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# Exploring Relational & Goal-Directed Interactions in Community-Based Mentor Relationships

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EXPLORING RELATIONAL & GOAL-DIRECTED INTERACTIONS IN  
COMMUNITY-BASED MENTOR RELATIONSHIPS

by

KANDI FELMET

Under the Direction of Gabriel Kuperminc, PhD

ABSTRACT

Research suggests that the specific types of match interactions play a significant role in the development of mentor relationships, but these studies have been largely correlational. This study systematically examines relational and goal-directed interactions to better understand how these interactions contribute to high quality, long-term mentor relationships using the Theoretically Evolving Activities in Mentoring (TEAM) framework. The sample included 223 matches from a southeastern Big Brothers Big Sisters (BBBS) community-based mentoring program in which mentors provided self-report data across multiple time points during the first 6 months of the relationship. Results support that relational interactions occurring early in the match have a stronger association with match persistence, whereas problem-focused, take on

added importance as the match becomes established. Further, results suggest that mentor characteristics may be more important than mentee characteristics in determining match interactions and changes in these interactions over time. This study enriches the mentoring literature by providing empirical support for the three dimensions of the TEAM framework. The findings are discussed in terms of relevant implications for research, theory and practice.

INDEX WORDS: Mentoring, Mentor, Match interactions, Match persistence, Mentoring relationship, Relational, Goal-directed, Community-based, Youth development

EXPLORING RELATIONAL & GOAL-DIRECTED INTERACTIONS IN  
COMMUNITY-BASED MENTOR RELATIONSHIPS

by

KANDI FELMET

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2015

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EXPLORING RELATIONAL & GOAL-DIRECTED INTERACTIONS IN  
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## **DEDICATION**

I dedicate this dissertation to my family and friends who have offered encouragement, support, and love throughout this process. Specifically, I dedicate this to my sisters who have always been the most inspirational, compassionate, loving and reliable mentors. I could not have done this without you.

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## 1 INTRODUCTION

Mentoring is a widely used intervention strategy to promote positive youth development, and research shows that high quality mentoring positively influences various aspects of youth development including behavioral, social, emotional, and academic domains (Dubois, Portillo, Rhodes, Silverthorn, & Valentine, 2011). However, the specific factors that contribute to successful, high quality mentoring relationships remain unclear. Research consistently demonstrates the difficulty and importance of establishing and maintaining quality mentoring matches over time to achieve positive youth outcomes (Grossman & Rhodes, 2002; Karcher, 2006). The first 6 months of matches in community-based mentoring programs like Big Brothers Big Sisters may represent a “critical period” for establishing the potential for making a positive difference in a child’s life. Indeed, matches that last less than 6 months can actually be harmful to the mentee, leading to feelings of abandonment and negative emotional, behavioral, and academic outcomes (Grossman & Rhodes, 2002; Herrera, Grossman, Kauh, Feldman, & McMaken, 2007).

Both quantitative and qualitative research has examined factors that influence match quality and sustainability, including individual and contextual programmatic factors. While quantitative research has generally focused on static characteristics of matches such as demographic characteristics of mentors and mentees, qualitative research has explored the dynamic relational processes such as authenticity, empathy, collaboration, and companionship that underlie match relationships. Generally, the literature suggests that developmentally appropriate, collaborative, youth driven relationships, are best for promoting positive youth development (Li & Julian, 2012; Morrow & Styles, 1995; Hamilton & Hamilton, 1992). However, the dynamic processes underlying successful matches remain a critical, yet

understudied aspect of mentoring. The goal of this study is to explore how relational and goal-directed interactions unfold over the first 6 months of mentoring relationships, and examine how these interactions contribute to the quality of and likelihood of developing long-term matches.

### **1.1 Differentiating Mentoring Styles and Interactions**

Researchers have used inconsistent terminology to categorize mentoring interactions and styles. Interactions, specific mentor-mentee activities and discussions, reflect the focus and purpose of mentoring meetings and are essential components of mentoring styles. However, the types of interactions alone are not sufficient to differentiate mentoring styles.

Relationship styles are differentiated by the particular pattern of interactions that develop over time throughout the relationship (Karcher & Nakkula, 2010). Karcher and Nakkula (2010) have proposed that two predominant mentoring styles are most effective in promoting successful relationships and positive youth outcomes. One style, *developmental*, is characterized by an initial emphasis on developing friendship and rapport prior to focusing on goals for youth improvement (Morrow & Styles, 1995). Morrow and styles were careful to differentiate goal-directed interactions that guided matches after the children brought their problems to their mentors for help from prescriptive interactions in which the mentors focused on their own beliefs about the problems and misbehaviors children needed to correct or the things the mentee should do to be more successful in life. This latter problem-focused approach was called prescriptive—one in which the mentor prescribes what the child needs to do (like a doctor prescribes what medicine a patient needs to get better).

The other important relationship style in the literature is one that emphasizes goal-directed interactions, at least at first, yet is not prescriptive. This style, what Hamilton and

Hamilton called *instrumental*, is characterized by an initial focus on goals, but ones that the youth brings to the relationship, as the Hamilton's work was with adolescents involved in apprenticeship programs. The adults working with youth apprentices had to job of helping youth develop skills the youth wanted, and the Hamiltons suggested these relationships became not just instrumental but also a form of mentoring when a friendship developed subsequent to their work on skills development. This was often characterized by the mentor and youth (they called protégé) integrating relational, playful interactions into their relationship over time (Hamilton & Hamilton, 1992).

Critical is that both the developmental and instrumental styles are youth-centered (i.e., somewhat youth directed), collaborative, and involve a combination of relational and goal-oriented interactions. Collaborative was viewed by Morrow and Styles as well as Hamilton and Hamilton as a characteristic of relationships in which both youth and adult brought something unique to the relationship and they both had considerable say in what happens during their time together, what has been called in the youth development literature as the youth having “voice and choice.”

That third mentoring approach described by Morrow and Styles, in which mentors are prescriptive, is goal-oriented and highly structured but it lacks youth voice and choice. As such, it tends to reflect the adult prescribing for the child what adult, in general, want the child to do differently or be like. For example, a mentor who enters a relationship and immediately starts to focus on things the child is failing at—e.g., grades, absenteeism, and misbehavior—and who has not been “invited” by the youth to discuss these problems or requested assistance typically is using the mentoring relationship to do what he or she wants—what he or she thinks the kid needs.

In the literature, prescriptive has often been confused with the instrumental style, but it is clearly distinct in that the prescriptive approach is not youth-centered and does not involve relationally focused interactions (e.g., casual conversations and play). The prescriptive style typically focuses on changing the mentee's problems and is considered to be a particularly ineffective mentoring style (Karcher & Nakkula, 2010; Morrow & Styles, 1995).

The importance of studying the influence of problem-focused interactions in mentoring relationships has become even greater in the recent rise in the number of goal-directed, often curriculum-based, mentoring programs. In these, a relationship is admittedly necessary, but often mentors can place too much emphasis on curriculum tasks and less on relationship development. Beyond the use of a given curriculum, a mentor may continue to emphasize problems facing the youth, which can further decrease the frequency of relationship-developing interactions. This may explain why the prescriptive mentoring style has regularly been associated with ineffective mentoring outcomes, from poor relationship quality to a lack of change in the mentee's behavior or academic performance.

Thus, an initial step to understanding how mentoring interactions and relationship styles contribute to short-term changes and long-term outcomes of youth mentoring, particularly in structured versus unstructured mentoring programs, is to examine the role of relational and goal-directed interactions, specifically those that are problem-focused in the growth of relationships, especially during the crucial first period when relationships begin to become established.

It is clear that clarity in terminology is critical to the success of such research just as it is very much needed in the practice of youth mentoring (e.g., training of mentors) in general. In this dissertation I use the term "relational" to describe specific *interactions* that promote relationship building, and the term "problem-focused" to reflect *interactions* that are goal-directed, but are

meant to serve specific objectives or development of skills that are typically of most pressing interest to adults, such as academic success and prosocial behaviors. That is, problem-focused interactions serve the purpose of achieving specific socially sanctioned goals that do not necessarily reflect the mentee's preference. This research examines these types of match interactions over time in order to investigate the association between interactions and match persistence, which is critical to advancing our understanding of the broader styles of mentoring.

## **1.2 Match Characteristics**

The mentoring literature discusses numerous characteristics of high quality matches. Through semi-structured interview techniques, qualitative researchers have found relational processes to be critical to the development and persistence of mentor relationships. For example, Spencer (2006) identified relational factors such as mentors' efforts to model authenticity, empathy, collaboration, and companionship as critical to developing close connections and sustaining matches with their mentees. Other factors that have been examined qualitatively include mentors' goals and expectations for the relationship, mentoring style, mentor-mentee interactions, and quality of relationship (Pryce, 2012; Spencer, 2006). Because individual and programmatic differences impact the style and quality of mentoring relationships, understanding the development of relational, collaborative goal-directed, and problem-focused prescriptive processes is critical to identifying the conditions under which mentoring can be most effective.

Quantitative studies provide empirical evidence for the influence of individual-level factors like demographic and personality characteristics, as well as contextual factors such as program policies, staff, and parents, in sustaining mentoring relationships (Rhodes, 2005; Keller, 2005). A large study of matches in Big Brothers Big Sisters programs found that individual characteristics of mentors and mentees are associated with the quality and duration of mentoring

relationships. For example, Grossman and Rhodes (2002) conducted a quantitative study of 1,138 youth in eight Big Brothers Big Sisters programs to examine predictors and effects of match duration in mentoring relationships. Youth were randomly assigned to treatment or wait-list control groups and followed for 18 months.

In this study by Grossman and Rhodes (2002) several mentor characteristics stood out as important contributors to mentoring outcomes. Mentor income and age were significant predictors of match duration such that mentors with higher income tended to sustain longer mentoring relationships than those with a lower income. Matches that had a mentor who was married and 26-30 years old were at higher risk of early termination than matches with mentors aged 18-25 years. The authors speculated that those who were married or fell into this young adulthood period, in which considerable professional and interpersonal challenges emerge, could be overwhelmed by the demands of mentoring children, especially when the relationships were not going well and these adults needed to take action to reduce stress in their lives.

Some mentee characteristics also were associated with program outcomes. Age emerged as an important mentee characteristic as well, such that older adolescents (13-16) tended to be in matches that terminated earlier than younger adolescents (10-12). Further, mentees with histories of emotional, sexual, or physical abuse tended to terminate earlier. Finally, Grossman and Rhodes noted trends between mentor-mentee demographic factors of gender and race and higher termination rates. Specifically, being female or minority status may be a risk factor for early termination. Notably, this risk appeared to be attenuated in dyads with greater interpersonal alignment or similarity (i.e. matches in which race or interests were used as primary matching criteria).

In addition to the importance of characteristics of the individuals involved, a recent meta-analysis of the effectiveness of youth mentoring programs highlighted the importance of program infrastructure that provides ongoing advice, problem-solving support and training for mentors to attain positive youth outcomes (DuBois et al., 2011). Programs with clear practices for recruitment, screening, matching, training and continued support for mentors tend to produce stronger positive effects on positive youth outcomes than programs without such structure (Bellamy, Springer, Sale, & Espiritu, 2004; Keller 2005; DuBois, Holloway, Valentine, & Cooper, 2002).

In sum, quantitative research in this area has primarily focused on program policies and mentor-mentee individual characteristics, but few scholars have empirically examined the role of processes between mentor-mentee dyads on match sustainability. One exception is Grossman and Rhodes (2002), who found mentees' perceptions of match relationship quality predicted relationship duration; and that more positive relationship quality attenuated the negative effect of mentor marital status on match duration. These findings are relevant in that they suggest that when mentors are more frustrated with the relationship (such as the married adults who may have ended their matches because they were overwhelmed and unable to tolerate the stress) are nevertheless able to persist when they simultaneously or subsequently feel that the relationship is not working even if changes they desired or expected to see result from their mentoring efforts were not being observed. Therefore, understanding the interplay between frustration, relationship quality, and match duration may be related to the nature of the mentoring interactions that occur.

More recently, Karcher and colleagues have built on the influential qualitative work of Morrow and Styles and Hamilton and Hamilton, specifically on the phenomenon of how

mentor's expectation and goals for the youth or the relationship can affect how mentors try to guide mentoring interactions and under what conditions youth and their mentors work together to chart the course of their evolving relationship. Karcher and Nakkula (2010) developed a framework for organizing mentor-mentee interactions and relationship styles to measure of mentoring style quantitatively. Specifically, they operationalized "relational" and "goal-directed" dimensions of mentoring interactions, in terms of the types of activities and discussions in which matches engage. Distinguishing relational and goal-directed interactional patterns has emerged as an important factor associated with distinct outcomes including relationship quality, effective mentoring relationship styles, and youth outcomes (Herrera, DuBois, & Grossman, 2013; Karcher & Nakkula, 2010; Keller & Pryce, 2010;). However, the majority of the work done by Karcher and colleagues on this topic has relied on a mentor-completed checklist of interactions (i.e., conversations or activities) that included relational interactions and mostly problem-focused interactions (e.g., Karcher, Herrera, & Hansen 2010). In addition, to date, research using this framework (and relying on this measure) has been cross-sectional, and has not examined the role of relational and goal-directed interactions on match persistence.

Furthermore, qualitative research of the mentoring process indicates other factors, such as the mentor's level of frustration and expectations, for mentoring may moderate the effects of the focus of interactions on match outcomes (Pryce, 2012; Spencer, 2006). That is to suggest that one way in which it may be evidenced that mentors have problem-focused goals that they are being unsuccessful in achieving with their mentees is when problem-focused interactions are high and mentors frustration with a lack of "progress" is also high. This would reflect two elements of the prescriptive style, both the problem-focus as well as the mentor feeling thwarted or unsuccessful in what he or she thinks needs to be changing in the youth. This is important

because prior research on the TEAM framework assumed that if the focus is problems then it is the mentor's agenda driving the interactions, when in fact, in both the developmental and instrumental styles problem-oriented interactions can occur but are ones that the youth initiates not the mentor. These styles also suggest that is the process of collaboratively working on shared goals that is most important, not amount of success in reducing problems.

Although it is clear that a collaborative and flexible balance between relational and goal-directed interactions is important for match persistence (Karcher, Kuperminc, Portwood, Sipe, & Taylor, 2006; Karcher & Nakkula, 2010), the specifics of what constitutes an optimal balance and how that balance is negotiated between mentor and mentee over time remains unclear. The literature emphasizes the importance of developmentally appropriate relationships in promoting positive youth development (Li & Julian, 2012; Morrow & Styles, 1995; Hamilton & Hamilton, 1992). In such relationships, mentors can focus on building the relationship and engaging in goal-directed activities and do so based on the mentee's interests and preferences (Karcher & Nakkula, 2010). In this way, the most helpful mentoring relationships are "youth-centered," regardless of whether the focus is on relationship development, problem solving, or goal/skill development. Therefore, understanding the degree of youth-centeredness of the mentors approach is another way to differentiate prescriptive from developmentally appropriate and relevant goal-directed and skills development interactions in mentoring.

This study seeks to contribute to the literature by exploring the role of different interaction patterns on match persistence to build an empirically testable model of developmental mentoring. Match interactions (discussions and activities) will be examined in a large sample of established community-based matches that have met for at least 3-months. In the sections that

follow, I review the literature pertaining to match interactions and match persistence to develop operational definitions that can be useful for quantitative research.

### **1.3 Match Interactions**

*“The meeting of two personalities is like the contact of two chemical substances: if there is any reaction, both are transformed.”- C.G. Jung*

To clarify the components of a high quality relationship, Karcher and Nakkula (2010) developed the Theoretically Evolving Activities in Mentoring (TEAM) framework for organizing mentor-mentee interactions (activities and discussions) and relationship styles on 3 dimensions: focus, purpose, and authorship. Focus reflects the target of an interaction across a continuum of relational to goal-directed types of interactions. Either focus can be youth-centeredness or mentor-directed. It also can be program directed, such as when a curriculum is utilized or program staff impose an agenda (Karcher & Hansen, 2011).

Purpose, the second dimension of the TEAM framework, reflects whether an adult or youth-centered agenda is being served primarily by a given interaction. Interactions that serve to achieve a purpose of greatest value to adults and which reflect the conventions of society (e.g., graduate, get a job, raise a family, pay taxes) are typically what adults want for youth in the future. These interactions have the purpose of achieving conventional goals in the future. Conventional interactions are future oriented. Interactions that are social, casual, fun, interactive and creative tend to be more present oriented and reflect the agenda of youth. This is an agenda of enjoying the present, feeling good about oneself and one’s relationship at the present time. Therefore, these interactions are about the present and are more in line with the goals of youth, even though as children move into adolescence, their interest in the future grows considerably, which is why a teen may seek mentoring interactions that serve an adult or conventional purpose.

This is why the purpose cannot be equated with youth centeredness. Sometimes youth want serious, future-oriented, goal-directed and even problem-focused interactions with mentors.

Authorship reflects the degree of collaboration. This third dimension of the TEAM framework defines how the mentor and mentee decide what to do together (e.g. mentor chooses activity, mentee selects activity, or decide together). When a mentor and child (or youth) negotiate what they do together, they typically bring in their respective interests, goals, background experiences, and current concerns and see what they can do that serves them both. This is one reason that youth-centeredness is good predictor of collaboration because, when reported by the mentor, youth-centeredness reflects the mentor's prioritizing the youth's experiences, interests, and needs—validating the youth's perspective and goals, whether those are to focus on having fun or getting something done and whether what they do serves a purpose in the present or the future.

In prior research on the TEAM framework, Karcher and colleagues (2010) have operationalized two types of foci - relational and goal-directed, specifically problem-focused, - in order to examine how the types of interactions are associated with distinct outcomes such as match quality. Specifically, they developed a checklist to classify match interactions on a predominately relational to problem-focused (goal-directed, conventional purpose) continuum. Relational interactions are operationalized as discrete events that reflect a focus on getting to know one another. They tend to serve the youth-specific purpose of building the mentoring relationship in the moment. Indicators of interactions serving a youth-specific purpose of enjoying the present include: playing games, casual conversation about friendships, and engaging in creative activities like art.

Conversely, problem-focused interactions have been viewed as having a goal-directed focus serving an adult-specific or conventional outcome. Examples include helping with homework, discussing career options, working on college applications *when* the youth has not invited or requested to do such things. Unlike interactions with a goal-directed focus or interactions serving an adult-centric (conventional) purpose, operationalized as emphasizing the development of skills or accomplishment of specific socially sanctioned goals.

Rarely do relational, goal-directed, or problem focused interactions persist indefinitely. Those that rigidly stick to just one type of interactions typically become stale (Langhout, Rhodes, & Osborne, 2004; Pryce & Keller, 2010). The interactions that occur in mentoring typically change over time. The most effective mentoring styles include all three (see Karcher & Hansen, 2014). Over time, matches usually engage in varying patterns of relational, goal-directed and problem-focused interactions, and are not necessarily characterized as one or the other. Factor analyses provide strong evidence for the distinction between relational and problem-focused interactions, as well as the importance of mentor-mentee collaboration in deciding activities (Karcher & Nakkula, 2010; Karcher et al., 2010). Karcher & Nakkula (2010) note that both relational and problem-focused interactions may significantly influence relationship quality and persistence in unique ways. In addition, higher relationship quality is associated with matches that have a shared purpose and make decisions regarding interactions collaboratively. To date, Karcher and colleagues' research has been limited to cross-sectional analysis. Thus, this study seeks to expand this literature through a descriptive examination of the patterns of relational and problem-focused interactions as matches develop over the first 6 months of the mentoring relationship.

Because there is little research in this area, it is difficult to predict the specific types of interactions to be expected at various stages of the match relationship. Preliminary evidence suggests that, for children, an early emphasis on relationship building is most appropriate, whereas a goal-directed approach is more appropriate for adolescents initially (Karcher & Nakkula, 2010). In addition, the research by Li and Julian (2012) highlights the importance of an evolving, flexible balance of interactions within each match based on the mentee's needs. Further, evidence in the mentoring field as well as therapeutic counseling (Spencer, 2006; Li & Julian, 2012; Karcher et al., 2010), suggests the importance of a relational focus during the rapport-building phase. Thus, it is expected that matches will exhibit changes in the relative balance between relational and goal-directed interactions at different stages of the mentoring relationship. This study will explore these changes as matches develop and become established during the first few months, and examine mentoring interactions as a predictor of match persistence.

#### **1.4 Match Persistence**

Match persistence has emerged as a key indicator of effective mentoring (Schwartz, Lowe, & Rhodes, 2012). Many studies of school and community-based mentoring programs demonstrate the importance of longer-term mentoring relationships (Deutsch & Spencer, 2009). Youth in longer-term matches tend to experience significantly more positive outcomes such as academic achievement, increased self-worth, and decreased risk behavior than youth in shorter-term relationships (Rhodes & Lowe, 2008; Grossman & Rhodes, 2002; Herrera, Grossman, Kauh, Feldman, & McMaken, 2007). Such differences are thought to emerge over time because the mentor serves as a supportive role model offering corrective interpersonal experiences and attachment for the youth. Data suggest that although youth in matches that last 6-12 months do

not experience negative outcomes, they do not experience the same positive outcomes of youth in matches persisting for a year or longer (Grossman & Rhodes, 2002; Grossman et al. 2012). Moreover, relationships that end prematurely can be detrimental because youth may feel rejected and disappointed (Grossman & Rhodes, 2002; Herrera et al., 2007). Feelings of rejection and disappointment result because community-based mentoring programs typically serve vulnerable youth often from low-income, single parent homes. Evidence from large studies of youth participating in Big Brothers Big Sisters community- and school-based mentoring programs show that youth in relatively short matches (those that terminate within 3-6 months) report significant declines in self worth, academic, and behavioral functioning including increased alcohol use. In contrast, youth in matches that persist one year or more show the most improvements in psychosocial, behavioral and academic outcomes such as increased self worth, perceived scholastic competence, parental relationship quality, and decreased substance use (Grossman & Rhodes, 2002; Grossman et al. 2012; Schwartz et al., 2012). Although higher risk youth may potentially experience greater benefits from a high quality mentor relationship, unfortunately, these vulnerabilities also make them more susceptible to the negative effects if the relationship does not persist. As a result, negative experiences in a match can place such youth at increased risk for emotional and behavioral difficulties such as engaging in substance use, violence, and misconduct. Further, these youth are at greater risk of early termination because various environmental factors contribute to challenges in sustaining the mentoring relationship (Spencer & Basualdo-Delmonico, 2014; Downey et al. 1998). Based on the literature, matches in this study will be classified into the following categories of persistence: 3-6 months, 6-9 months, 9-12 months, and 12 months or longer (Bayer, Grossman, & Dubois, 2015).

## 1.5 Additional Factors

Based on the literature, the integrity of the match is as important as match persistence for youth to experience positive outcomes (Grossman & Rhodes, 2002; Grossman et al. 2012). Because factors related to youth, volunteers, and program characteristics impact match integrity, this study incorporates other factors important to understanding the effects of match interactions on match persistence. In particular, youth characteristics related to poor underlying psychosocial adjustment and maltreatment have been shown to negatively impact match persistence (Grossman & Rhodes, 2002). Grossman and Rhodes warn that early terminations may be a proxy for the “poorer underlying adjustment” of some youth (2002), and encourage future studies to explore this further. Therefore, to isolate the association between match interactions and match persistence, baseline youth victimization and distress levels will be included as covariates in analyses.

Further, based on the TEAM framework, purpose and authorship are critical dimensions of match interactions and likely influence match persistence. As mentioned earlier, purpose reflects whether the mentor or mentee’s interests are being satisfied, and authorship reflects how the mentor and mentee select activities/interactions. Taking the three core dimensions of the TEAM framework and the qualitative research of mentoring processes into consideration, the association between focus (relational or problem-focused) and match persistence may be moderated by various factors associated with purpose and authorship. For example, if the mentor dictates match interactions to fulfill their own goals for the mentee, without considering the mentee’s interests or preferences, such mentor-driven purpose and authorship may undermine the effects of the focus of match interactions. Additionally, mentor expectations reflect one aspect of purpose from the mentor perspective, and may undermine the effects of the focus of match

interactions. For instance, if the mentor expects mentoring to be fun or expects to see changes in their mentee's behavior, academic performance, etc. and these expectations are not fulfilled the mentor will likely feel frustrated with mentoring and/or their mentee. This example illustrates how mentor expectations indicate whether mentors are prioritizing their own agenda. In the context of developmental mentoring, purpose and authorship ideally would be decided together by the mentor and mentee. In some cases, however, mentors' own intentions and expectations for their mentees' behavior, social and emotional development may override those of their mentees. Therefore, this study will examine whether how matches decide how to spend time together (authorship) and whether mentor expectations, one aspect of purpose, in terms of dissatisfaction with the match and frustration with lack of change in their mentee moderate the association between match interactions (focus) and match persistence. While mentor expectations alone do not comprehensively reflect the dimension of purpose, this study's examination of mentor expectations may contribute to understanding purpose and ultimately inform the development of the TEAM framework. Lastly, few studies have focused on the mentors' perspectives and experiences in match relationships (Rhodes, Schwartz, & Wu, 2014). To reduce this gap, this study uses measures designed and validated to assess mentors' perspectives.

In sum, this study will describe the nature of interactions within matches over time, and explore potential moderators of the association between match interactions and match persistence. I will descriptively explore the types of interactions within matches over 2, 4, and 6 months. I will use linear growth curve analyses to explore predictors of different patterns of change in relational and problem-focused interactions over time. Because research regarding match interactions thus far has been cross-sectional, this study will further inform understanding of the mentoring process. Additionally, I will examine the effects of relational and problem-

focused match interactions in predicting match sustainability. Finally, I will examine whether authorship, mentor's expectations (e.g. dissatisfaction with the match, and frustration with lack of change in their mentee) moderate the association between match interactions and match persistence.

## **2 METHOD**

### **2.1 Program Description**

Big Brothers Big Sisters of America (BBBSA), a donor-funded, non-profit organization, has been serving America's youth since 1904. BBBSA serves children ages 6-18 through two types of core programs: community-based and school-based. The mission of BBBSA is "to make a positive difference in the lives of children and youth, primarily through a professionally-supported one-to-one relationship with a caring adult, and to assist them in achieving their highest potential as they grow to become confident, competent and caring individuals" (BBBSA, 2014).

The traditional Community-Based Mentoring program uses best practices to match adults and youth in one-to-one relationships based on "interest and suitability." BBBSA relies on adult volunteers who are willing to commit a year or more of their time to mentor a child. In general, BBBSA requires that matches meet twice per month, but this varies by state agency and individual match relationships. Match activities may include recreational, cultural and educational activities. Additionally, BBBSA agencies provide group activities throughout the year in community settings, to bring mentors and youth together. Finally, BBBSA provides a professional match supervisor and support specialists to each match to monitor relationships and provide assistance as needed ([www.bbbs.org](http://www.bbbs.org)).

Big Brothers Big Sisters of Metro Atlanta (BBBSMA) is the largest one-to-one mentoring organization in the Southeast. BBBSMA serves over 3,390 youth throughout the 12-county metropolitan area in one-to-one relationships. BBBSMA partnered with university researchers at Georgia State University to conduct a randomized controlled trial of the *Mentoring Toward College* (MTC) program relative to the agency's standard community-based mentoring program. MTC includes a specialized curriculum with structured activities and individualized plans for mentors to help mentees achieve academically. This longitudinal program evaluation is currently ongoing and will ultimately include approximately 450 matches.

## **2.2 Sample**

These data were drawn from a larger, ongoing program evaluation. Participants in the larger study were recruited through the standard recruitment guidelines utilized by the BBBSMA agency for the community-based program. Eligible mentees included youth in grades 4 through 8 who are exposed to varying levels of environmental risk (e.g. children of incarcerated parents or high crime neighborhoods), which make up more than 80% of BBBSMA's population served by community-based programs. Mentees were matched with a mentor through established agency procedures based on best practices. Eligible mentors included adults 21 years and older that completed thorough screening procedures as required by BBBSMA, and whose mentee agreed to participate in the study. The agency requires a minimum 12-month commitment from all mentors. Next, the pairs were randomized to either the standard community-based mentoring program typically offered by BBBSMA (standard mentoring group), or the enhanced MTC group (treatment group). MTC consists of the standard community-based mentoring programming with an additional specialized curriculum that emphasizes a structured, educational focus. All matches in both groups received the high quality services (i.e. full screening of

mentors, mentor training and support, ongoing monitoring and support from Match Support Specialists) associated with the standard community-based program.

The unit of analysis in this study was the mentor-mentee pair. The sample included 223 matches. Eligible matches persisted at least 3 months in order to have data to be included in this study. Mentees were in grades 4-9, 52.5% female, 78.5% African American, 41.8% had an incarcerated parent, and 86.1% received free/reduced lunch. Mentors were 21-57 years of age, 53% were female, 56.9% were African American, and 86% had at least a bachelor's degree. See Tables 1 and 2 for complete demographic data.

**Table 1 Youth Characteristics**

Characteristic ( <i>N</i> = 223)	Frequency	Percentage
<u>Gender</u>		
Male	106	47.5
Female	117	52.5
<u>Ethnicity</u>		
Black	175	78.5
Hispanic	29	13.0
Multi-Racial	12	5.4
White	7	3.1
<u>Age</u> ( <i>M</i> = 11, <i>SD</i> = 1.5)		
9 yrs.	23	10.3
10 yrs.	51	22.9
11 yrs.	39	17.5
12 yrs.	54	24.2
13 yrs.	43	19.3
14 yrs.	11	4.9
15 yrs.	2	0.9
<u>Caregiver</u>		
2 Parents	32	14.3
1 Parent Female	174	78
1 Parent Male	5	2.2
Grandparent(s)	9	4
Other Relative/Non-Relative	3	1.3
<u>Income</u>		
Less than \$10,000	67	32.5
\$10,000-\$24,999	71	34.5
\$25,000-\$49,999	49	23.9

\$50,000 or more	19	9.3
<u>Family Assistance</u>	139	63.2
<u>Free or Reduced-Price Lunch</u>	192	86.1
<u>Incarcerated Parent</u>	89	41.8

*Note.* Grade level at baseline.

**Table 2 Mentor Characteristics**

Characteristic ( <i>N</i> = 223)	Frequency	Percentage
<u>Gender</u>		
Male	106	47.5
Female	117	52.5
<u>Ethnicity</u>		
Black	123	56.9
Hispanic	9	4.2
Multi-Racial	5	2.3
White	79	36.6
<u>Age</u> ( <i>M</i> = 31, <i>SD</i> = 8.2)		
21-25 yrs.	69	31.0
26-35 yrs.	106	47.4
36-45 yrs.	29	12.8
46-55 yrs.	16	6.9
> 55 yrs.	3	1.3
<u>Marital Status</u>		
Single	162	75.7
Married	43	20.1
Divorced	9	4.2
<u>Education Level</u>		
High School Degree	2	1.0
Some College	26	13.2
Bachelor's Degree	115	58.4
Master's Degree	49	24.9
Juris Doctorate	5	2.5

### 2.3 Procedure

After being matched, BBBSMA agency standards require mentors and mentees to complete several self-report measures to help determine service and match support needs, and to provide a baseline for monitoring the progress of matches over a 12-month period. Mentees completed outcome measures at baseline, 6-months and 12-months in the BBBS offices or over

the telephone. Mentors completed measures of their perceptions of the strength of the relationship at 3- and 12-months, as well as a checklist of discussions and activities every 2 months throughout the study period via telephone or email. The checklists of activities/discussions were the primary focus of the current study.

## **2.4 Measures**

### **2.4.1 Match Persistence**

Match persistence was measured by length of time the match remained active. As discussed previously, only matches that lasted at least 3 months or longer were classified as established and included in this study because relevant data were not collected until the 3-month time point. Based on the literature (Bayer, Grossman, & DuBois, 2015) and Dr. Karcher (personal communication April 15, 2015) matches in this study were categorized into the following categories: 3-6 months, 6-9 months, 9-12 months, and 12 months or longer. Previous research has documented the most detrimental effects result from matches lasting less than 6 months (Grossman & Rhodes, 2002), while the most positive and significant effects emerge in matches persisting 12 months or longer (Grossman & Rhodes, 2002).

### **2.4.2 Match Interactions**

Mentors completed activities checklists every two months to document the type and frequency of interactions (activities and discussions) with their mentees. For example, mentors were asked, "How often do you do each of the following with your little?" and response options included the following items: sports, indoor games, and creative activities. Mentors rated the frequency in which they engaged in each interaction over the past 2 months using a 4-point scale ranging from 0 = *Never* to 4 = *Very Often*. Mentor responses were categorized by type on the

relational- goal-directed continuum using scales that have established reliability and validity (Karcher, Herrera, Hansen, 2010). These scales consisted of a total of 12 items, including 4 activities and 8 discussions reflecting relational or goal-directed focus (See Tables 3 and 4 below and Appendix A for complete measure).

**Table 3 Relational Scale**

Items
Casual Conversation (sports, weekend, holiday plans, events in town, etc.)
Conversation on Social Issues (religion, race, poverty, etc.)
Conversation about Relationships- a) Family; b)Teacher or Employers; c) Friends, Peers, Other Youth; d) Romantic Friend
Listening & Learning (your goals, interests, feelings, etc.)
Played Sports, Athletic Activity, or Outdoor Game
Played Indoor Games (Play cards, board games, computer games)
Creative Activities (Art, read, write a story or song)
Reliability 10 items Cronbach's Alpha = 0.69
<i>Note.</i> Item responses on 4-point scale ranging from 0 = Never- 4 = Very Often.

**Table 4 Problem-Focused Scale**

Items
Academics (Discuss grades, school, testing, etc.)
Behavior (Discuss youth's misbehavior related to problems with peers, teachers, or the courts)
Attendance (Discuss importance of showing up school/work)
Future Talk (Discuss college, jobs, goals, dreams, etc.)
Help with Homework/Tutoring (e.g. Help with homework, reading, or academic computer/library work)
Reliability 7 items Cronbach's Alpha = 0.71
<i>Note.</i> Item responses on 4-point scale ranging from 0 = Never- 4 = Very Often.

### 2.4.3 Proposed Moderators

Three constructs related to the TEAM framework were assessed using items from a standard scale of relational quality collected by Big Brothers Big Sisters agencies. Authorship, mentor dissatisfaction with the match, and mentor frustration with lack of change in their mentee, were measured with 3 items from the Strength of Relationship (SoR) measure (Rhodes, Schwartz, Willis, & Wu, 2014).

The SoR is a self-report measure that BBBS uses with mentors to assess multiple aspects of perceived quality of mentoring relationships. Mentors completed this measure at 3- and 12-months post match, but only 3-month data were used in the current study. Mentors responded to 2 questions that assessed dissatisfaction and frustration with the match. The questions included “I expected that being a mentor would be more fun than it actually is”, and “I sometimes feel frustrated with how few things have changed with my little.” Response options were on a 5-point scale ranging from *1 = Strongly disagree* to *5 = Strongly agree*.

Authorship, as an indicator of how collaboratively decisions about what to do and discuss were made by the pair, was measured with a 3rd item from the SoR, “Which of the following best describes how decisions are usually made about how you and your little will spend your time together.” Response options were as follows: *(1) I usually decide how we’ll spend our time together, (2) My Little usually decides how we’ll spend our time together, (3) I get ideas from my Little then we decide together, (4) The agency case manager outlines how we will spend our time together, or (5) Someone else (like a teacher or parent) decides how we’ll spend our time together*. Responses were grouped based on collaboration such that mentor decides, little decides, agency case manager decides, other decides were all coded 0 for “non-collaborative,” and “I get ideas from my Little and we decide together was coded 1 for “collaborative”.

Mentor expectations, and specifically dissatisfaction with the match and frustration with lack of change in the mentee, reflect only the failure of one dimension of purpose. Although dissatisfaction and frustration are overlapping constructs, they are distinct. Mentor dissatisfaction with the match reflects whether the mentor is enjoying the experience of mentoring broadly in terms of having been able to play as much as expected, while mentor frustration with lack of change in the mentee specifically reflects the mentor’s expectations for the mentee’s behavior

reflects failure to achieve some goal or outcome. These are independent of collaboration (or authorship) in that both aspects of purpose may reflect a mentor's willingness to collaboratively decide with the mentee how to spend time together. Therefore, the interaction between collaborative authorship and mentor dissatisfaction and collaborative authorship and mentor frustration will be examined separately to thoroughly explore these potentially critical underlying processes of match interactions.

#### **2.4.4 *Baseline Individual Characteristics***

All mentor-mentee pairs were same gender matches. Thus, a dichotomous variable for match gender was used (1 = male; 0 = female). Mentors self-reported age, race/ethnicity, gender, and level of education. Mentors identified primarily as Black (57%) or White (37%). Since there was limited variability in mentors that identified as "other" ethnicity (6%), a dichotomous variable was created (1 = White; 0 = other). With respect to levels of educational attainment, 86% of mentors reported earning a bachelor's degree or higher. Thus, a dichotomous variable was created (1 = Bachelor's degree or higher; 0 = Less than bachelor's degree).

Mentees and their parents self-reported mentee age, race/ethnicity, gender, family assistance status, type/number of caregivers in the home, and whether a parent was incarcerated. Due to the potential of emotional and behavioral difficulties associated with single parent homes, other relatives, or non-relatives versus a traditional 2-parent household for minority youth (Wilcox & Marquardt, 2011), a dichotomous variable was created (1 = two-parent household; 0 = single parent/other). Based on Grossman & Rhodes' (2002) recommendations, mentee baseline distress and experience of victimization were measured to account for the potential contribution made by these variables on to relationship between predictor variables and the outcome of match persistence.

Mentee distress was measured using the 12-item distress subscale from the Weinberger Adjustment Inventory (WAI) (Weinberger & Schwartz, 1990). The average of the 12 items indexes overall subjective distress (e.g. “I don’t like myself,” “I often feel sad,”) with response options ranging from *1 = Not at all true* to *4 = Very true*. Weinberger conducted confirmatory factor analyses to validate use of the measure in large clinical and non-clinical populations with individuals reading at or above the fourth-grade level (Weinberger, 1997). It has been shown to be reliable for youth ages 10-17 ( $\alpha = .87$ ) and young adults ages 18- 30 ( $\alpha = .86$ ) (Weinberger, 1997).

Mentees’ experience of victimization was measured at baseline with the Youth Outcomes Survey (YOS) using 5 items from the Youth Risk Behavior Surveillance System (YRBSS; CDC, 2004), which index experiences of theft, violence, and threats of violence in the past 6 months. Response options for these items range from *0 = Never* to *3 = 3 or more times*.

### 3 RESULTS

This study examined how mentor and mentee relational processes contribute to the persistence of mentoring relationships using data from 223 matches enrolled in an ongoing randomized controlled trial of the BBBSMA Program. Because these data were drawn from a larger program evaluation that involves random assignment of pairs to standard mentoring or a specialized program (MTC), group condition was held constant in all analyses. Only established matches lasting at least 3 months were included in analyses to ensure that data from the 3-month SoR and at least one 2-month activity checklist were collected. As a result, 18 matches were excluded from the study due to termination prior to 3 months. Specifically, this study included mentor and mentee demographic data collected at baseline, youth baseline characteristics, data

from the Activities Checklist completed at two, four, and six months post match, and data from the mentor SoR at 3-months post match.

### 3.1 Missing Data

The percentage of missing data in the study variables ranged from 0% to 48%. Overall, missing data were primarily due to failure to collect the data during the appropriate time interval, and secondarily due to attrition (e.g. 6-month Activities Checklist was not available for matches that terminated before 6 months). Therefore, full information maximum likelihood (FIML) fitting was used so that the data available from each participant determined the model-based estimates. Thus, results are based on the sample size of 223 matches with at least one time point of activities checklist data.

The data were analyzed for potential bias due to group assignment using t-tests and chi-square tests on all study variables. The MTC (n = 120) and standard mentoring group (n = 103) groups did not significantly differ on any of the study variables (match persistence, 2-, 4-, 6-month relational and goal-directed interactions; mentor dissatisfaction and frustration), or covariates (match gender; mentee age, ethnicity, living with single parent or 2 parents, family financial assistance, having an incarcerated parent, mentee baseline distress and victimization; mentor age, ethnicity, education level). In addition, the data were analyzed for potential attrition bias by using ANOVA and chi-square tests to compare matches persisting: 3-6 months (n = 39), 6-9 months (n = 22), 9-12 months (n = 17), and 12 months or longer (n = 145) on all study variables. There were no significant differences between match persistence categories on any study variables. There was however, a significant difference between these groups with respect to mentor ethnicity. Matches with white mentors lasted longer on average ( $\chi^2(3, N = 216) = 12.72, p < .01$ ). Thus, mentor ethnicity was included as a covariate in the primary analyses.

### 3.2 Correlations

The means, standard deviations and bivariate correlations of all of the study variables are presented in Table 5. Among study variables, mentor reported problem-focused interactions at 2, 4, and 6-months were positively correlated across the three time points. Additionally, mentor reported *relational* interactions at 2-, 4-, and 6-months were positively correlated across the three time points. Relational interactions also were correlated with problem-focused interactions at corresponding time points.

Focus of interactions was associated with mentors' reports of disappointment and frustration. Reports at three months of mentor dissatisfaction with the match were also positively correlated with mentor frustration regarding lack of change in their mentee. Further, relational interactions were correlated with problem-focused interactions at corresponding time points. Mentor dissatisfaction with the match was positively correlated with mentor frustration regarding lack of change in their mentee. Mentors who reported more dissatisfaction in the match after three months endorsed fewer relational interactions at 4-months and those who reported more frustration about not observing change after three months also endorsed fewer relational interactions at 6-months. Mentors who reported collaborative authorship three months into the match reported both less dissatisfaction and less frustration with the match. Collaboration also was associated with increased match persistence. Collaborative authorship was unrelated to relational and problem focused interactions at all time points, consistent with the idea that a wide range of activities can be negotiated between mentors and mentees.

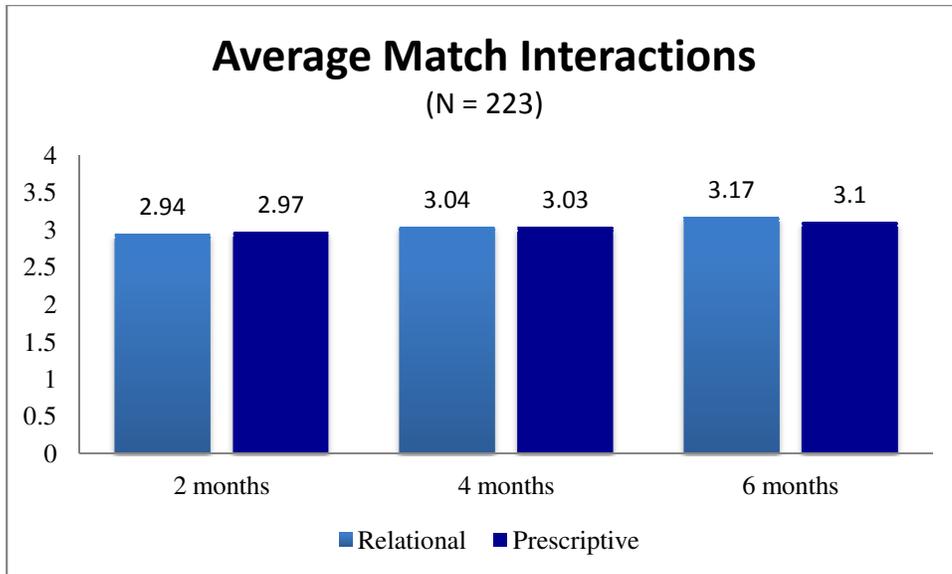
Several covariates had significant correlations with key study predictor variables. Mentors who endorsed more relational interactions at 2-months and who reported more frustration were more likely to work with a mentee who received family assistance. Mentors

reported both higher dissatisfaction and higher frustration when the mentee lived in a two-parent household (compared to those living in single parent homes or with other relatives). Mentee's experience of victimization was positively correlated with mentor reports of problem-focused interactions at 6-months and negatively related to collaborative authorship.

Mentor characteristics were associated with the predictor and outcome variables. Mentor ethnicity (being white) was associated with increased match persistence. Mentors with bachelor's degrees or higher reported fewer relational interactions at 2-months, and fewer problem-focused interactions at 2-, 4-, and 6-months. Finally, male mentors reported more relational interactions at 2-months than female mentors.

### **3.3 Description of Match Interactions**

I first conducted descriptive analyses to identify the relative frequency that matches engaged in relational and problem-focused interactions at 2, 4, and 6 months. As shown in Figure 1, matches engaged in moderate levels of relational interactions across all three-time points. Similarly, matches engaged in moderate levels of problem-focused interactions on average over 2, 4, and 6 months (See Table 6). In terms of the two mentoring program models, matches in MTC and the standard mentoring model engaged in similar levels of relational and problem-focused activities from 2-6 months. Indeed, there were no significant group differences in levels of relational or problem-focused activities.



**Figure 1** *Match Interactions Over Time*

**Table 5 Correlations Among Study Variables**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Ch Age (Yrs)	-	-0.05	-0.11	-0.06	-0.02	0.04	-0.12	-0.04	0.07	0.04	0.03	-0.07	-0.07	-0.03	-0.11	-0.06	0.05	0.03	-0.05
2. Mentor Age (Yrs)		-	0.07	0.15*	0.14*	0.14*	0.01	-0.06	-0.03	0.01	0.01	-0.01	0.14*	-0.03	-0.03	0.10	-0.07	0.08	0.26*
3. Incarcerated parent			-	0.07	0.21*	0.09	0.04	0.03	0.06	0.11	-0.08	-0.05	-0.03	0.10	0.07	-0.02	0.08	-0.07	-0.02
4. Mentee 2 Parent Household				-	0.05	0.11	0.04	-0.08	0.17*	0.23*	-0.11	0.04	0.04	0.12	0.07	-0.06	0.13	0.10	0.02
5. Child Family Assistance					-	-0.05	0.00	-0.09	0.08	0.19*	-0.05	-0.10	-0.05	0.17*	-0.03	-0.16	0.14	-0.06	-0.07
6. Match Gender						-	0.24*	-0.04	-0.10	0.04	0.05	0.06	0.14*	0.12	0.09	0.00	0.19*	0.15	0.04
7. Mentor Ethnicity							-	0.10	-0.13	-0.03	0.05	-0.03	0.05	0.15	0.14	-0.02	-0.04	-0.04	-0.11
8. Mentor Education Level								-	0.04	-0.12	0.05	-0.18*	-0.09	-0.20*	-0.13	-0.02	-0.29*	-0.20*	-0.30*
9. Mentor Expectation									-	0.60*	-0.34*	0.03	0.07	-0.12	-0.27*	-0.12	0.01	-0.14	-0.02
10. Mentor Frustration										-	-0.30*	0.04	0.10	0.04	-0.05	-0.26*	0.03	-0.04	0.10
11. Collaborative Authorship											-	0.00	-0.14*	-0.10	0.08	-0.15	-0.08	0.05	0.08
12. Child Distress Level												-	0.37*	-0.03	-0.02	-0.05	-0.02	0.04	0.05
13. Child Victimization													-	0.06	0.04	0.01	0.12	0.03	0.23
14. 2mo AC Relational														-	0.54*	0.43*	0.59*	0.34*	0.29*
15. 4mo AC Relational															-	0.48*	0.37*	0.60*	0.35*
16. 6mo AC Relational																-	0.31*	0.20*	0.65*
17. 2mo AC Prob.Foc																	-	0.51*	0.39*
18. 4mo AC Prob.Foc																		-	0.44*
19. 6mo AC Prob.Foc																			-

Note. \*p < .05.

**Table 6 Means and Standard Deviations for Match Interactions by Group**

	<b>MTC</b> (n = 120)	<b>Standard</b> (n = 103)	<b>Overall Sample</b> (n = 223)
Relational Interactions 2 mos.	2.90(.84)	3.06(.74)	2.94(.57)
Relational Interactions 4 mos.	2.94(.86)	3.08(.52)	3.04(.61)
Relational Interactions 6 mos.	3.14(.98)	3.09(.70)	3.17(.65)
Problem-Focused Interactions 2 mos.	2.87(.56)	3.04(.56)	2.97(.80)
Problem-Focused Interactions 4 mos.	2.98(.61)	3.18(.77)	3.03(.81)
Problem-Focused Interactions 6 mos.	3.23(.73)	3.08(.52)	3.10(.86)

\*Note. Range 0 Never - 4 Very Often in past 2 months

### 3.4 Latent Growth Analysis

Next, I used latent growth curve modeling specifying linear change in match interactions to explore changes in relational and problem-focused interactions within matches over time (2 months, 4 months, and 6 months). Specifically, I explored the main and interactive effects of predictors on match interactions to identify patterns of change over time. The predictors I included in these models were condition (MTC v. Standard approach), match gender, mentee age, mentee having an incarcerated parent, mentee experience of victimization, mentor ethnicity, mentor level of education, mentor dissatisfaction with the match at 3 months, mentor frustration with the match at 3 months, and collaborative authorship. Analyses were conducted with Mplus 7.1 software using a robust maximum likelihood estimator.

#### 3.4.1 Relational Interactions

I specified four growth models for relational match interactions: an intercept only model, a main effects model, and two interaction models. The intercept-only model indicated a general pattern of linear change in relational interactions over time. Then, predictors that might explain this change in relational interactions over time were added to the model based. This main effects model examined linear change in relational match

interactions over 2, 4, and 6 months, and included as all of the variables significantly associated with either predictor or outcome variables. These predictors-as-covariates were match group condition (MTC v. Standard approach), match gender, mentee age, mentee having an incarcerated parent, mentee living in a two-parent household versus living in a single parent home, mentee experience of victimization, mentor ethnicity, mentor level of education.

Predictors of interest in these models explaining the pattern of change in relational interactions over time were mentor dissatisfaction with the match at 3 months, mentor frustration with the match at 3 months, and collaborative authorship on the intercept (i.e. 2 month levels) and slope (i.e. rate of change across three time points) of relational match interactions. This model fit the data well,  $RMSEA = 0.0$ ,  $CFI = 1.0$ ,  $SRMR = 0.03$ . The mean level of relational activities at 2 months was 3.02,  $SE = 0.22$ ,  $p < .01$ , but did not vary significantly between matches,  $Var_{res} = 0.13$ ,  $SE = 0.07$ ,  $p = 0.06$ . The linear increase in relational interactions over time was not significant,  $M_{slope} = 0.08$ ,  $SE = 0.07$ ,  $p = 0.23$ , and did not vary significantly between subjects,  $Var_{res} = -.001$ ,  $SE = 0.01$ ,  $p = 0.92$ . As a result of limited systematic change the standardized slope-intercept correlation could not be estimated. All non-significant covariates from the main effects model were dropped from subsequent models.

Mentoring approach and mentors' experiences were associated with changes in relational interactions over time. Mentors assigned to the MTC condition reported somewhat (but not significantly) fewer relational interactions compared to those in the standard mentoring approach initially, but also reported significantly increased relational interactions from 2- to 6-months,  $B = 0.06$ ,  $SE = 0.03$ ,  $p = 0.02$ . Further, mentor

frustration was associated with a significant decline in relational interactions over time,  $B = -0.06$ ,  $SE = 0.03$ ,  $p = 0.01$ .

The final models examined the interactions of mentor dissatisfaction and frustration with collaborative authorship on relational interactions from 2-to 6-months. The third linear growth model included the interaction of mentor dissatisfaction with the match and collaborative authorship. This model fit the data well,  $RMSEA = 0.03$ ,  $CFI = 0.98$ ,  $SRMR = 0.02$ . Similar to the initial model, mentor frustration was associated with significant decline in relational interactions from 2 to 6 months, and being in the MTC condition was associated with increased relational interactions from 2- to 6-months. In addition, a main effect of mentor's education emerged. Mentors with higher levels of education (bachelor's degree or higher) reported engaging in significantly lower initial levels of relational activities. The mentor dissatisfaction collaborative authorship interaction predicted lower initial levels of relational interactions, but was not associated with change over time (see figure 2).

When simple slopes of mentor dissatisfaction were probed at low levels of collaborative authorship, the effect of mentor dissatisfaction on baseline relational interactions reached statistical significance. Mentor frustration at three months was negatively associated with rates of relational interactions at two-months among those matches which engaged in low levels of collaborative authorship,  $B = -0.25$ ,  $SE = 0.08$ ,  $p < 0.01$ . At high levels of collaborative authorship, the association between reports of mentor dissatisfaction and baseline rates of relational interactions high levels of collaborative authorship was not statistically significant. However, this association was considered a noteworthy finding that merits future investigation.

The fourth latent growth model predicting patterns of change in rates of relational interactions over time included the coefficients representing the interactive effects of mentor frustration with the match and collaborative authorship. This model also fit the data well,  $RMSEA = 0.0$ ,  $CFI = 1.0$ ,  $SRMR = 0.03$ . A main effect of mentor's education emerged in this model such that mentors with higher levels of education (bachelor's degree or higher) reported engaging in significantly lower initial levels of relational activities.

Contrary to the other models, the main effect of mentor frustration was not related to change in relational interactions over time. As evident in earlier bivariate correlations, mentors who reported higher levels of relational interactions at baseline also reported higher levels of frustration with lack of change in their mentee at three months. However, the frustration x collaborative authorship interaction was statistically significant. (see figure 3). When the simple slope of mentor frustration was probed at low levels of collaborative authorship, the effect of mentor frustration on baseline relational interactions dropped from statistical significance,  $B = -0.003$ ,  $SE = 0.08$ ,  $p = .97$ . Therefore, based on probing, the relationship between mentor frustration and baseline relational interactions is not robust since mentor frustration and baseline relational interactions are not significantly associated when matches are not collaborative. Full results from the final models, which include main effect and interaction terms, are presented in Tables 7 and 8.

**Table 7 Interactive Effects for Relational Linear Growth Mentor Dissatisfaction x Collaborative Authorship**

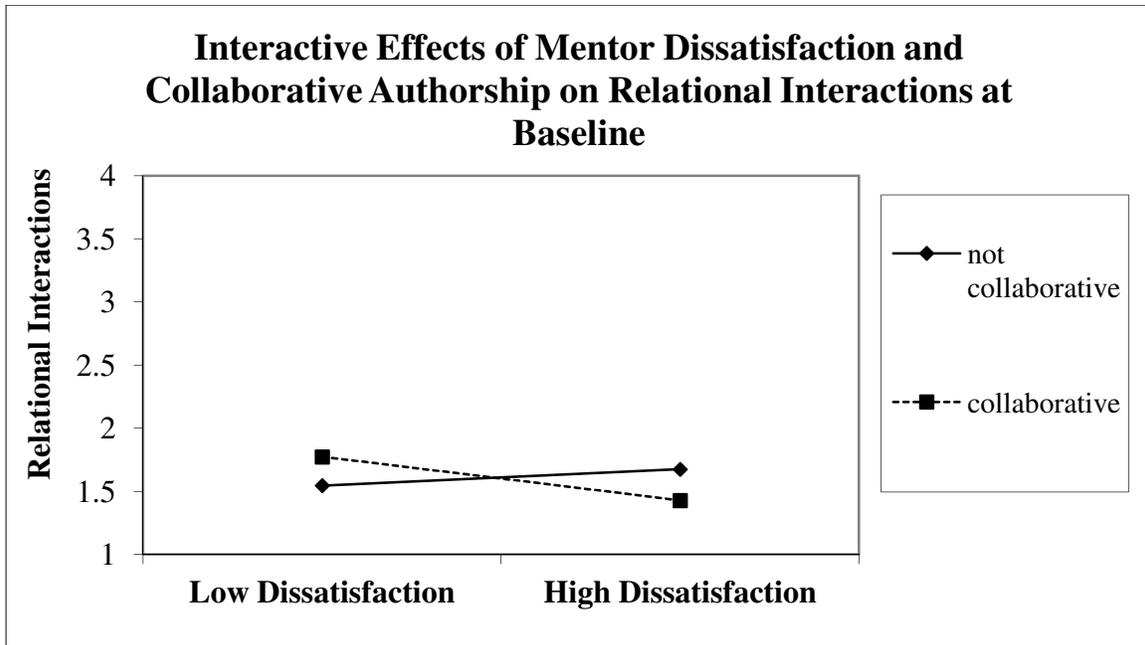
IV's	Relational Interactions					
	Intercept			Linear Slope		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Intercept	3.11*	0.23	0.00	0.06	0.07	0.35
MTC Group	-0.14	0.08	0.09	0.06*	0.03	0.02
Bachelor's Degree or Higher	-0.28*	0.13	0.03	0.05	0.04	0.21
Mentor Dissatisfaction	0.09	0.12	0.48	-0.06	0.07	0.36
Mentor Frustration	0.09	0.06	0.16	-0.06*	0.03	0.02
Collaborative Authorship	-0.01	0.15	0.94	-0.01	0.04	0.83
Dissatisfaction x Authorship	-0.33*	0.13	0.01	0.1	0.07	0.14
Residual Variance	0.17*	0.07	0.01	0.05	0.01	0.07

Note. \* $p < .05$

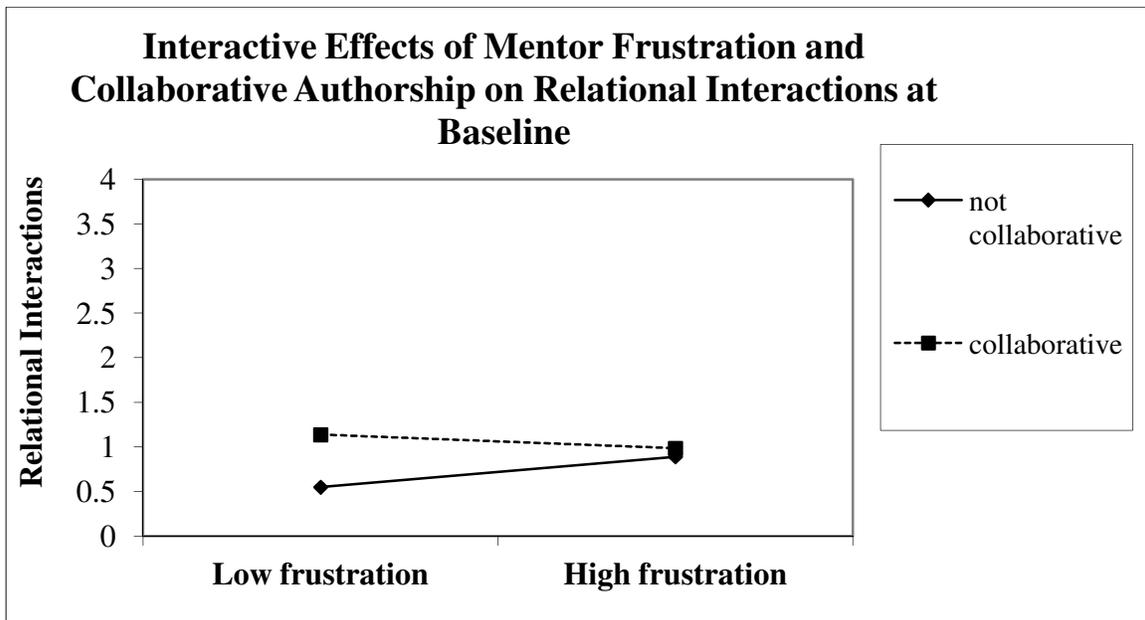
**Table 8 Interactive Effects for Relational Linear Growth-Mentor Frustration x Authorship**

IV's	Relational Interactions					
	Intercept			Linear Slope		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Intercept	2.91*	0.25	0.00	0.08	0.08	0.31
MTC Group	-0.11	0.08	0.17	0.05*	0.03	0.04
Bachelor's Degree or Higher	-0.30	0.14	0.03	0.04	0.04	0.30
Mentor Dissatisfaction	-0.16	0.08	0.051	0.02	0.03	0.49
Mentor Frustration	0.28*	0.09	0.001	-0.09	0.05	0.07
Collaborative Authorship	0.29	0.22	0.17	-0.04	0.08	0.64
Frustration x Authorship	-0.29*	0.12	0.01	0.03	0.05	0.51
Residual Variance	0.17*	0.07	0.01	0.00	0.53	0.53

Note. \* $p < .05$



**Figure 2** *Interaction of mentor dissatisfaction with lack of change in mentee and collaborative authorship on baseline levels of relational interactions*



**Figure 3** *Interaction of mentor frustration with lack of change in mentee and collaborative authorship on baseline levels of relational interactions*

### 3.4.2 Problem-Focused Interactions

With respect to problem-focused interactions, four growth models were specified: an intercept only model, a main effects model, and two interaction models. The intercept-only model indicated a general pattern of linear change in problem-focused interactions over time. The main effects model modeled linear change in problem-focused interactions over the three time points, after accounting for variability due to match group condition (MTC v. standard mentoring), match gender, mentee age, mentee having an incarcerated parent, mentee experience of victimization, mentor ethnicity, mentor level of education, mentor dissatisfaction with the match at 3 months, mentor frustration with the match at 3 months, and collaborative authorship on the intercept (i.e. 2 month levels) and slope (i.e. rate of change across three time points) of problem-focused match interactions. This model fit the data well,  $RMSEA = 0.02$ ,  $CFI = 0.99$ ,  $SRMR = 0.04$ . The mean level of problem-focused activities at 2 months was 3.69,  $SE = 0.28$ ,  $p < .001$ , and varied significantly between matches,  $Var_{res} = 0.48$ ,  $SE = 0.12$ ,  $p < .001$ . The linear increase in problem-focused interactions over time was not significant,  $M_{slope} = 0.02$ ,  $SE = 0.08$ ,  $p = 0.74$ , but varied significantly between subjects,  $Var_{res} = 0.04$ ,  $SE = 0.02$ ,  $p = 0.03$ . Slope and intercept were significantly correlated,  $r = -.59$ ,  $p < .001$ . Match gender and mentor educational attainment were significantly associated with problem-focused intercept at 2 months. Male mentors reported more problem-focused interactions than female mentors,  $B = 0.31$ ,  $SE = 0.13$ ,  $p = 0.02$ . Mentors with bachelor's degrees or higher reported engaging in fewer problem-focused interactions initially than mentors with less education,  $B = -0.61$ ,  $SE = 0.18$ ,  $p < .01$ . None of the predictors had main effects on slope of problem-focused interactions over time.

Similar to the growth models specified for relational interactions, I specified the interactions of mentor dissatisfaction and frustration with collaborative authorship on problem-focused interactions from 2-to 6-months. The non-significant covariates from the main effects model were not included in subsequent models. The third model of problem-focused interactions, which included the interaction of mentor dissatisfaction with the match and collaborative authorship, fit the data well,  $RMSEA = 0.02$ ,  $CFI = 0.99$ ,  $SRMR = 0.04$ . However, the mentor dissatisfaction x collaborative authorship interaction was not associated with initial levels of problem-focused interactions or with linear change in interactions over time and therefore was not included in the final model. The fourth model included the interactive effects of mentor frustration with the match and collaborative authorship. This model also fit the data well,  $RMSEA = 0.03$ ,  $CFI = 0.99$ ,  $SRMR = 0.02$ , however, the frustration x authorship interaction was not associated with initial levels of problem-focused interactions or with linear change in interactions over time so it was not included in the final model. The final model excluded the non-significant covariates from the initial model, and fit the data well,  $RMSEA = 0.03$ ,  $CFI = 0.98$ ,  $SRMR = 0.03$ . Full results from the final problem-focused growth model including only main effects are presented in Table 9.

**Table 9 Final Problem-Focused Linear Growth Model**

IV's	Problem-Focused Interactions					
	Intercept			Linear Slope		
	<i>B</i>	<i>SE</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>p</i>
Intercept	3.63*	0.29	0.00	0.05	0.09	0.60
Match Gender	0.30*	0.11	0.01	-0.06	0.04	0.17
Bachelor's Degree or Higher	-0.62*	0.18	0.001	-0.01	0.05	0.82
Mentor Dissatisfaction	0.02	0.1	0.88	0.01	0.04	0.78
Mentor Frustration	-0.06	0.08	0.50	-0.02	0.03	0.61
Collaborative Authorship	-0.29	0.19	0.13	0.06	0.05	0.26
Residual Variance	0.47*	0.12	0.00	0.04*	0.02	0.03

Note. \* $p < .05$

### 3.5 Examining Match Interactions as Predictors of Match Persistence.

In the second part of this study I used ordinal logistic regression to explore the extent to which relational and problem-focused interactions were associated with match persistence. Match persistence consisted of 4 ordinal levels: 3-6 months, 6-9 months, 9-12 months, and 12 months or longer (see table 10). The continuous predictors of match interactions- average levels of relational and problem-focused interactions, and the two-way interaction of these predictors were included to predict the likelihood of the matches persisting. The following covariates were examined in relation to match persistence and match interactions using chi-square tests and ANOVA's: match condition, match gender, mentee age, mentee having an incarcerated parent, mentee living in a two-parent household versus living in a single parent home, mentee experience of victimization, mentee distress, mentor ethnicity, and mentor having a bachelor's degree or higher. Of these covariates, only mentor ethnicity was significantly associated with match persistence and therefore was included as a covariate in the analyses. Analyses were conducted in Mplus 7.1 using Monte-Carlo Integration.

**Table 10 Match Persistence Groups**

	N
3-6 months	39
6-9 months	22
9-12 months	17
12 months or longer	145

\**Note.* Overall sample = 223 matches.

Three ordinal logistic regressions examined the effect of match interactions at 2-months, the effect of change in match interactions from 2- to 4-months, and the effect of change in match interactions from 4- to 6-months. Each model included relational and

problem-focused interactions as predictors and the covariate mentor ethnicity. Mentor ethnicity was a significant predictor of match persistence such that matches involving white mentors were significantly more likely to persist beyond 2-months. Increased frequency of relational interactions from 2- to 4-months also was significantly associated with longer match persistence ( $B = 1.15$ ,  $SE = 0.57$ ,  $p < .05$ ). See tables 11-13 for detailed results.

**Table 11 Ordinal Logistic Regression Results- Relational and Problem-Focused Interactions at 2 Months**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.01*	0.35	0.004
	Relational Interactions 2-mos	0.06	0.41	0.88
	Problem-Focused Interactions 2-mos	0.27	0.29	0.36
	Relational X Problem-Focused Interactions	-0.29	0.39	0.45

*Note.* \* $p < .05$

**Table 12 Ordinal Logistic Regression Results- Relational and Problem-Focused Interactions from 2 to 4 Months**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.88*	0.39	0.03
	Relational Interactions 2-mos	-0.49	0.52	0.35
	Problem-Focused Interactions 2-mos	-0.18	0.35	0.83
	Relational Interactions 4-mos	1.15*	0.57	0.05
	Problem-Focused Interactions 4-mos	-0.18	0.35	0.60
	Relational X Problem-Focused Interactions	0.08	0.46	0.86

*Note.* \* $p < .05$

**Table 13 Ordinal Logistic Regression Results- Relational and Problem-Focused Interactions from 4 to 6 Months**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.90*	0.38	0.02
	Relational Interactions 4-mos	0.87	0.51	0.09
	Problem-Focused Interactions 4-mos	-0.46	0.42	0.27
	Relational Interactions 6-mos	0	0.97	1.00
	Problem-Focused Interactions 6-mos	0.29	0.77	0.71
	Relational X Problem-Focused Interactions	0.06	0.49	0.91

*Note.* \* $p < .05$

### 3.6 Examining Potential Moderators

In the third part of this study I used ordinal logistic regression to explore potential moderators of the association between match interactions and match persistence: mentor dissatisfaction with the match, mentor frustration with lack of change in their mentee's behavior/outcomes, and collaboration in deciding how to spend time together.

#### 3.6.1 Mentor Dissatisfaction

Six independent ordinal logistic regressions predicting match persistence were computed to examine whether mentor dissatisfaction with the match moderated the association between types of match interactions and match persistence. Three models examined the two-way interaction between mentor dissatisfaction and *relational* interactions at (1) 2-months, (2) from 2-4 months, and (3) from 4-6 months. Three additional models examined the two-way interaction between mentor dissatisfaction and *problem-focused* interactions at (1) 2-months, (2) from 2-4 months, and from (3) 4-6 months. Mentor ethnicity was included in all models as a covariate, and again in all 6 models such that matches involving white mentors were significantly more likely to persist.

Mentor dissatisfaction at three months moderated the association between relational interactions at 6 months and match persistence. When mentor dissatisfaction is high, it appears that 6-month relational interactions on match persistence decreases with increased mentor dissatisfaction ( $B = -3.54^*$ ,  $SE = 0.81$ ,  $p < .05$ ). See tables 14-16 and Appendix C for detailed results.

**Table 14** *The Moderation Effect of Mentor Dissatisfaction on Relational Interactions and Match Persistence at 2 Months*

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
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Match Persistence	Mentor Ethnicity- White	1.07*	0.37	0.003
	Relational Interactions 2-mos	0.12	0.42	0.77
	Problem-Focused Interactions 2-mos	0.27	0.29	0.35
	Mentor Dissatisfaction	-0.13	0.24	0.58
	Dissatisfaction X 2m Relational Interactions	-0.67	0.42	0.11

Note. \* $p < .05$

**Table 15 The Moderation Effect of Mentor Dissatisfaction on Relational Interactions and Match Persistence from 2-4 Months**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.96*	0.38	0.01
	Relational Interactions 2-mos	-0.48	0.53	0.37
	Problem-Focused Interactions 2-mos	0.18	0.39	0.63
	Relational Interactions 4-mos	1.13	0.6	0.06
	Problem-Focused Interactions 4-mos	-0.2	0.33	0.56
	Mentor Expectation	-0.05	0.27	0.86
	Dissatisfaction X 4m Relational Interactions	-0.36	0.51	0.49

Note. \* $p < .05$

**Table 16 The Moderation Effect of Mentor Dissatisfaction on Relational Interactions and Match Persistence from 4-6 Months**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.09*	0.57	0.05
	Relational Interactions 4-mos	1.33	0.74	0.07
	Problem-Focused Interactions 4-mos	-0.18	0.33	0.60
	Relational Interactions 6-mos	-0.13	1.10	0.91
	Problem-Focused Interactions 6-mos	-0.54	0.54	0.45
	Mentor Expectation	0.42	1.01	0.68
	Dissatisfaction X 6m Relational Interactions	-3.54*	0.81	0.00

Note. \* $p < .05$

### 3.6.2 Mentor Frustration

Six independent ordinal logistic regressions predicting match persistence were computed to examine whether mentor frustration with lack of change in their mentee moderated the association between types of match interactions and match persistence.

Three models examined the two-way interaction between mentor *frustration* and *relational* interactions at (1) 2-months, (2) from 2-4 months, and (3) from 4-6 months.

Three additional models examined the two-way interaction between mentor *frustration*

and *problem-focused* interactions at (1) 2-months, (2) from 2-4 months, and from (3) 4-6 months. Mentor ethnicity was included in all models as a covariate. There was a significant main effect of mentor ethnicity in all 6 models such that matches involving white mentors were significantly more likely to persist than matches comprised of non-white mentors at 2-, 4-, and 6-months. None of the six two-way interactions (i.e. interaction type X mentor frustration) was statistically significant, thus the conditional effects of the predictor at levels of the proposed moderator were not explored further. See Appendix D for detailed results.

### **3.6.3 Collaborative Authorship**

Six independent ordinal logistic regressions predicting match persistence were computed to examine whether collaboration in deciding match interactions moderated the association between types of match interactions and match persistence. Three models examined the two-way interaction between mentor *collaboration* and *relational* interactions at (1) 2-months, (2) from 2-4 months, and (3) from 4-6 months. Three additional models examined the two-way interaction between mentor *collaborative authorship* and *problem-focused* interactions at (1) 2-months, (2) from 2-4 months, and from (3) 4-6 months. Mentor ethnicity was included in all models as a covariate. There was a significant main effect of mentor ethnicity in all 6 models such that matches involving white mentors were significantly more likely to persist than matches comprised of non-white mentors at 2-, 4-, and 6-months.

From 4-6 months there was a main effect of problem-focused interactions such that higher levels of problem-focused interactions at 6-months predicted longer match persistence ( $B = 4.91, SE = 2.48, p < .05$ ). The two-way interaction of *collaborative*

*authorship* and *6-month problem-focused interactions* proved significant ( $B = -5.83$ ,  $SE = 2.31$ ,  $p < .05$ ) and moderated the association between problem-focused interactions and match persistence. Indeed, when simple slopes of 6-month problem-focused interactions were probed at low levels of collaborative authorship, the effect of 6 month problem-focused interactions on match persistence slope dropped from statistical significance at low levels of collaborative authorship,  $B = -0.30$ ,  $SE = 1.15$ ,  $p > .05$ . This indicates that the relationship between 6-month problem-focused interactions and match persistence is not present when decision-making is not collaborative (but rather when it is decided by one party alone). See table 17 and Appendix E for detailed results.

**Table 17** *Collaboration as a Moderator of Problem-Focused Interactions and Match Persistence from 4-6mos*

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.3*	0.56	0.02
	Relational Interactions 4-mos	0.45	0.49	0.36
	Problem-Focused Interactions 4-mos	-0.37	0.30	0.22
	Relational Interactions 6-mos	0.88	0.96	0.36
	Problem-Focused Interactions 6-mos	4.91*	2.48	0.05
	Collaboration	-1.33	1.16	0.25
	Collaboration X 6m Problem-Focused Interactions	-5.83*	2.31	0.02

*Note.* \* $p < .05$

## 4 DISCUSSION

The present study explored stability and change in types of interactions within matches from 2-to 6-months, examined the associations between match interactions and match persistence, and examined several moderators of those associations. The findings extend the mentoring literature by enriching knowledge of match interactions over time, and ultimately contributing to understanding of broader styles of mentoring, which has potential implications for mentoring best practices. Previous studies have suggested the

importance of match interactions, but have not empirically examined the focus, purpose, and authorship of match interactions as those interactions unfold over the period of time in which matches are becoming established (Larose, Savoie, DeWit, Lipman, & DuBois, 2015). Using latent growth curve models to examine relational and problem-focused interactions over the first 6-months of match relationships, this study offers a more nuanced perspective of mentoring interaction patterns than previous cross-sectional studies. The key findings from this study and the relevant implications for research, theory and practice will be discussed in the remaining sections.

#### **4.1 The Importance of Relational and Problem-Focused Interactions**

Relational and problem-focused interactions are important, and these findings suggest that successful matches integrate both types. Overall mentors reported moderately high levels of relational and problem-focused interactions that remained stable over 2-6 months, demonstrating that both types of interactions occur early on and throughout the duration of match relationships. Although apparent increases were observed in both types of match interactions from 2-6 months those increases did not reach significance. It is possible, however, that increases would be observed if this pattern occurred over a longer period of time (e.g. 8 months, 10 months, 12 months).

Further, the findings from this study support the importance of specific types of match interactions as matches become established. Consistent with previous research (Larose, Savoie, DeWit, Lipman, & DuBois, 2015), *relational* interactions seem to be critical for match persistence *early* in the mentor-mentee relationship and *problem-focused* interactions seem to be most relevant *after* the match has been established. Specifically, increased relational interactions from 2 to 4 months significantly and

positively predicted match persistence, underscoring the importance of this type of interaction in the early development of the match. In contrast, problem-focused from 4 to 6 months significantly predicted increased likelihood of match persistence, highlighting the importance of this type of interaction once the match has been established, but only when the decision to focus on problems was made jointly. These results are consistent with theories of positive youth development and the mentoring literature, which assert youth development is best promoted by developmental relationships characterized by reciprocity, attachment, progressive complexity, and balance of power. In such relationships the initial focus is on developing emotional connection based on trust, collaboration, and mutuality followed by the integration of more complex interactions as the relationship develops (Li & Julian, 2012; Morrow & Styles, 1995; Hamilton & Hamilton, 1992).

## **4.2 Factors that Affect Match Interactions**

### **4.2.1 Mentor Characteristics**

Interestingly, the findings in this study suggest that mentor characteristics may be more important than mentee characteristics in determining match interactions and changes in these interactions over time. Regarding problem-focused interactions, male mentors engaged in higher levels of problem-focused interactions than female mentors at the 2 month baseline, and mentors with bachelor's degrees or higher reported engaging in fewer problem-focused interactions at 2 months, than did mentors with lower levels of education. Additionally, several mentor characteristics were negatively associated with levels of relational interactions. Similar to problem-focused interactions, mentors with advanced educational degrees reported engaging in fewer relational interactions at 2

months, than mentors with lower educational achievement. Further, mentors assigned to the MTC condition reported somewhat (but not significantly) lower levels of relational interactions at two months and increased levels of relational interactions from 2- to 6-months. This may have been the result of being assigned to the MTC program that emphasized working toward academic goals.

Most importantly, mentor frustration with lack of change in their mentee was associated with a decline in relational interactions from 2- to 6-months not observed in matches with less frustrated mentors. Moreover, mentor dissatisfaction with the match moderated the association between relational interactions at 6-months and match persistence only in matches with high levels of relational interactions at 6 months and mentors who wanted to see more change. These results evidence the importance of examining the two dimensions of focus and purpose in the TEAM framework. Although mentor expectations only reflect one aspect of purpose, the interaction of mentor expectations with relationally focused interactions on match persistence not only highlights the distinction between focus and purpose, but also suggests the two dimensions interact to shape the match relationship.

#### ***4.2.2 Collaborative Authorship***

Collaborative authorship emerged as an important factor in match persistence. Collaborative authorship moderated the association between baseline levels of relational interactions and mentor expectations (i.e. mentor dissatisfaction and mentor frustration with lack of change in their mentee) reported a month later. In particular, matches in which mentors reported lower levels of relational interactions at baseline also tended to

report dissatisfaction (or frustration) with the match *and* more collaboration in deciding how to spend time together.

Despite the generally positive association between problem-focused interactions and match persistence, there was an instructive interaction between collaborative authorship and problem-focused interactions at 6-months. Collaborative authorship moderated the association between problem-focused interactions at 6-months and match persistence suggesting that the positive effect of problem-focused interactions seems to be muted/nullified when mentors perceive low levels of collaborative authorship. It is difficult to interpret this interaction since the measure of collaborative authorship was based on the mentor's report only. Notably, this pattern was present with respect to relational interactions as well, but did not reach significance. A more in-depth measure of authorship that integrates both the mentor and the mentee perspectives may be necessary to truly understand the effects of collaborative authorship. Nonetheless, this finding highlights the importance of examining not just the type of interactions, but also the relational context in which the interactions occur.

### **4.3 Strengths and Limitations**

The primary limitations of this study include the reliance on mentor self-report data and higher than optimal missing data unrelated to attrition. Despite the agency's investment in this research study to inform the development and implementation of specialized mentoring programs, agency staff did not have the time or resources to collect complete data for all study matches due to budget issues and a high turn over rate. Relying on mentor report only limited my ability to interpret the role of collaborative authorship in match interactions and match persistence. Finally, as a result of the

difficulty associated with determining the specific endpoint for terminated matches, this study utilized ordinal logistic regression to categorize matches based on match length in months. This method conservatively assumes uniform change in match persistence over time from 3- to 12-months. Future research designs should incorporate frequent assessment of match status based on mentor and mentee reports to improve the measurement of match length and allow for more sensitive, refined analyses. For example, more accurate assessment of match length would enable the use of time-to-event analysis (Willett, Singer, & Martin, 1998).

Despite these limitations, this is the first longitudinal analysis of match interactions. Moreover, this is the first study to include longitudinal assessment of the three core dimensions (focus, purpose, and authorship) of the TEAM framework, which contributes to understanding the processes involved in the development of mentoring relationships. Furthermore, the measures used in this study are readily available to and commonly used within BBBS agencies. Therefore, this study has practical implications for match support staff as these findings could be easily replicated to inform match support strategies at specific sites.

#### **4.4 Implications for Research and Theory**

As the first systematic use of the TEAM framework across multiple time points, this study provides empirical support for the TEAM framework, and offers preliminary evidence for the operationalized constructs of focus, purpose and authorship as defined in this study. Specifically, the findings support the reliability and construct validity of the current measure of match interactions to reflect focus and purpose. However, an important direction for future research is to extend the current measure of authorship to

incorporate multiple perspectives (i.e. mentee, parent) to provide a more complete assessment of the level of collaboration within the match. As evidenced in the psychotherapy literature and the qualitative research by Spencer and Pryce, collaboration consistently emerges as a critical component of high quality, effective relationships (Spencer, 2004; Pryce 2012). Hence, qualitative measures of authorship would also be valuable in identifying, defining, and understanding matches that engage in effective collaborative authorship. Additionally, this study's findings regarding the dimensions of focus and purpose converge with the qualitative work of Spencer (2002) and Pryce (2012), in which mentors ability to attend to their own needs while also attending to those of their mentee has direct implications for the selection of match activities and discussions and ultimately the quality of the match relationship. Thus, similar future research on purpose and focus would be valuable to replicate and extend these findings.

Moreover, this study's focus on the mentor's perspective and the role of match interactions in high quality, long-term matches contributes to an underdeveloped area of research in the mentoring field. The current findings point to the importance of examining match interactions and understanding the temporal associations of specific interactions to promote successful matches. Eighteen matches were excluded from this study due to termination prior to 3 months, so the first 3 months post-match may be a meaningful period for researchers to examine match interactions in-depth to understand early termination and the resulting effects. A direction for future research would be a comprehensive longitudinal examination of match interactions with attention to nuances in interactions among pairs of diverse age, ethnicity, and environmental risk including and beyond the first 6 months of the relationship. In a larger sample, a latent class or

latent profile analysis would be most sensitive for detecting different trajectories/combinations of match interactions that emerge over time. This analysis would provide a description of individual patterns of interactions involving a more comprehensive, integrated picture of the interplay between relational and problem-focused interactions.

Furthermore, this study found mentor expectations to significantly influence the relationship between match interactions and match persistence. Specifically, mentor frustration with lack of change in their mentee was associated with lower levels of relational interactions, and mentor dissatisfaction negatively moderated the effect of relational interactions on match persistence at 6-months. These findings are consistent with Spencer's qualitative research of BBBS matches (2007) in which mentors reported that unfulfilled expectations about the match and the hopes for changes in their mentee played a significant role in the early termination of match relationships. Given the negative association of mentor expectations on match relationships over time, a meaningful direction for future research would explicitly and systematically assess mentor and mentee expectations for the match at the beginning of the relationship and over time. This would not only enhance understanding the dimensions of focus and purpose of interactions, but also might clarify the association between authorship and mentor frustration and dissatisfaction.

Last, although no mentee characteristics were associated with match persistence, mentor ethnicity emerged as a significant predictor of match persistence at 2-, 4-, and 6-months. Contrary to reports that mentors in formal mentoring programs are typically predominantly white (Grossman & Tierney, 1998), the majority of mentors in this sample

identified as Black. Specifically, mentors in the current sample identified as primarily Black or White, and matches composed of White mentors were consistently more likely to persist. Ethnicity and race have been found to influence the ways in which mentors and mentees relate to each other, relationship closeness, and effectiveness of the match (Liang & West, 2007; Sanchez & Colon, 2005). However, previous studies have found mixed results for same-race and cross-race matches in terms of match persistence, quality of match relationships and youth outcomes such as self-esteem and academic competence (Liang & West, 2007). Given the mixed findings, Sanchez and colleagues emphasize examining the issues of race, ethnicity, and culture at a deeper level, rather than focusing on the simple concept of racial/ethnic identification to understand the role of race/ethnicity and culture in mentoring relationships (Sanchez, Colon-Torres, Freur, Roundfield, & Berardi, 2014). Based on these recommendations, it is likely the findings in this study are complex products of individuals' racial/ethnic identity development; racial, ethnic, and cultural similarity or dissimilarity; cultural competence; and systemic factors such as the mentee's experience and understanding of oppression. Thus, continued systematic investigation of the role of mentor ethnicity in larger, more diverse samples is warranted.

#### **4.5 Practical Implications for Mentoring Programs**

The results of this study clearly indicate that the types of interactions occurring in the first 6 months of a match have implications for match persistence. Therefore, this study may offer practical guidance for agencies to improve current standards of practice. First, findings from this study highlight ways in which agencies can better support matches. Research documents that training and continued support for mentors is

associated with stronger positive effects on youth outcomes (DuBois et al., 2002). This study adds to previous findings by indicating that training and ongoing support needs to focus on the types of interactions and expectations mentors bring to the match. Given the initially moderate levels of relational and problem-focused interactions, and stability over time from 2-6 months in this study, identifying significant patterns of change in frequency of match interactions over time may be a notable indicator of problems within matches and reason for increased match support. For example, declines in mentor-reported relational interactions in the early months of the match may be an indicator of mentor frustration, and match support might explore with the mentor what is happening to problem solve and/or promote increased relational interactions.

Second, the negative effect of mentor dissatisfaction and frustration on relational interactions and match persistence found in this study evidences the importance of explicitly discussing and addressing mentors' expectations for the match at the time of matching. A potentially effective strategy for this is to provide mentors with pre-match training to learn developmentally appropriate ways to communicate, bond and collaboratively set goals with mentees. Ideally, mentors could participate in continued in-service training to practice and improve these skills as the match develops, particularly in the first few months. Third, these findings highlight the importance of match support providing immediate intervention when mentors express frustration and dissatisfaction with the match to promote improved relationship quality and match persistence. Such intervention by match support should include the following 6 components: (1) promote mentors' sense of safety expressing frustration and dissatisfaction; (2) allow for collaborative and sensitive exploration of the source of mentor frustration and

dissatisfaction; (3) validate the challenges associated with working with at-risk youth; (4) emphasize the need for patience, consistency, and persistence; (5) explore the mentor's reasons for becoming a mentor and expectations for the experience and their mentee; and (6) collaboratively develop a plan to address the difficulties the mentor is experiencing.

Last, it is common practice to provide mentors with match activity ideas. Based on these findings, agencies might consider expanding these efforts by emphasizing the importance of flexibly and collaboratively choosing relational and goal-directed activities based on mentor expectations and youth needs. Additionally, these findings may be specifically useful to inform match support staff about mentor characteristics that may play a role in the development of match relationships. For example, match support specialists might consider helping mentors talk to their mentees about cultural similarities and differences in a sensitive manner.

In sum, this study evidences the utility of the TEAM framework for organizing and examining match interactions and mentoring styles on the three dimensions of focus, purpose, and authorship. Findings indicate that the types of match interactions play a significant role in match persistence as the relationship develops. Specifically, relational interactions seem to be important early on, while goal-directed interactions are associated with match persistence once the match is established. Additionally, mentor characteristics, especially mentor expectations, significantly influence match interactions throughout the relationship, and ultimately influence match persistence. Finally, these results have valuable implications for research, theory, and practice.

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## APPENDICES

### Appendix A Activities Checklist from Karcher, Herrera & Hansen (2010)

<b>Relational Activities/Discussions</b>	Never	Hardly	Some -times	Often	Very Often
<i>With your Little, how often do you TALK about...</i>					
1. Casual Conversation (Discuss sports, whate either of you did on the weekend, holiday plans, or other events in town, etc.)	0	1	2	3	4
2. Conversation on Social Issues (religion, race, poverty, etc.)	0	1	2	3	4
3. Conversation about Relationships (can check multiple)					
Family	0	1	2	3	4
Teacher or Employers					
Friends, Peers, Other Youth					
Romantic Friend					
4. Listening & Learning (your goals, interests, feelings, etc.)	0	1	2	3	4
<i>How often do you DO each of the following with your Little...</i>					
1. Played Sports, Athletic Activity, or Outdoor Game	0	1	2	3	4
2. Played Indoor Games (Play cards, board games, computer games)	0	1	2	3	4
3. Creative Activities (Art, read, write a story or song)	0	1	2	3	4
 <b>Prescriptive Activities/Discussions</b>					
<i>With your Little, how often do you TALK about...</i>					
1. Academics (Discuss grades, school, testing, etc.)	0	1	2	3	4
2. Behavior (Discuss youth's misbehavior related to problems with peers, teachers, or the courts)	0	1	2	3	4
3. Attendance (Discuss importance of showing up school/work)	0	1	2	3	4
4. Future Talk (Discuss college, jobs, goals, dreams, etc.)	0	1	2	3	4
<i>How often do you DO each of the following with your Little...</i>					
1. Help with Homework/Tutoring (e.g. Help with homework, reading, or academic computer/library work)	0	1	2	3	4

**Appendix B Mentor Expectation Satisfaction from Rhodes, Schwartz, & Wu 2014**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I expected that being a mentor would be more fun than it actually is.	1	2	3	4	5
2. I sometimes feel frustrated with how few things have changed with my Little.	1	2	3	4	5

## Appendix C Moderation Effects of Mentor Dissatisfaction on Problem-focused

### Interactions and Match Persistence

<b>2 Months</b>				
Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.07*	0.36	0.003
	Relational Interactions 2-mos	0.04	0.4	0.92
	Problem-focused Interactions 2-mos	0.29	0.29	0.32
	Mentor Dissatisfaction	-0.08	0.22	0.71
	Dissatisfaction X 2m Prob.-focused Interactions	-0.27	0.31	0.39

*Note.* \* $p < .05$

<b>2-4 Months</b>				
Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.95*	0.37	0.01
	Relational Interactions 2-mos	-0.43	0.51	0.40
	Problem-focused Interactions 2-mos	0.19	0.38	0.62
	Relational Interactions 4-mos	1.05	0.59	0.07
	Problem-focused Interactions 4-mos	-0.24	0.32	0.45
	Mentor Dissatisfaction	0.06	0.25	0.80
	Dissatisfaction X 4m Prob.-focused Interactions	-0.06	0.2	0.76

*Note.* \* $p < .05$

<b>4-6 Months</b>				
Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.90*	0.36	0.01
	Relational Interactions 4-mos	0.59	0.5	0.23
	Problem-focused Interactions 4-mos	-0.06	0.44	0.90
	Relational Interactions 6-mos	0.92	1.25	0.46
	Problem-focused Interactions 6-mos	-0.53	0.95	0.58
	Mentor Dissatisfaction	-0.01	0.36	0.97
	Dissatisfaction X 6m Prob.-focused Interactions	-0.39	1.09	0.72

*Note.* \* $p < .05$

## Appendix D Moderation Effects of Mentor Frustration on Match Interactions and

### Match Persistence

#### *Appendix D.1*

#### **Mentor Frustration as a Moderator of Relational Interactions and Match Persistence at 2mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.02*	0.35	0.004
	Relational Interactions 2-mos	0.14	0.42	0.74
	Problem-focused Interactions 2-mos	0.26	0.29	0.37
	Mentor Frustration	-0.15	0.22	0.50
	Frustration X 2m Relational Interactions	-0.26	0.36	0.47

*Note.* \* $p < .05$

#### **Mentor Frustration as a Moderator of Relational Interactions and Match Persistence from 2-4mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.86*	0.39	0.03
	Relational Interactions 2-mos	-0.35	0.56	0.53
	Problem-focused Interactions 2-mos	0.2	0.37	0.58
	Relational Interactions 4-mos	0.98	0.54	0.07
	Problem-focused Interactions 4-mos	-0.31	0.33	0.35
	Mentor Frustration	-0.1	0.25	0.71
	Frustration X 4m Relational Interactions	0.3	0.88	0.74

*Note.* \* $p < .05$

#### **Mentor Frustration as a Moderator of Relational Interactions and Match Persistence from 4-6mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.91*	0.39	0.02
	Relational Interactions 4-mos	0.53	2.52	0.84
	Problem-focused Interactions 4-mos	-0.27	0.52	0.61
	Relational Interactions 6-mos	0.55	2.37	0.82
	Problem-focused Interactions 6-mos	0.03	1.5	0.98
	Mentor Frustration	0.01	4.18	1.00
	Frustration X 6m Relational Interactions	0.09	9.4	0.99

*Note.* \* $p < .05$

*Appendix D.2*

**Mentor Frustration as a Moderator of Problem-focused Interactions and Match Persistence at 2mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.03*	0.35	0.003
	Relational Interactions 2-mos	0.15	0.42	0.72
	Prescriptive Interactions 2-mos	0.25	0.28	0.38
	Mentor Frustration	-0.18	0.23	0.43
	Frustration X 2m Prescriptive Interactions	-0.1	0.32	0.76

*Note.* \* $p < .05$

**Mentor Frustration as a Moderator of Problem-focused Interactions and Match Persistence from 2-4mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.91*	0.37	0.01
	Relational Interactions 2-mos	-0.41	0.52	0.43
	Problem-focused Interactions 2-mos	0.21	0.37	0.58
	Relational Interactions 4-mos	0.99	0.55	0.07
	Problem-focused Interactions 4-mos	-0.27	0.31	0.39
	Mentor Frustration	-0.13	0.28	0.64
	Frustration X 4m Prob.-focused Interactions	0.08	0.31	0.80

*Note.* \* $p < .05$

**Mentor Frustration as a Moderator of Prescriptive Interactions and Match Persistence from 4-6mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.90*	0.42	0.03
	Relational Interactions 4-mos	0.49	4.5	0.91
	Problem-focused Interactions 4-mos	-0.25	1.27	0.85
	Relational Interactions 6-mos	0.56	2.08	0.79
	Problem-focused Interactions 6-mos	0.01	1.25	0.99
	Mentor Frustration	0.01	2.29	1.00
	Frustration X 6m Prob.-focused Interactions	0.16	9.8	0.99

*Note.* \* $p < .05$

**Appendix E Moderation Effects of Collaborative Authorship on Match Interactions  
and Match Persistence**

*Appendix E.1*

**Collaboration as a Moderator of Relational Interactions and Match Persistence at  
2mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.08	0.37	0.003
	Relational Interactions 2-mos	-0.62	0.92	0.50
	Problem-focused Interactions 2-mos	0.28	0.3	0.36
	Collaborative Authorship	0.03	0.46	0.95
	Collab. Authorship X 2m Relational Interactions	0.91	0.98	0.36

*Note.* \* $p < .05$

**Collaboration as a Moderator of Relational Interactions and Match Persistence from 2-  
4mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.96*	0.36	0.01
	Relational Interactions 2-mos	-0.34	0.52	0.57
	Problem-focused Interactions 2-mos	0.29	0.37	0.44
	Relational Interactions 4-mos	0.98	0.71	0.17
	Problem-focused Interactions 4-mos	-0.32	0.31	0.30
	Collaborative Authorship	-0.2	0.51	0.70
	Collab. Authorship X 4m Relational Interactions	-0.18	0.87	0.84

*Note.* \* $p < .05$

**Collaboration as a Moderator of Relational Interactions and Match Persistence from 4-  
6mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.28*	0.6	0.03
	Relational Interactions 4-mos	0.27	0.6	0.65
	Problem-focused 4-mos	-0.21	0.34	0.55
	Relational Interactions 6-mos	5.82	3.94	0.14
	Problem-focused Interactions 6-mos	-0.18	0.69	0.79
	Collaborative Authorship	-1.99	2.52	0.43
	Collab. Authorship X 6m Relational Interactions	-5.46	3.8	0.15

*Note.* \* $p < .05$

*Appendix E.2*

**Collaboration as a Moderator of Problem-focused Interactions and Match Persistence at 2mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	1.04*	0.36	0.004
	Relational Interactions 2-mos	0.06	0.4	0.89
	Problem-focused Interactions 2-mos	0.3	0.44	0.50
	Collaborative Authorship	-0.06	0.46	0.90
	Collab. Authorship X 2m Prob.-focused Interactions	-0.07	0.54	0.90

*Note.* \* $p < .05$

**Collaboration as a Moderator of Problem-focused Interactions and Match Persistence from 2-4mos**

Dependent Variable	Independent Variable	<i>B</i>	<i>SE</i>	<i>p</i>
Match Persistence	Mentor Ethnicity- White	0.92*	0.37	0.01
	Relational Interactions 2-mos	-0.42	0.53	0.44
	Problem-focused Interactions 2-mos	0.26	0.38	0.51
	Relational Interactions 4-mos	1.04	0.62	0.10
	Problem-focused Interactions 4-mos	-0.68	0.44	0.13
	Collaborative Authorship	-0.09	0.46	0.85
	Collab. Authorship X 4m Prob.-focused Interactions	0.51	0.51	0.32

*Note.* \* $p < .05$