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**ABSTRACT**

Youth mentoring is defined as a close, interpersonal relationship between a young person and a more experienced adult. The quality of the youth-mentor relationship is critical to youth mentoring interventions and thus it is imperative that relational dynamics, such as match satisfaction, are explored and understood in order to further inform programme development.

**Methods:** This research outlines a secondary analysis of quantitative data gathered as part of a large scale, longitudinal evaluation of the Big Brother Big Sister (BBBS) of Ireland programme (Dolan et al, 2011). Specifically, 76 young people and their mentors who took part in the Irish BBBS programme completed questionnaires assessing their perceptions of the quality of their mentoring relationship. Multiple waves of data collection were completed over a two year period. Young people also reported on their developmental outcomes at each time point. **Results:** Results from a series of hierarchical regression analyses suggest that both mentor and mentee's perceptions of match satisfaction are significantly associated with youth developmental outcomes over time. **Discussion:** Overall, this research reports several findings that have relevance for youth mentoring research and practice and expands our understanding of how match satisfaction can impact the success of formal youth mentoring programmes, such as the BBBS programme.

## 1. Introduction

Youth mentoring is often defined as an intense interpersonal relationship between a young person and a more experienced adult or individual, who provides the youth with guidance, support, and/or encouragement (Eby & Lockwood, 2005; Rhodes, 2002). Although mentoring can occur naturally, interest in the implementation of formal youth mentoring programmes has increased exponentially in recent times (DuBois et al., 2011; Herrera et al., 2011). Mentoring programmes attempt to formally ‘match’ a young person with an adult volunteer, with the aim of helping the pair to develop a supportive, emotional bond ‘in which trust and closeness can develop and the adult can help the young person to cope and develop to the best of his or her ability’ (Dolan & Brady, 2011, p. 128). Generally, evaluations of formal mentoring initiatives have indicated that these programmes are associated with an array of positive developmental outcomes among youth (DuBois et al., 2011; Rhodes, 2008). However, research also suggests that the positive effects associated with formal mentoring initiatives appear to vary considerably, both over time and across different programmes (DeWit et al., 2016; Rodriguez-Planas, 2014; Stelter et al., 2018). Researchers now contend that greater attention needs to be placed on understanding the relational and structural processes that are key to promoting positive experiences for youth in formal mentoring programmes (DeWit et al., 2016; Martin & Sifers, 2012).

Currently, there is a large body of empirical evidence which suggests that young people who take part in youth mentoring programmes (particularly those ‘at-risk’) show significant improvements in a wide range of behavioural, emotional, and cognitive outcomes (DeWit et al., 2016; DuBois et al., 2011; Meyerson, 2013; Tolan et al., 2014). For example, research has found that youths’ participation in formal mentoring programmes appears to be associated with increased emotional and psychological well-being (Bowers et al., 2015; Larsson et al., 2016). In addition, research suggests that youth who participate in mentoring programmes show reduced engagement in delinquent and aggressive behaviours (Jolliffe & Farrington, 2007; Tolan et al., 2014), while other research indicates that formal youth mentoring is positively associated with increased peer acceptance and greater social skills (Deutsch et al., 2017; Rodríguez-Planas, 2014; Spencer & Liang, 2009). Furthermore, a large number of studies have also found evidence of a link between youths’ participation in mentoring programmes and improved educational achievement, including increased school attendance, higher grade scores, and greater scholastic efficacy (Grossman et al., 2012; Herrera et al., 2007; Shiner et al., 2004).

Nonetheless, although support for the efficacy of these youth-mentoring programmes in promoting positive youth development appears to be widespread, recently researchers have begun to express concerns over the durability of these positive effects over time (DuBois et al., 2011; De Wit et al., 2016; Meyerson, 2013). In particular, results from a number of longitudinal evaluations have suggested that the positive effects associated with mentoring programmes may dissipate within a few months of programme completion (Herrera et al., 2011; Holt et al., 2008). Researchers have also noted several inconsistencies in the observed effectiveness of mentoring initiatives across different programme evaluations, with some mentoring programmes not appearing to be associated with any positive youth outcomes and others showing evidence of detrimental effects (DuBois et al., 2011; Matz, 2013; Roberts et al., 2004; Rodríguez-Planas, 2014). Crucially, an accumulation of evidence now suggests that the strength of programme effects may be tempered by a number of important structural and relational processes (DuBois & Keller, 2017), which in turn may help explain the inconsistencies observed in the direction and size of effects across various mentoring initiatives (DeWit et al., 2016).

Research indicates that a number of programme structures and supports, such as programme fidelity, the level of training received by volunteers, and the quality of support provided to mentors, may play an integral role in influencing the success or duration of the mentoring programme or relationship (DuBois et al., 2002; Higley et al., 2016; McQuillan, Straight & Saeki, 2015; Miller et al., 2013). Additionally, a large amount of research suggests that the duration of the mentoring relationship and the frequency of contact between youth and their mentors, may also impact the success of the mentoring programme (Bowers et al., 2016; Goldner & Mayseless, 2009; Grossman et al., 2012; Schwartz et al., 2013). Moreover, the type of ‘mentoring style’ employed by mentors has also been shown to be important in impacting youth outcomes (Brumovska, 2017; Karcher & Nakkula, 2010; Keller & Pryce, 2012). Similarly, the perceived quality of the mentoring relationship that develops between the youth and their mentor, has been consistently linked with youth outcomes (Deutsch & Spencer, 2009; Rhodes et al., 2017).

Notably, researchers propose that youth and mentors’ perceived happiness or satisfaction with their mentoring relationship is likely to have a strong impact on youth’s developmental outcomes, and may be fundamental to the success of these mentoring programmes (Chapman et al., 2017; Spencer et al., 2018). For example, a study by Larose et al. (2010) found that youth showed improved educational and school-related outcomes when both mentors and youth reported higher levels of satisfaction with the relationship. Furthermore, recent research by

Rhodes et al. (2017) showed that higher levels of youth and mentor relationship satisfaction were associated with longer term mentoring relationships. However, despite these promising results, research investigating both mentor and youth relationship satisfaction is limited (Rhodes et al., 2017) and it is generally agreed that further research in this area is needed (Matz, 2013; Renick Thomson & Zand, 2010; Suffrin, Todd & Sanchez, 2016).

Hence, the current research sets out to extend current knowledge in this area by generating greater understanding about how youth and mentors perceive their mentoring relationship over time and investigating whether these relational dynamics are associated with changes in youths developmental outcomes. Specifically, the aim of the current research is twofold: 1) To explore youth and mentor's self-reported match satisfaction during their participation in a formal, community-based, youth mentoring programme (e.g. Big Brother Big Sister; BBBS); and 2) To examine the association between youth and mentor's perceived match satisfaction and youth's emotional well-being, relational support, risky behaviour and educational outcomes, over time. In line with the theoretical and research evidence, it was hypothesised that youth and mentors would report higher levels of match satisfaction over time and that there would be a significant, positive association between match satisfaction and youth outcomes, over time.

## **2. Method**

Data for this research was obtained from a larger longitudinal study, called the BBBS of Ireland Evaluation Study (Dolan et al., 2011), in which youth were randomly allocated to either the BBBS mentoring programme or to a non-mentoring youth service, which acted as a wait-list control group. In the Dolan et al. (2011) study, youth, parents and mentors participated in four assessment waves over a two year period (Time 1: Baseline; Time 2: 12 months post baseline; Time 3; 18 months post baseline; Time 4: 24 months post baseline). The current study reports on the longitudinal data collected from those youth who participated in the BBBS programme, and their mentors, only.

### ***2.1 Participants***

Participants consisted of 76 young people (39 male, 37 female), aged 10–15 years ( $M = 12.24$ ,  $SD = 1.27$ ) who took part in one of the BBBS mentoring programmes located in the west of Ireland. An attrition rate of 4% was observed at both time 2 and time 3, with 73 participants completing follow-up outcome measures at these time points. An overall attrition rate of 11% was observed at time 4, with 68 participants completing assessments at the final

wave. Data was also collected from 76 (39 male, 37 female) adults, who volunteered to act as mentors to the youths in the BBBS programme. All mentors were aged 18–56 years ( $M = 30.98$ ,  $SD = 8.37$ ) and were paired with one of the youths in the BBBS intervention group as a Big Brother or Big Sister. Approximately 86% of mentors were of Irish nationality.

## **2.2 Materials & Measures**

### **2.2.1 Youth Developmental Outcomes**

A series of instruments were employed to measure youths' self-reported developmental outcomes over the four wave intervals.

**2.2.1.1 Emotional Well-Being** Youth's emotional well-being was assessed using the Snyder et al. (1997) *Children's Hope Scale*. The Children's Hope Scale is a six item measure which taps children's perceptions of their own agency (e.g., ability to take control) and their perceived capability to come up with pathways through which they can achieve their goals. Higher scores on this measure represent higher perceptions of agency and capability.

**2.2.1.2 Education** Four assessments were used to measure youths' educational outcomes. *School Liking* is a three-item measure (Eccles, 1999) which assesses how well the young person likes school and feels excited about going to school. Higher scores represent greater school liking. *Scholastic Efficacy* was assessed using the six item sub-scale from the Harter (1985) self-perception profile for children scale. Scholastic Efficacy assesses youths' confidence in doing their school work. Three items are reversed, so higher scores reflect greater efficacy. Youths' *Education Plans* were assessed using three items which measured youths' plans to finish secondary or high school, go to college, and finish college. Higher scores represent greater intentions to complete their education. *Grade Scores* were assessed using four individual items which measured youths' grade performance in a number of subjects. Higher scores represent higher academic performance.

**2.2.1.3 Risky Behaviour** Youths' engagement in delinquent or risky behaviours were assessed through the use of the six-item Misconduct scale (Brown et al., 1986). This scale taps youths' self-reported behaviour in relation to skipping school without permission, hitting people, taking something without paying for it, and using alcohol and tobacco. Higher scores on this scale represent higher levels of risky behaviour.

**2.2.1.4 Relational Support** Youths' levels of perceived relational support and social acceptance were assessed through the use of three separate measures. *Parental Trust* was

assessed through the use of the Parental Trust scale, from the Inventory of Parent Attachment (Armsden & Greenberg, 1987). This four item scale measures the extent to which youths feel they have a trusting relationship with their parent or guardian. Higher scores on this scale are indicative of greater trusting relationships. Youths' perceptions of *Social Support* were measured using the Social Provisions Scale – revised (SPS-R; Cutrona & Russell, 1990). The SPS-R scale consists of 16 items. The scale is composed of four subscales which examine youths' social relationships and support across four different contexts: *Perceived Social Support from Friends* (four items); *Perceived Social Support from Parents* (four items); *Perceived Social Support from Siblings* (four items), and *Perceived Social Support from Other Adults* (four items). Higher scores reflect greater perceived social support levels in each of these domains. The six-item social acceptance sub-scale, of Harter's (1985) self-perception profile for children, was employed to assess youth's sense of *Social Acceptance* from their peers. Three items on this scale are reverse-coded so that higher scores reflect higher levels of peer acceptance.

### **2.2.2 Youth Match Satisfaction**

Youth also completed a series of measures assessing their satisfaction with their mentor and/or mentoring relationship at times 2-4. Specifically, all young people who participated in the BBBS programme completed instruments assessing their perceptions of the level of support they receive from their mentors; the degree to which mentors helped them to cope, and their perceived happiness with their mentoring relationship. Youths' perceptions of mentor *Support* were assessed using the four-item SPS-R scale (Cutrona & Russell, 1990). The scale was adapted to assess youth's reports of the level of social support they received from their mentors. Higher scores reflect greater levels of perceived mentor support. Youth's perceptions of mentors levels of *Helping* were measured using three items adapted from the Rhodes et al. (1987) Helped to Cope scale. This scale was used to measure the degree to which youth perceived their mentors as helping them to cope with their emotions/problems. Higher scores on this scale reflect greater levels of perceived mentor helping. Youth perceptions of match *Happiness* were measured using six items from the Rhodes et al. (1987) scale. This scale was used to assess the degree to which youth's felt content with their mentoring relationship. Items on this scale are reversed scored so that higher scores reflect greater levels of youth happiness with their mentor match.

### **2.2.3 Mentor Match Satisfaction**

Mentors also completed self-report measures which assessed their perceived levels of satisfaction with their mentoring relationship/experience. *Mentor Satisfaction* was assessed using the 25-item mentor satisfaction scale (Rhodes et al., 1987). Items were reverse-coded, so higher scores represent greater levels of mentor satisfaction with their match.

### ***2.3 Procedure***

Before taking part in the BBBS programme, all youths completed a baseline (time 1) self-report survey assessing their current emotional well-being, relational support, risky behaviour and educational outcomes. Youth's demographic information (e.g. Gender, Age) was also collected at Time 1. Once youths completed these initial assessments, they were enrolled into the programme and forwarded for matching with their individual mentors. The programme was delivered per the BBBS service delivery manual and all volunteers were vetted and trained before being matched with a young person. Approximately 12 months after the initial baseline assessments, follow-up assessments were carried out (time 2). At time 2, youths completed questionnaires containing the same outcome measures as at time 1. Youths also reported on their current level of satisfaction with their mentor and their perceived support and emotional helping from their mentor. Identical questionnaires assessing youths' developmental outcomes and match satisfaction were carried out at time 3 and time 4. Mentors were also asked to complete self-report (postal) questionnaires at times 2, 3, and 4, assessing their satisfaction with their match/mentoring experience. Assessments of youth and mentors' match satisfaction were not assessed at time 1, as mentors and mentees were not paired until after the baseline assessment. For more information about the procedure and measures employed please see Dolan et al., (2011).

### ***2.4 Statistical Analysis***

A series of hierarchical regression analyses were conducted to investigate whether youth or mentor's match satisfaction were associated with changes in youths' developmental outcomes (e.g. relational support, emotional well-being, risky behaviour & educational attainment), over time. For all regression analyses, Time 1 outcome measures, mentee age and mentee gender were entered as control variables. Other supplementary analyses were conducted using ANOVAs and correlations.

## **3. Results**

### ***3.1 Preliminary Analyses***

As a number of predictor and criterion variables were assessed using same-source measurements, preliminary analyses were conducted in order to test for the presence of common method variance in the current research. Specifically, Harman's Single Factor Test (Podaskoff et al., 2003) was performed using principal components analysis, to examine whether there was a single factor in the data which could account for the majority of the observed variance (Chang, Van



Witteloostuijn, & Eden, 2010; Tehseen, Ramayah, & Sajilan, 2017). Separate Harman's Single Factor Tests were carried out on all youth-reported indicators (e.g. all predictor and outcome variables) at Time 2, Time 3 and Time 4. Results from these analyses indicated that no single factor accounted for the majority of variance observed in the data, as the highest level of variance accounted for by any one factor, at any time point, was 19.81%. Following guidelines set forth by Podsakoff et al. (2003) and Tehseen et al. (2017), these results suggest that common method variance is not an issue in the current research and the data appears suitable for further analysis.

### ***3.2 Identifying Changes in Youth and Mentor's Levels of Match Satisfaction Over Time***

Descriptive statistics were calculated in order to examine whether matched youths and mentors were satisfied with the mentoring relationship over the two-year period (e.g. Times 2-4). Table 1 shows the descriptive statistics, including means and standard deviations, for all measures assessing youth and mentor match satisfaction across the different time points. As can be seen in Table 1, youths reported high levels of perceived support, help, and happiness with their mentors, at all three time points. Similarly, mentors reported experiencing high levels of match satisfaction at all three time points. A series of one-way repeated-measures ANOVAs were calculated to examine whether youth or mentors' match satisfaction fluctuated significantly over time. Results indicated that there were no significant changes in youths' perceived levels of support, help, or happiness (all  $p_s > 0.05$ ) at any time point. Results also revealed no significant changes over time in mentors' level of satisfaction with the match (all  $p_s > 0.05$ ). For further information on match characteristics please see Dolan et al. (2011).

Table 1

*Means (M), Standard Deviations (SD) and Scale Ranges for All Youth & Mentor's Match Satisfaction Measures from Time 2 - Time 4.*

	<b>Time 2</b>		<b>Time 3</b>		<b>Time 4</b>		<b>Possible Scale Range</b>
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	
<b>Support</b>	10.74	1.66	10.62	1.81	11.00	1.54	4-12
<b>Help</b>	10.86	1.12	10.71	1.39	10.93	1.63	3-12
<b>Happiness</b>	21.36	2.90	21.81	2.70	21.19	4.06	6-24
<b>Mentor Satisfaction</b>	100.27	8.73	101.04	10.39	102.85	12.18	25-125

### ***3.3 Investigating Associations between Youth & Mentors Perceived Match Satisfaction***

In order to examine, whether youth's levels of match satisfaction were associated with mentor's levels of match satisfaction over time, correlational analyses were conducted. Specifically, a series of Spearman's rho correlations were carried out to examine the relationship between Youths'

Satisfaction (e.g., Support, Happiness, Helping) and Mentor's Satisfaction, at Time 2-4 (please see Table 2).

Table 2

*Correlations showing relationships between youth and mentor satisfaction over time.*

<b>Factor</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b><i>Time 2</i></b>			
<b>1. Support</b>	--		
<b>2. Happiness</b>	<b>0.49**</b>	--	
<b>3. Helping</b>	<b>0.74**</b>	<b>0.49**</b>	--
<b>4. Mentor Satisfaction</b>	<b>0.19</b>	<b>0.22</b>	<b>0.18</b>
<b><i>Time 3</i></b>			
<b>1. Support</b>	--		
<b>2. Happiness</b>	<b>0.43**</b>	--	
<b>3. Helping</b>	<b>0.54**</b>	<b>0.45**</b>	--
<b>4. Mentor Satisfaction</b>	<b>0.06</b>	<b>0.23*</b>	<b>-0.03</b>
<b><i>Time 4</i></b>			
<b>1. Support</b>	--		
<b>2. Happiness</b>	<b>0.33</b>	--	
<b>3. Helping</b>	<b>0.47**</b>	<b>0.36*</b>	--
<b>4. Mentor Satisfaction</b>	<b>0.01</b>	<b>0.10</b>	<b>0.16</b>

*Note: \*  $p < 0.05$ ; \*\*  $p < 0.001$*

As can be seen in Table 2, at Time 2 and Time 3 youths' perceptions of support, helping, and happiness all correlated positively with each other. At Time 4, however, no significant association was found between support and happiness. Additionally, mentor satisfaction did not appear to be significantly associated with any aspect of youth match satisfaction factor at Time 2 or Time 4, and at Time 3, mentor satisfaction was only found to correlate significantly (and positively) with youths' perceived match happiness.

### ***3.4 Examining Associations between Youth-Mentor Match Satisfaction and Youth Developmental Outcomes, Over Time***

Descriptive statistics for each youth developmental outcome measures were calculated for each time point (e.g. Time 1–4). As can be seen in Table 3, youths appeared to endorse moderate to high scores on all developmental outcomes over each time period. Only one exception to this trend was observed in relation to youths' level of risky behaviours, where youth showed relatively low levels of misconduct across time<sup>1</sup> (please see Table 3).

<sup>1</sup> This research did not assess whether youth showed significant differences in these outcomes over time, as this was previously tested and reported by Dolan et al. (2011)

Table 3

*Descriptive Statistics (Means & Standard Deviations) for All Youth Developmental Outcomes*

	<b>TIME 1</b>		<b>TIME 2</b>		<b>TIME 3</b>		<b>TIME 4</b>	
	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>	<b>M</b>	<b>SD</b>
<b>HOPE</b>	18.96	3.22	19.82	2.91	20.08	2.65	19.96	3.00
<b>SOCIAL ACCEPTANCE</b>	17.55	3.96	18.54	3.71	19.27	3.87	19.22	3.40
<b>SCHOOL LIKING</b>	7.27	2.67	7.37	2.93	7.51	2.65	8.03	2.34
<b>SCHOLASTIC EFFICACY</b>	17.11	3.77	17.40	3.63	17.50	3.85	17.36	3.54
<b>EDUCATION PLANS</b>	8.91	2.95	9.45	2.46	9.45	2.55	9.40	2.54
<b>GRADE SCORES</b>	14.16	3.05	13.88	2.91	13.75	2.77	13.78	2.97
<b>MISCONDUCT</b>	8.60	2.99	8.43	2.76	8.59	3.32	8.51	3.70
<b>PARENTAL TRUST</b>	13.85	2.64	14.12	2.67	14.05	2.25	14.29	2.31
<b>SOCIAL SUPPORT: FRIENDS</b>	10.51	1.70	10.78	1.54	10.80	1.49	10.96	1.43
<b>SOCIAL SUPPORT: PARENTS</b>	10.68	1.81	10.75	1.85	10.96	1.57	10.62	1.95
<b>SOCIAL SUPPORT: SIBLINGS</b>	9.42	2.49	9.41	2.41	9.83	2.04	9.43	2.70
<b>SOCIAL SUPPORT: ADULTS</b>	9.79	2.54	10.40	1.75	9.60	2.31	9.91	1.89

**NOTE:** *Hope scale ranges from 6–24; Social Acceptance ranges from 6–24; School Liking ranges from 3–12; Scholastic Efficacy ranges from 6–24; Education Plans range from 3–12; Grade Scores range from 4–20; Misconduct ranges from 6–24; Parental Trust ranges from 4–16; Friend Support 4–12; Parent Support 4–12; Sibling Support 4–12; Other Adult Support 4–12.*

In order to examine whether youth and mentor's levels of perceived match satisfaction were associated with youths' developmental outcomes over time, a series of hierarchical regression analyses were conducted<sup>2</sup>. Hierarchical regression analyses were employed in order to assess the impact that each of the four predictors had on youth's outcome measures, after controlling for a number of covariates. Specifically, in each regression model, three covariates: youth gender, youth age, and the baseline (time 1) outcome measurements were controlled for in a first step. Next, youths' perceived levels of Support, Helping, and Happiness with their mentor, as well as Mentors' Satisfaction with their match, were entered into the model simultaneously as individual predictors. Separate regression models were run for each developmental outcome (e.g., hope, social support [friend, sibling, parental & other adults], social acceptance, school liking, scholastic efficacy, education plans, grade scores, parental trust, and misconduct), at each time point, which acted as separate criterion variables. Time 2, Time 3, and Time 4 models assessed the association between Time 2, Time 3 and Time 4 predictors and criterion variables, respectively.

<sup>2</sup> Regression analyses were chosen as the most suitable method of analyses due to the small observed sample size.

*Time 2*

Hierarchical regression analyses were carried out on all Time 2 outcomes. Results from these hierarchical regression analyses revealed that after controlling for gender, age, and baseline responses on the outcome measures, the predictors indicating youths' and mentors' satisfaction with their matches had a significant association with the majority of developmental outcomes. However, the overall models for two outcomes, scholastic efficacy and support from friends, were not significant. An overview of model results for all Time 2 outcomes is presented in Table 4.

For the control variables, results from the regression analyses indicated that all baseline (time 1) measures appeared to have a significant positive association with all youths' outcomes (all  $p_s < 0.05$ ), apart from youths' perceived social support from friends, which was non-significant ( $p > 0.05$ ). Additionally, while youth's gender was not found to be significantly associated with any developmental outcomes, some limited effects were observed for youth age. Namely, older youths were found to report significantly higher levels of misconduct ( $\beta = 0.24, p = 0.02$ ), as well as lower levels of Parental Trust ( $\beta = -0.21, p = 0.04$ ) and support from parents ( $\beta = -0.20, p = 0.04$ ).

In relation to the main predictor variables, mentor satisfaction was not found to have any significant associations with any youth outcome at time 2. However, youth's perceptions of mentor support were found to be positively associated with higher levels of perceived social acceptance ( $\beta = 0.34, p = 0.04$ ) and perceived support from other adults ( $\beta = 0.37, p = 0.02$ ). Moreover, higher levels of perceived mentor helping were positively associated with youth's grade scores ( $\beta = 0.48, p = 0.001$ ), while greater happiness with one's mentor was associated with higher levels of parental support ( $\beta = 0.24, p = 0.04$ ). No other significant links between youth outcomes and mentoring relational dynamics were observed at time 2. Standardised and unstandardized estimates, standard errors and alpha levels for all Time 2 associations are displayed in Table 4 below.

Table 4

Model Results, Standardised & Unstandardized Estimates and Standard Error for all Time 2 outcomes.

<b>Outcome</b>	<b>Predictor</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>	<b>P</b>	<b>F</b>	<b>R<sup>2</sup></b>	<b><math>\Delta</math>R<sup>2</sup></b>	<b>R<sup>2</sup> Change</b>
<b>T2 Hope</b>	Gender	-.27	.57	-.05	.64	<b>6.28**</b>	<b>.40</b>	<b>.34</b>	<b>.08</b>
	Age	.21	.23	.09	.35				
	<b>T1 Hope</b>	<b>.52</b>	<b>.09</b>	<b>.59</b>	<b>&lt; .001</b>				
	T2 Helping	.59	.37	.23	.11				
	T2 Happiness	.04	.11	.04	.71				
	T2 Support	-.08	.25	-.05	.74				
	T2 Mentor Satisfaction	.03	.04	.11	.33				
<b>T2 School Liking</b>	Gender	.17	.60	.03	.77	<b>6.25**</b>	<b>.40</b>	<b>.34</b>	<b>.04</b>
	Age	.03	.22	.01	.89				
	<b>T1 School Liking</b>	<b>.63</b>	<b>.11</b>	<b>.58</b>	<b>&lt; .001</b>				
	T2 Helping	.16	.38	.06	.66				
	T2 Happiness	.07	.11	.07	.55				
	T2 Support	-.22	.25	-.13	.38				
	T2 Mentor Satisfaction	.06	.04	.18	.10				
<b>T2 Social Acceptance</b>	Gender	.58	.73	.08	.43	<b>6.41**</b>	<b>.41</b>	<b>.35</b>	<b>.05</b>
	Age	-.14	.28	-.05	.61				
	<b>T1 Social Acceptance</b>	<b>.56</b>	<b>.09</b>	<b>.60</b>	<b>&lt; .001</b>				
	T2 Helping	-.42	.47	-.13	.38				
	T2 Happiness	-.20	.14	-.16	.18				
	<b>T2 Support</b>	<b>.67</b>	<b>.31</b>	<b>.34</b>	<b>.04</b>				
	T2 Mentor Satisfaction	.02	.05	.05	.65				
<b>T2 Scholastic Efficacy</b>	Gender	-.29	.84	-.04	.73	<i>1.96</i>	<i>.17</i>	<i>.09</i>	<i>.04</i>
	Age	-.01	.32	.00	.98				
	<b>T1 Scholastic Efficacy</b>	<b>.36</b>	<b>.11</b>	<b>.37</b>	<b>&lt; .001</b>				
	T2 Helping	.53	.55	.17	.34				
	T2 Happiness	.05	.17	.04	.74				
	T2 Support	.02	.36	.01	.96				
	T2 Mentor Satisfaction	.01	.05	.03	.83				

<b>Outcome</b>	<b>Predictor</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>	<b>P</b>	<b>F</b>	<b>R<sup>2</sup></b>	<b><math>\Delta</math>R<sup>2</sup></b>	<b>R<sup>2</sup> Change</b>
<b>T2 Education Plans</b>	Gender	.04	.44	.01	.93	<b>11.95**</b>	<b>.56</b>	<b>.51</b>	<b>.07</b>
	Age	-.08	.16	-.04	.62				
	<b>T1 Education Plans</b>	<b>.55</b>	<b>.07</b>	<b>.67</b>	<b>&lt; .001</b>				
	T2 Helping	-.21	.27	-.10	.44				
	T2 Happiness	.05	.08	.06	.53				
	T2 Support	.32	.18	.22	.07				
	T2 Mentor Satisfaction	.03	.03	.11	.24				
<b>T2 Grade Scores</b>	Gender	-.77	.56	-.13	.18	<b>8.11**</b>	<b>.47</b>	<b>.41</b>	<b>.12</b>
	Age	.01	.21	.01	.96				
	<b>T1 Grade Scores</b>	<b>.59</b>	<b>.09</b>	<b>.61</b>	<b>&lt; .001</b>				
	<b>T2 Helping</b>	<b>1.21</b>	<b>.35</b>	<b>.48</b>	<b>.001</b>				
	T2 Happiness	.05	.11	.06	.61				
	T2 Support	-.42	.23	-.24	.08				
	T2 Mentor Satisfaction	-.03	.03	-.09	.36				
<b>T2 Misconduct</b>	Gender	.02	.56	.00	.97	<b>6.33**</b>	<b>.41</b>	<b>.34</b>	<b>.04</b>
	<b>Age</b>	<b>.52</b>	<b>.22</b>	<b>.24</b>	<b>.02</b>				
	<b>T1 Misconduct</b>	<b>.40</b>	<b>.10</b>	<b>.44</b>	<b>&lt; .001</b>				
	T2 Helping	-.42	.36	-.18	.25				
	T2 Happiness	-.11	.11	-.12	.30				
	T2 Support	.23	.25	.14	.36				
	T2 Mentor Satisfaction	-.01	.03	-.04	.70				
<b>T2 Parental Trust</b>	Gender	-.24	.53	-.05	.66	<b>6.26**</b>	<b>.40</b>	<b>.34</b>	<b>.07</b>
	<b>Age</b>	<b>-.43</b>	<b>.21</b>	<b>-.21</b>	<b>.04</b>				
	<b>T1 Parental Trust</b>	<b>.44</b>	<b>.10</b>	<b>.44</b>	<b>&lt; .001</b>				
	T2 Helping	-.25	.34	-.11	.47				
	<b>T2 Happiness</b>	<b>.22</b>	<b>.10</b>	<b>.24</b>	<b>.04</b>				
	T2 Support	.11	.23	.07	.64				
	T2 Mentor Satisfaction	.02	.03	.07	.52				

<b>Outcome</b>	<b>Predictor</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>	<b>P</b>	<b>F</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>R<sup>2</sup> Change</b>
<b>T2 Social Support: Friends</b>	Gender	.28	.39	.09	.47	<i>.80</i>	<i>.08</i>	<i>.02</i>	<i>.06</i>
	Age	.00	.15	.00	.98				
	T1 Social Support: Friends	.11	.11	.12	.36				
	T2 Helping	.19	.25	.14	.46				
	T2 Happiness	-.07	.08	-.13	.36				
	T2 Support	.11	.16	.13	.49				
	T2 Mentor Satisfaction	.02	.02	.10	.47				
<b>T2 Social Support: Parents</b>	Gender	-.09	.34	-.02	.80	<i>8.51**</i>	<i>.48</i>	<i>.42</i>	<i>.10</i>
	<b>Age</b>	<b>-.29</b>	<b>.14</b>	<b>-.20</b>	<b>.04</b>				
	<b>T1 Social Support: Parents</b>	<b>.50</b>	<b>.10</b>	<b>.49</b>	<b>&lt; .001</b>				
	T2 Helping	-.32	.22	-.20	.15				
	T2 Happiness	.12	.07	.20	.07				
	T2 Support	.19	.15	.17	.21				
	T3 Mentor Satisfaction	.04	.02	.17	.10				
<b>T2 Social Support: Siblings</b>	Gender	-.49	.46	-.10	.29	<i>7.27**</i>	<i>.44</i>	<i>.38</i>	<i>.08</i>
	Age	.21	.18	.11	.26				
	<b>T1 Social Support: Siblings</b>	<b>.61</b>	<b>.09</b>	<b>.64</b>	<b>&lt; .001</b>				
	T2 Helping	-.29	.30	-.14	.34				
	T2 Happiness	.13	.09	.16	.15				
	T2 Support	.17	.20	.12	.38				
	T2 Mentor Satisfaction	.05	.03	.18	.09				
<b>T2 Social Support: Adults</b>	Gender	-.03	.37	-.01	.95	<i>4.15*</i>	<i>.31</i>	<i>.23</i>	<i>.14</i>
	Age	-.26	.15	-.19	.08				
	<b>T1 Social Support: Adults</b>	<b>.17</b>	<b>.08</b>	<b>.25</b>	<b>.03</b>				
	T2 Helping	.03	.24	.02	.90				
	T2 Happiness	-.03	.08	-.05	.72				
	<b>T2 Support</b>	<b>.39</b>	<b>.16</b>	<b>.37</b>	<b>.02</b>				
	T2 Mentor Satisfaction	.00	.02	.01	.94				

### ***Time 3***

At time 3, the overall regression models were also found to be significant for the majority of developmental outcomes, even after controlling for youths' gender, age, and baseline scores. However, as can be seen in Table 5, for the friend social support outcome variable, the overall model was not found to be significant. Additionally, while significant associations were found between the majority of baseline (Time 1) outcome measures and time 3 outcome measures (all  $p_s < 0.05$ ), no significant associations were found between Time 1 support from friends and Time 3 support from friends. Furthermore, limited effects were observed for the other control variables, age and gender. Specifically, gender appeared to have no significant associations with any Time 3 outcome, while older adolescents appeared to show significantly lower levels of perceived support from other adults ( $\beta = -0.30$ ,  $p = 0.002$ ) at time 3, in comparison to younger youth.

Furthermore, mentor's reports of match satisfaction at Time 3 were significantly and positively associated with youth reports of hope ( $\beta = 0.21$ ,  $p = 0.04$ ), scholastic efficacy ( $\beta = 0.30$ ,  $p = 0.01$ ), education plans ( $\beta = 0.26$ ,  $p = 0.01$ ), school liking ( $\beta = 0.28$ ,  $p = 0.01$ ) and grade scores ( $\beta = 0.22$ ,  $p = 0.03$ ) at time 3. Results also indicated that mentor helping was positively linked with youth's social acceptance ( $\beta = 0.32$ ,  $p = 0.005$ ), while perceived mentor support was positively associated with youth's perceptions of social support from other adults ( $\beta = 0.37$ ,  $p = 0.002$ ). Youths' happiness with their mentor was also significantly associated with higher levels of parental trust ( $\beta = 0.23$ ,  $p = 0.04$ ) and education plans ( $\beta = 0.26$ ,  $p = 0.03$ ) at time 3. However, a negative relationship between youth's match happiness and youth's reported school liking ( $\beta = -0.25$ ,  $p = 0.03$ ) was observed at Time 3. Standardised and unstandardized estimates, standard errors and alpha levels for all Time 3 associations are displayed in Table 5.



Table 5 Model Results, Standardised &amp; Unstandardized Estimates and Standard Error for all Time 3 outcomes.

Outcome	Predictor	B	SE	$\beta$	P	F	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> Change
T3 Hope	Gender	-.19	.52	-.04	.72	<b>6.01**</b>	<b>.40</b>	<b>.33</b>	<b>.16</b>
	Age	-.09	.21	-.04	.69				
	<b>T1 Hope</b>	<b>.36</b>	<b>.09</b>	<b>.43</b>	<b>&lt; .001</b>				
	T3 Helping	.27	.23	.14	.25				
	T3 Happiness	.20	.11	.21	.06				
	T3 Support	-.07	.17	-.05	.67				
	<b>T3 Mentor Satisfaction</b>	<b>.05</b>	<b>.03</b>	<b>.21</b>	<b>.04</b>				
T3 School Liking	Gender	.28	.55	.05	.61	<b>5.47**</b>	<b>.37</b>	<b>.30</b>	<b>.12</b>
	Age	-.03	.21	-.01	.89				
	<b>T1 School Liking</b>	<b>.49</b>	<b>.10</b>	<b>.50</b>	<b>&lt; .001</b>				
	T3 Helping	.26	.24	.14	.28				
	<b>T3 Happiness</b>	<b>-.24</b>	<b>.11</b>	<b>-.25</b>	<b>.03</b>				
	T3 Support	.09	.17	.07	.58				
	<b>T3 Mentor Satisfaction</b>	<b>.07</b>	<b>.03</b>	<b>.28</b>	<b>.01</b>				
T3 Social Acceptance	Gender	.18	.66	.02	.78	<b>11.13**</b>	<b>.55</b>	<b>.50</b>	<b>.07</b>
	Age	.27	.26	.09	.31				
	<b>T1 Social Acceptance</b>	<b>.63</b>	<b>.08</b>	<b>.66</b>	<b>&lt; .001</b>				
	<b>T3 Helping</b>	<b>.87</b>	<b>.30</b>	<b>.32</b>	<b>.005</b>				
	T3 Happiness	-.15	.14	-.11	.27				
	T3 Support	-.11	.21	-.05	.61				
	T3 Mentor Satisfaction	-.01	.03	-.04	.67				
T3 Scholastic Efficacy	Gender	-.28	.80	-.04	.73	<b>4.23*</b>	<b>.31</b>	<b>.24</b>	<b>.21</b>
	Age	-.06	.32	-.02	.84				
	<b>T1 Scholastic Efficacy</b>	<b>.30</b>	<b>.11</b>	<b>.29</b>	<b>.01</b>				
	T3 Helping	.53	.36	.19	.15				
	T3 Happiness	.21	.17	.15	.22				
	T3 Support	-.05	.26	-.02	.86				
	<b>T3 Mentor Satisfaction</b>	<b>.11</b>	<b>.04</b>	<b>.30</b>	<b>.01</b>				

Outcome	Predictor	B	SE	$\beta$	P	F	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> Change
T3 Education Plans	<b>Gender</b>	1.52	.49	.30	.30	<b>7.81**</b>	<b>.45</b>	<b>.40</b>	<b>.13</b>
	Age	-.01	.19	.00	.97				
	<b>T1 Education Plans</b>	<b>.39</b>	<b>.09</b>	<b>.45</b>	<b>&lt; .001</b>				
	T3 Helping	-.34	.21	-.19	.12				
	<b>T3 Happiness</b>	<b>.21</b>	<b>.10</b>	<b>.23</b>	<b>.03</b>				
	T3 Support	-.01	.15	-.01	.93				
	<b>T3 Mentor Satisfaction</b>	<b>.06</b>	<b>.02</b>	<b>.26</b>	<b>.01</b>				
T3 Grade Scores	Gender	-.19	.55	-.03	.74	<b>6.43**</b>	<b>.41</b>	<b>.34</b>	<b>.14</b>
	Age	-.30	.21	-.14	.16				
	<b>T1 Grade Scores</b>	<b>.40</b>	<b>.09</b>	<b>.44</b>	<b>&lt; .001</b>				
	T3 Helping	.27	.24	.14	.27				
	T3 Happiness	-.03	.11	-.03	.82				
	T3 Support	.26	.17	.17	.13				
	<b>T3 Mentor Satisfaction</b>	<b>.06</b>	<b>.03</b>	<b>.22</b>	<b>.03</b>				
T3 Misconduct	Gender	.55	.70	.08	.44	<b>4.71**</b>	<b>.33</b>	<b>.26</b>	<b>.05</b>
	Age	.42	.28	.16	.14				
	<b>T1 Misconduct</b>	<b>.55</b>	<b>.12</b>	<b>.50</b>	<b>&lt; .001</b>				
	T3 Helping	.51	.31	.22	.10				
	T3 Happiness	-.24	.14	-.20	.10				
	T3 Support	.00	.22	.00	.99				
	T3 Mentor Satisfaction	.00	.03	-.02	.89				
T3 Parental Trust	Gender	.18	.43	.04	.68	<b>7.35**</b>	<b>.44</b>	<b>.38</b>	<b>.05</b>
	Age	-.30	.17	-.17	.10				
	<b>T1 Parental Trust</b>	<b>.53</b>	<b>.09</b>	<b>.59</b>	<b>&lt; .001</b>				
	T3 Helping	-.31	.20	-.19	.12				
	<b>T3 Happiness</b>	<b>.19</b>	<b>.09</b>	<b>.23</b>	<b>.04</b>				
	T3 Support	.17	.14	.14	.23				
	T3 Mentor Satisfaction	.00	.02	.00	.96				

<b>Outcome</b>	<b>Predictor</b>								<b>R<sup>2</sup> Change</b>
<b>T3 Social Support: Friends</b>	Gender	.07	.36	.02	.84	<i>1.47</i>	<i>.14</i>	<i>.04</i>	<i>.09</i>
	Age	.07	.14	.06	.62				
	T1 Social Support: Friends	.18	.11	.21	.11				
	T3 Helping	.07	.16	.07	.66				
	T3 Happiness	.06	.07	.12	.39				
	T3 Support	.15	.11	.19	.19				
	T3 Mentor Satisfaction	.00	.02	.03	.83				
<b>T3 Social Support: Parents</b>	Gender	-.41	.29	-.13	.16	<i>12.25**</i>	<i>.47</i>	<i>.42</i>	<i>.06</i>
	Age	-.23	.12	-.19	.06				
	<b>T1 Social Support: Parents</b>	<b>.47</b>	<b>.08</b>	<b>.53</b>	<b>&lt; .001</b>				
	T3 Helping	-.10	.13	-.09	.46				
	T3 Happiness	.11	.06	.20	.06				
	T3 Support	.14	.09	.16	.14				
	T3 Mentor Satisfaction	.01	.01	.04	.70				
<b>T3 Social Support: Siblings</b>	Gender	.30	.42	.08	.48	<i>4.39**</i>	<i>.32</i>	<i>.26</i>	<i>.03</i>
	Age	-.10	.17	-.06	.58				
	<b>T1 Social Support: Siblings</b>	<b>.42</b>	<b>.09</b>	<b>.51</b>	<b>&lt; .001</b>				
	T3 Helping	-.11	.19	-.08	.57				
	T3 Happiness	.12	.09	.16	.17				
	T3 Support	.13	.14	.12	.35				
	T3 Mentor Satisfaction	.002	.02	.01	.94				
<b>T3 Social Support: Adults</b>	Gender	-.02	.41	-.01	.96	<i>9.10**</i>	<i>.49</i>	<i>.44</i>	<i>.14</i>
	<b>Age</b>	<b>-.55</b>	<b>.17</b>	<b>-.30</b>	<b>.002</b>				
	<b>T1 Social Support: Adults</b>	<b>.25</b>	<b>.09</b>	<b>.28</b>	<b>.01</b>				
	T3 Helping	.07	.19	.04	.72				
	T3 Happiness	-.02	.09	-.02	.82				
	<b>T3 Support</b>	<b>.46</b>	<b>.14</b>	<b>.37</b>	<b>.002</b>				
	T3 Mentor Satisfaction	.01	.02	.06	.50				

#### ***Time 4***

Similarly, at time 4, after controlling for baseline outcome responses, gender, and age, a number of significant predictor effects were also observed for the majority of developmental outcomes assessed. However, non-significant models were observed for the Social support: Friends, Social Support: Siblings and Social Support: Adults outcome measures. An overview of all Time 4 model results is provided in Table 6. In relation to the control variables, results revealed no significant age or gender effects at Time 4, however, baseline (Time 1) outcome scores were found to be significantly associated with the majority of Time 4 outcome measures, apart from the Social support: Friends and Social Support: Adults outcomes ( $p_s > .05$ ).

In particular, youth's perceptions of mentor helping at time 4 were positively associated with their Time 4 reports of hope ( $\beta = 0.37, p = 0.03$ ) and school liking ( $\beta = 0.46, p = 0.01$ ). Youths' happiness with their mentor also appeared to be positively associated with youth reports of social acceptance ( $\beta = 0.36, p = 0.01$ ), parental trust ( $\beta = 0.33, p = 0.02$ ), and perceived parental support ( $\beta = 0.26, p = 0.04$ ) at time 4. Furthermore, mentor's reports of match satisfaction were significantly and positively linked to youths' reports of scholastic efficacy ( $\beta = 0.34, p = 0.02$ ), education plans ( $\beta = 0.26, p = 0.04$ ), school liking ( $\beta = 0.43, p < 0.001$ ), and sibling support ( $\beta = 0.31, p = 0.04$ ). However, mentor support did not appear to be associated with any youth outcome at time 4. Standardised and unstandardized estimates, standard errors and alpha levels for all Time 4 associations are displayed in Table 6.

Table 6 Model Results, Standardised &amp; Unstandardized Estimates and Standard Error for all Time 4 outcomes.

Outcome	Predictor	B	SE	$\beta$	P	F	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> Change
T4 Hope	Gender	-.60	.70	-.10	.40	5.67**	.52	.43	.09
	Age	.06	.30	.03	.83				
	<b>T1 Hope</b>	<b>.54</b>	<b>.11</b>	<b>.62</b>	<b>&lt; .001</b>				
	<b>T4 Helping</b>	<b>.92</b>	<b>.42</b>	<b>.37</b>	<b>.03</b>				
	T4 Happiness	-.03	.10	-.04	.80				
	T4 Support	-.22	.31	-.11	.48				
	T4 Mentor Satisfaction	.02	.03	.09	.46				
T4 School Liking	Gender	.12	.62	.02	.85	4.91*	.48	.38	.23
	Age	-.13	.24	-.07	.58				
	<b>T1 School Liking</b>	<b>.36</b>	<b>.13</b>	<b>.38</b>	<b>.01</b>				
	<b>T4 Helping</b>	<b>.94</b>	<b>.36</b>	<b>.46</b>	<b>.01</b>				
	T4 Happiness	-.09	.08	-.16	.27				
	T4 Support	-.52	.26	-.33	.05				
	<b>T4 Mentor Satisfaction</b>	<b>.08</b>	<b>.02</b>	<b>.43</b>	<b>&lt; .001</b>				
T4 Social Acceptance	Gender	.71	.83	.09	.40	8.17**	.61	.53	.11
	Age	-.29	.33	-.10	.39				
	<b>T1 Social Acceptance</b>	<b>.64</b>	<b>.10</b>	<b>.70</b>	<b>&lt; .001</b>				
	T4 Helping	-.09	.51	-.03	.86				
	<b>T4 Happiness</b>	<b>.33</b>	<b>.11</b>	<b>.36</b>	<b>.01</b>				
	T4 Support	.02	.37	.01	.96				
	T4 Mentor Satisfaction	.00	.03	-.01	.91				
T4 Scholastic Efficacy	Gender	.97	.93	.14	.30	3.54*	.40	.29	.15
	Age	.10	.37	.04	.79				
	<b>T1 Scholastic Efficacy</b>	<b>.42</b>	<b>.13</b>	<b>.43</b>	<b>&lt; .001</b>				
	T4 Helping	.33	.55	.11	.55				
	T4 Happiness	.15	.13	.18	.24				
	T4 Support	-.02	.40	-.01	.96				
	<b>T4 Mentor Satisfaction</b>	<b>.09</b>	<b>.04</b>	<b>.34</b>	<b>.02</b>				

Outcome	Predictor	B	SE	$\beta$	P	F	R <sup>2</sup>	$\Delta R^2$	R <sup>2</sup> Change
T4 Education Plans	Gender	.34	.70	.06	.63	4.87*	.48	.38	.08
	Age	-.07	.26	-.03	.79				
	<b>T1 Education Plans</b>	<b>.49</b>	<b>.12</b>	<b>.58</b>	<b>&lt; .001</b>				
	T4 Helping	.54	.39	.24	.18				
	T4 Happiness	-.03	.09	-.05	.71				
	T4 Support	-.29	.29	-.16	.34				
	<b>T4 Mentor Satisfaction</b>	<b>.06</b>	<b>.03</b>	<b>.26</b>	<b>.04</b>				
T4 Grade Scores	Gender	-.16	.88	-.03	.86	2.58*	.33	.20	.08
	Age	.32	.34	.14	.35				
	<b>T1 Grade Scores</b>	<b>.41</b>	<b>.14</b>	<b>.43</b>	<b>.01</b>				
	T4 Helping	.76	.51	.30	.15				
	T4 Happiness	-.16	.12	-.22	.19				
	T4 Support	-.04	.37	-.02	.91				
	T4 Mentor Satisfaction	.03	.04	.12	.41				
T4 Misconduct	Gender	-.04	.06	-.01	.97	3.70*	.41	.30	.09
	Age	.50	.45	.16	.27				
	<b>T1 Misconduct</b>	<b>.72</b>	<b>.18</b>	<b>.61</b>	<b>&lt; .001</b>				
	T4 Helping	-.87	.63	-.26	.17				
	T4 Happiness	-.09	.14	-.10	.53				
	T4 Support	.93	.48	.35	.06				
	T4 Mentor Satisfaction	.02	.04	.06	.65				
T4 Parental Trust	Gender	-.59	.64	-.11	.36	5.81**	.52	.43	.11
	Age	-.45	.26	-.22	.09				
	<b>T1 Parental Trust</b>	<b>.55</b>	<b>.13</b>	<b>.56</b>	<b>&lt; .001</b>				
	T4 Helping	-.41	.38	-.18	.28				
	<b>T4 Happiness</b>	<b>.21</b>	<b>.09</b>	<b>.33</b>	<b>.02</b>				
	T4 Support	.44	.27	.25	.12				
	T4 Mentor Satisfaction	-.01	.03	-.03	.78				

<b>Outcome</b>	<b>Predictor</b>	<b>B</b>	<b>SE</b>	<b><math>\beta</math></b>	<b>P</b>	<b>F</b>	<b>R<sup>2</sup></b>	<b><math>\Delta R^2</math></b>	<b>R<sup>2</sup> Change</b>
<b>T4 Social Support: Friends</b>	Gender	.48	.33	.23	.15	<i>1.23</i>	<i>.19</i>	<i>.04</i>	<i>.04</i>
	Age	.04	.13	.04	.79				
	T1 Social Support: Friends	.18	.10	.29	.08				
	T4 Helping	-.09	.20	-.10	.64				
	T4 Happiness	-.01	.05	-.03	.85				
	T4 Support	.13	.14	.18	.38				
	T4 Mentor Satisfaction	.01	.01	.11	.49				
<b>T4 Social Support: Parents</b>	Gender	-.48	.43	-.12	.27	<b>8.06**</b>	<b>.60</b>	<b>.53</b>	<b>.10</b>
	Age	-.15	.18	-.10	.41				
	<b>T1 Social Support: Parents</b>	<b>.61</b>	<b>.11</b>	<b>.64</b>	<b>&lt; .001</b>				
	T4 Helping	-.01	.25	-.01	.96				
	<b>T4 Happiness</b>	<b>.12</b>	<b>.06</b>	<b>.26</b>	<b>.04</b>				
	T4 Support	.22	.18	.17	.24				
	T4 Mentor Satisfaction	.02	.02	.10	.38				
<b>T4 Social Support: Siblings</b>	Gender	-.18	.83	-.03	.83	<i>2.24</i>	<i>.30</i>	<i>.17</i>	<i>.11</i>
	Age	-.08	.36	-.04	.82				
	<b>T1 Social Support: Siblings</b>	<b>.49</b>	<b>.17</b>	<b>.46</b>	<b>.01</b>				
	T4 Helping	.46	.50	.19	.36				
	T4 Happiness	-.01	.12	-.01	.97				
	T4 Support	-.05	.37	-.03	.90				
	<b>T4 Mentor Satisfaction</b>	<b>.07</b>	<b>.03</b>	<b>.31</b>	<b>.04</b>				
<b>T4 Social Support: Adults</b>	Gender	-.45	.58	-.12	.44	<i>.72</i>	<i>.12</i>	<i>.05</i>	<i>.12</i>
	Age	-.02	.24	-.02	.92				
	T1 Social Support: Adults	-.02	.13	-.02	.90				
	T4 Helping	.30	.35	.20	.39				
	T4 Happiness	.00	.08	-.01	.96				
	T4 Support	.22	.25	.18	.40				
	T4 Mentor Satisfaction	.01	.02	.05	.75				

#### 4. Discussion

The aim of this research was to explore youth and mentor's satisfaction with their BBBS mentoring relationship, over the course of two years, and to examine whether match satisfaction was positively associated with youth outcomes over this time. From this investigation, a number of important findings emerged to suggest that not only are both youth and mentor's satisfaction with their mentoring relationship directly associated with youths' developmental outcomes, but that different aspects of these mentoring dynamics may have different impacts on youth outcomes. For example, youth's match happiness was found to be significantly, positively associated with youth's perceptions of parental trust at all three time points, whereas youth's perceptions of mentor support were associated with higher levels of perceived social support from adults at both Time 2 and Time 3, while mentor's match satisfaction appeared to be positively linked to youth's educational outcomes (School Liking, Scholastic Efficacy, Education Plans) at Time 3 and Time 4. Further evidence appeared to suggest that youth and mentor's match satisfaction did not change significantly over time and that gender and age had a minimal impact on the outcome measures. Overall, findings have several notable implications for both research and practice, which warrant further discussion.

One major finding emerging from the current research is the apparent connection between match satisfaction and youth outcomes. In particular, youth perceptions of support, helping, and happiness with/from their mentor, as well as mentors' levels of match satisfaction, were generally associated with more favourable youth outcomes, providing some support for the proposed research hypothesis. Crucially, Beta values were found to range from 0.21 to 0.48, suggesting that a moderate-to-strong relationship exists between these four indicators of match satisfaction and youths' developmental outcomes. These findings echo those reported in previous research studies (Eby et al., 2013; Larose et al., 2015), providing further evidence to suggest that the success of mentoring programmes, such as BBBS, may be linked to the 'quality' of the mentor-mentee relationship which develops. Hence, it is argued that both researchers and practitioners may benefit from giving greater attention to both youth *and* mentors' perceptions of the mentoring quality and further exploring what factors impact youth/mentor's levels of match satisfaction (Martin & Sifers, 2012; McQuillan et al., 2015; Rhodes & DuBois, 2008).

Nonetheless, some notable discrepancies were observed in the relationship between individual youth outcomes and these four predictors of match satisfaction. First, it is



important to acknowledge that while match satisfaction was ‘typically’ associated with positive youth outcomes, over time, no significant associations were found between either youth or mentor satisfaction and a number of developmental outcomes. Specifically, although youth perceptions of support, helping, happiness, and mentor satisfaction were positively associated with youth’s academic outcomes (e.g., school liking, scholastic efficacy, grades scores, education plans), social outcomes (e.g., social acceptance, parental trust, social support from parents, siblings, and other adults), and emotional outcomes (e.g. hope), no indicator of youth-mentor match satisfaction was associated with either youth engagement in risky behaviour (e.g., misconduct) or their perceptions of friend social support, at any time point. Hence, the current research may provide evidence to suggest that while there is a connection between match satisfaction and programme success, youth and mentor’s perceived satisfaction with the mentoring relationship may only be linked to positive youth outcomes within certain developmental domains (e.g., social support and acceptance, parental trust, agency, education, etc). However, this relationship warrants further investigation, as it may have important implications for practitioners working with youth in other community based mentoring programmes.

Additionally, one negative relationship was observed in the current research, where greater youth match happiness appeared to be associated with lower school liking at 18 months (Time 3). Although this relationship was not found consistently over time, it is inconsistent with the pattern of relationships typically reported in the literature (Eby et al., 2013; Herrera et al., 2011) – yet there are some possible explanations for why this negative trend occurred. For instance, research suggests that mentors frequently act as ‘connectors’ – often helping young people to strengthen their social networks and build positive social relationships with others (Munson et al., 2010; Renick Thomson & Zand, 2010; Rhodes et al., 2006; Spencer, 2006). Thus, one possible explanation for the current findings is that youths who experienced growth in their social relationships with others displayed greater happiness with their mentoring relationships, and their subsequent change in school liking may reflect their adoption of the social values of their new social group or peers. Although this argument remains speculative, an established body of research provides evidence to suggest that youths do adopt similar attitudes to those endorsed by their peer or friendship groups (Aboud, 2005; Rutland et al., 2010). Nevertheless, what is clear from these research findings is that there is a need for researchers and practitioners to explore the youth–mentor relationship in more detail, in order to gain a greater understanding about the specific dynamics (e.g., perceived

benefits of relationship, expectations of mentoring, style of mentoring, type of support) that may moderate youths' perceived happiness with their mentoring relationship over time (Kupersmidt et al., 2017; Raposa et al., 2017; Sánchez et al., 2008).

Another noteworthy finding from the current study is that although youths' perceptions of support, helping, happiness, and mentor satisfaction were significantly associated with a number of youth outcomes, each of these indicators appeared to be related to different outcomes. For example, youths' perceptions of mentor support were positively linked with their perceived social acceptance and support from other adults at time 2, but at time 3 the link with social acceptance was no longer significant, and by time 4 perceived mentor support was not significantly related to any outcome. Thus, the current results provide evidence to suggest that although youths may benefit from feeling supported by their mentor, these benefits may be limited to the areas of social support and acceptance. On the other hand, higher levels of youth happiness with the mentoring relationship was consistently associated with greater levels of parental trust, across all three time points, suggesting that youth match happiness may have a more significant connection with youths' parental relationships. In addition, while mentor satisfaction was not found to be associated with any outcomes at time 2, at both time 3 and 4 this indicator appeared to be closely connected to youths' academic outcomes, in that higher levels of mentor satisfaction were consistently linked with greater school liking, education plans, and scholastic efficacy at both 18 months and 24 months. Thus, the current research appears to provide preliminary evidence that different mentoring dynamics may be associated with different outcomes for young people (see Larose et al., 2010; Keller & Pryce, 2012). Nonetheless, greater research in this area is needed in order to explore this proposed trend further.

Furthermore, it is also important to comment on the relationship which emerged between youth's perceptions of mentor's helping levels and their developmental outcomes. In particular, while perceptions of mentor helpfulness were found to be positively related to youth outcomes over time, these perceptions were significantly associated with *different* developmental outcomes at each time point. Specifically, greater mentor helping was associated with higher grade scores at 12 months (time 2), increased social acceptance at 18 months (time 3) and greater perceived agency and school liking at 24 months (time 4). Although these results may suggest that mentor helping has an inconsistent (though positive) relationship with youth development, it is also possible that the link between mentor helping

and youth outcomes may depend on the nature of the help provided (Rhodes, 2005). Findings from other research suggest that mentors may help their mentees to cope with negative experiences by providing guidance or counsel on how to deal with specific issues or problems (Karcher, 2005; Sánchez et al., 2008). Thus, this observed link between mentor helping and improved school liking, hope, grade scores, and social acceptance may be evident due to mentors providing greater, more tangible support on these specific issues.

Finally, it is important to briefly comment on the impact that youth age and gender appeared to have on youths' developmental outcomes. Notably, gender was not found to be significantly associated with any of the twelve developmental outcomes assessed in the current research. However, age was found to be negatively associated with a small number of youth outcomes (e.g., misconduct, parental trust, and perceived social support from parents & other adults) at time 2 or time 3. While a major advantage of the current analytical approach is that it controls for the effect of these demographic characteristics on youth outcomes, it is possible that other individual differences, not measured here, may also impact youths' developmental outcomes. Greater knowledge about how other individual differences (e.g., cultural norms, ethnicity, motivations for joining programme) may influence mentoring relationships or youth outcomes is necessary in order to help researchers and practitioners develop programmes and promote positive youth–mentor relationships that benefit young people from *all* different backgrounds (Allen et al., 2017; Darling et al., 2006; Zhou et al., 2018).

### **Key Recommendations & Considerations**

By assessing the link between youth-mentor match satisfaction and youth developmental outcomes this research provides several benefits for both research and practice in the youth mentoring area. For example, although other research has examined the role that mentor *or* youth match satisfaction/perceived relationship quality may play in impacting programme outcomes, relatively little research has examined how both youth *and* mentor match satisfaction may impact community based mentoring programmes, such as BBBS, over time (see Martin & Sifers, 2012; Rhodes et al., 2017). Notably, findings from the current research also indicated that youth and mentor perspectives appear to be associated with different developmental outcomes. Thus, this research is important as it provides new insight into the connection between youth-mentor match satisfaction and youth outcomes - insight which may be key to promoting greater programme success and enhancing the beneficial

effects associated with mentoring programmes for young people (Larose et al., 2010; Nakkula & Harris, 2013).

In addition, findings from the current research also revealed that mentors' match satisfaction appears to be (typically) unrelated to youths' perceptions of match satisfaction. Crucially, however, this research did not examine what contributed to youth or mentor's satisfaction within their mentor relationship. Although a variety of research suggests that several factors, such as frequency or consistency of contact between mentors-mentees or level of ongoing programme support, may impact youths' and mentors' perceptions of relationship quality or match satisfaction (Martin & Sifers, 2012; Larose et al., 2015; Zhou et al., 2018), further research is needed to establish not only *how* mentoring works but also *why* it works. Specifically, future research may benefit from determining what factors increase both youth and mentor's match satisfaction and help young people and mentors establish lasting, quality relationships.

Furthermore, findings from this research suggests that both youths and mentors reported high levels of match satisfaction over the course of their participation in the BBBS programme. This is a significant finding given that relationship quality/satisfaction is often considered an important hallmark of programme success (Allen et al., 2006), and, thus, provides further evidence in support of the efficacy of the BBBS mentoring programme. However, it is important to acknowledge that the current study only reflects youths' and mentors' reports on a small number of indicators of match satisfaction (e.g. support, happiness, helping). It is crucial that researchers and practitioners recognise that there may be other important indicators of mentoring satisfaction/quality (see Erdem et al., 2016; Van Dam et al., 2018). Although this study represents a key preliminary step in identifying how specific indicators of match satisfaction benefit or hinder youth development, greater understanding about how other mentoring dynamics impact youth outcomes is still warranted. An important objective for future research and practice is to explore how mentors and youths' perceptions of other aspects of relational and instrumental support or quality evolve throughout their involvement in youth mentoring programmes, and to examine how these different quality indicators impact youth outcomes over time.

### **Limitations**

There are a number of limitations associated with the current study which should be noted. First, it is important to acknowledge that due to the secondary analytic nature of this research, participants consist entirely of young people who had participated in a BBBS programme, as match satisfaction was not assessed with the non-mentored group (see Dolan et al., 2011). Although the longitudinal nature of the study data is a major strength, the validity of these findings may be limited by the lack of a comparison group and the resultant small sample size ( $N = 76$ ). Thus, the current research reflects findings from young people who participated in an established and structured formal, community-based youth mentoring programme, and as such, findings may not translate to other non-community-based settings or to non-formal mentoring relationships. Furthermore, due to the observational nature of the analyses it is not possible to make any inferences about the causal nature of the associations reported here. Moreover, although results from the Harman's Single Factor Test suggested that common method bias was not an issue in the current research, it should be acknowledged that this technique has recognised limitations (Chang et al., 2010) and future research may benefit from employing more rigorous checks or collecting data from different sources. Additionally, while the current results provide new insights into the literature it is possible that the volume of comparisons conducted may have resulted in some spurious associations. Future research would benefit from addressing these limitations and recruiting larger sample sizes or employing more sophisticated forms of analyses, such as latent growth modelling (McArdle & Hamagami, 1992). Future research should also strive to further expand the findings of this research by assessing how match satisfaction may mediate or moderate programme effects.

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