Billy, and Grady 2003). Future analyses will address these biases by examining parent perspectives.

Implications for Programming

The results of this study have important implications for the delivery of effective mentoring programs. To reduce early mentoring relationship closures and increase the positive impact of mentoring on youth development, mentoring programs may need to implement more effective methods of screening to ensure that prospective mentors are committed to helping youth succeed over the long-term, improve the process of pairing mentors to mentees to account for the needs and expectations of both parties, and offer enhanced training encouraging mentors and mentees to meet or surpass the expected 1-year period of commitment to the mentoring relationship. Programs may also need to apply greater scrutiny to relationships at the early stages of development through more intense caseworker contacts aimed at identifying problems before they escalate. At the same time, programs should raise awareness that relationship closures will happen and seek to minimize harm by ensuring that mentors and mentees notify each other of their intention to end the relationship and explain their decision in a sensitive manner. Finally, mentored girls and boys experienced health and social benefits that varied by their mentoring status. Further study of what underlies these differences is required in advance of making gender-specific recommendations around program content and practices.

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