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Through the Looking Glass: Adolescents? and Peers? Perspectives of Interpersonal Behaviors and Their Associations with Adolescents? Internalizing Symptoms

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THROUGH THE LOOKING GLASS: ADOLESCENTS' AND PEERS' PERSPECTIVES OF INTERPERSONAL BEHAVIORS AND THEIR ASSOCIATIONS WITH ADOLESCENTS' INTERNALIZING SYMPTOMS

By

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Through the Looking Glass: Adolescents' and Peers' Perspectives of Interpersonal Behaviors and Their Associations with Adolescents' Internalizing Symptoms

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Individuals who engage in excessive reassurance seeking (constantly seeking reassurance that one is needed and valued) have higher rates of internalizing disorders. However, little research has examined excessive reassurance seeking among adolescents, particularly in a non-clinical population. Furthermore, research has not examined how close relationships in adolescence, such as best friends and romantic partners, view an adolescent's use of excessive reassurance seeking behavior. This is particularly interesting, as best friends and romantic partners may be the primary recipients of this behavior. The current study sought to (a) examine the association between excessive reassurance seeking and internalizing symptoms among adolescents, (b) examine the agreement between adolescents' and close peers' ratings of excessive reassurance seeking as well as potential moderators of concordance, and (c) examine the association between peer ratings of excessive reassurance seeking behavior and adolescents' internalizing symptoms, both concurrently and prospectively over time.

Participants included 465 adolescents (61% girls), ages 15-20 years, 64.3% Hispanic, 19.1% White non-Hispanic, 6.3% Black and 10.3% other. Participants completed the Excessive Reassurance Seeking subscale of *Depressive Interpersonal Relationships Inventory*, the *Youth Self Report* (YSR) and the *Network of Relationships*

Inventory – Revised. Of this larger sample, a subsample of 44 adolescents (68% female), ages 15-18, 59.1% Hispanic, 31.8% White-non-Hispanic, 2.3% Black and 6.8% mixed ethnicity or other, was used to test hypotheses related to close peer's assessment of excessive reassurance seeking behavior. Participants also completed the YSR two months later. Data were collected as part of a larger study of adolescent peer relationships during class periods at public high schools in an urban area of the Southeast US.

Data were analyzed using hierarchical linear regression techniques, controlling for demographic variables and testing the unique contributions of study variables. Regarding the first study aim that sought to examine associations between excessive reassurance seeking and adolescents' internalizing symptoms, results indicated that excessive reassurance seeking was related to internalizing symptoms concurrently, but not prospectively. Age, gender and ethnicity were found to also be significant predictors of adolescents' internalizing symptoms concurrently, but only ethnic differences emerged prospectively. Regarding the second study aim, examining the concordance between self and peer reports of excessive reassurance seeking, the agreement between self and peer reports was significant. However, further analysis revealed this association was moderated by friendship quality and informant type. Specifically, relationships with high positive quality showed concordance, as opposed to those low in positive relationship quality. Furthermore, romantic partners showed concordance in reports, but not best friends. Regarding the third study aim that sought to examine whether both self and peer reports of excessive reassurance seeking were related to adolescents' internalizing symptoms, results indicated that both self and peer reports were uniquely related to internalizing symptoms concurrently; however this was not the case prospectively.

These findings suggest that certain peer informants (romantic partners, high quality relationships) may be reliable indicators of adolescents' excessive reassurance seeking behavior. This has potential implications in the assessment of adolescent internalizing symptoms and interpersonal behaviors associated with these symptoms. However, as results did not emerge in the current study over time, future research is needed to examine the developmental pathways between excessive reassurance seeking and internalizing symptoms.

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CHAPTER 1: INTRODUCTION

Examining symptoms of internalizing disorders in adolescence, such as feelings of depression and anxiety, offers unique opportunities to provide a conceptual framework for the epidemiological changes that occur during adolescence. Evidence suggests that the prevalence of internalizing disorders is high during adolescence. Specifically, prevalence rates for depression in children are around 5%; however, during adolescence lifetime prevalence rates increase by a factor of four, reaching adult levels of prevalence (Hankin, Abramson, & Moffitt, 1998). Similarly, certain anxiety disorders, including social phobia and panic disorder, are common during adolescence when they typically begin to emerge (Costello, Foley & Angold, 2006).

In order to understand how internalizing disorders emerge and develop during adolescence, it is critical to examine the potential contributions of peer processes and the emergence of symptoms of internalizing problems before they reach levels of clinical significance. Peer relations are of high importance during adolescence (Furman & Buhrmester, 1992). In fact, research has established links between friendship support, interpersonal interactions between friends, other peer experiences (i.e., victimization), and internalizing symptoms (Joiner, Alfano, & Metalsky, 1992; La Greca & Harrison, 2005; La Greca & Mackey, 2007; Prinstein, Boergers, & Vernberg, 2001). For example, among older adolescents, poor relationship quality between best friends and romantic partners has been linked with higher levels of social anxiety and depression (La Greca & Harrison, 2005). Additionally, the interpersonal behavior of excessive reassurance seeking (the tendency to constantly seek feedback from close friends that one is truly valued and needed) has been found to be particular pernicious, and linked to higher levels

of depressive symptoms in older adolescents and young adults (Joiner et al., 1992). The current study seeks to further examine the role of excessive reassurance seeking in adolescents' internalizing symptoms, as well as consider related factors, such as close peer relationships (e.g., best friendships and romantic relationships), and these peer's perspectives on adolescent behavior.

Excessive Reassurance Seeking and Internalizing Symptoms

Reassurance seeking, in small amounts, may be considered part of the development of adolescent relationships, which become increasingly more emotionally sophisticated (Asher & Parker, 1989; Bukowski, Newcomb, & Hartup, 1996). The concept of excessive reassurance seeking is part of Coyne's (1976) interpersonal theory of depression, which explores the idea that depressed individuals seek reassurance from others that they "truly" care. According to this theory, upon receiving this reassurance, however, depressed individuals also doubt the sincerity of these statements, causing them to seek more reassurance. This process continues to reinforce more frequent and excessive reassurance seeking, eventually leading to frustration in the individual's close relationships. This frustration causes a deterioration of those friendships and interpersonal rejection, which also increase depressive interpersonal behaviors, such as excessive reassurance seeking, and internalizing symptoms. It is important to note that certain aspects of this theory have been well-studied, while others merit further examination (for review, see Joiner, Metalsky, Katz, & Beach, 1999; Starr & Davila, 2008).

In order to test Coyne's (1976) theory, research has documented links between excessive reassurance seeking and declines in close relationship quality and satisfaction

(Benazon, 2000; Katz & Beach, 1997; Prinstein, Borelli, Cheah, & Aikins, 2005). Additionally, research has found associations among excessive reassurance seeking and depression (Joiner et al., 1992; Joiner & Schmidt, 1998; Katz , Beach, & Joiner, 1998; Prinstein et al., 2005). Taken together, along with other, similar findings, these results provide evidence for this interpersonal theory. However, there have been fewer studies using longitudinal methodology to better explore the causal patterns between internalizing symptoms, interpersonal difficulties and excessive reassurance seeking (Starr & Davila, 2008). Those studies that have utilized longitudinal methodology provide support for a causal link between excessive reassurance seeking and later depression (Davila, 2001; Joiner & Metalsky, 2001; Potthoff, Holahan & Joiner, 1995; Prinstein et al., 2005). In line with much of the aforementioned research, the focus of this study will be to examine adolescents' perceptions of excessive reassurance seeking and the potential consequences of this interpersonal behavior, rather than its antecedents.

Although existing research supports a link between interpersonal processes and adolescents' reports of internalizing symptoms (Inderbitzen, Walters, & Bukowski, 1997; La Greca & Harrison, 2005; La Greca & Lopez, 1998; La Greca & Mackey, 2007; Prinstein et al., 2005; Rudolph & Hammen, 1999; Stice, Ragan, & Randall, 2004), there are a number of gaps in the existing literature. One critical gap has been methodological, in that adolescents' reports of both interpersonal processes as well as internalizing symptoms are typically gathered from the adolescents' perspective (e.g., La Greca & Harrison, 2005; Prinstein et al., 2001), which may lead to measurement bias (e.g., shared method variance). There is a need for the development of measures that can assess key interpersonal constructs, such as reassurance seeking, from multiple informants.

Moreover, in an effort to better interpret peer reports of interpersonal behaviors, consideration must also be given to related factors, including the type of relationship between the informant and adolescent, as well as the quality of that relationship.

Thus, the current study sought to examine excessive reassurance seeking and evaluate whether this construct can be assessed using peer informants. More specifically, the study had three specific aims: a) to examine the association between excessive reassurance seeking and internalizing symptoms among a community sample of adolescents, b) to examine the correspondence between adolescents' and their close peers' report of excessive reassurance seeking and positive and negative relationship quality, and c) to examine the contribution of the close peers' reports of excessive reassurance seeking to adolescents' internalizing symptoms (above and beyond adolescents' self reports).

The sections below review past research findings on interpersonal processes that have been linked to internalizing symptoms, as well as address biases of individuals with internalizing symptoms that may affect their reporting of their behavior. First, the role of close peer relationships in adolescents' emotional functioning will be examined, followed by a review of interpersonal processes that have been linked to internalizing symptoms. Next, the potential for close peers to serve as an informant of adolescents' internalizing symptoms will be reviewed. Finally, potential relevant factors to both internalizing symptoms and the validity of peer informants, such as gender and relationship quality, will be discussed.

Close Peer Relationships in Adolescence: Best Friendships and Romantic Relationships

Close peer relationships in adolescence become increasingly important for an adolescent's social and emotional functioning (Buhrmester & Furman, 1987; Furman & Buhrmester, 1992). It is important to distinguish between the multiple peer influences that affect adolescents, including larger peer groups, friendships, and romantic relationships (La Greca, Davila, & Siegel, 2009). In examining interpersonal processes related to excessive reassurance seeking, it is important to consider adolescents' dyadic relationships. Most notably, this includes adolescent best friendships and romantic relationships (La Greca & Harrison, 2005). As such, it is important to consider the development of each type of relationship and its role in an adolescent's functioning.

Adolescents' best friendships can provide opportunities for increased intimacy, companionship, disclosure, and serve as models for future intimate relationships (Asher & Parker, 1989; Bukowski, Newcomb, & Hartup, 1996; Furman & Buhrmester, 1985; Hartup, 1992). In addition to the aforementioned positive effects of friendships in adolescence, research has even found that friendships can serve as protective factors against internalizing symptoms (Bishop & Inderbitzen, 1995; La Greca & Lopez, 1998).

However, research has also found deleterious effects of friendships on adolescents' well-being. Notably, negative experiences within an adolescent friendship, such as criticism and antagonism, have been found to be associated with negative psychological outcomes, such as anxiety and depression (Demir & Urberg, 2004; Borelli & Prinstein, 2006; Hussong, 2000; La Greca & Harrison, 2005). It is also worth noting that even within the context of good friendships, interpersonal processes can have negative effects on psychological functioning. The concept of co-rumination, or

excessive discussion of personal problems within a relationship, is one such example. Co-rumination has been found to exist in relationships that are high in friendship quality, yet this process has also been linked to internalizing symptoms (Rose, 2002). Taken together, these findings emphasize the importance of considering close friendships as an important context for examining interpersonal processes and adolescent well-being. In fact, much of the literature on excessive reassurance seeking, particularly among adolescents, has been in the context of best friendships (Prinstein et al., 2005).

In addition to adolescent best friendships, romantic relationships are an important context for examining interpersonal processes that may influence an adolescent's internalizing symptoms. Romantic relations are relatively common in mid-to-late adolescence, with most adolescents' reporting a current or previous romantic partner by age 16 (Carver, Joyner & Udry, 2003). Romantic relationships often begin as an outgrowth of opposite-sex friendships, yet even younger adolescents view them as unique relationships distinct from friendships in qualities such as passion (Connolly, Craig, Goldberg, & Pepler, 1999). As adolescence continues, they become increasingly more sophisticated and central to an adolescent's emotional functioning (Collins, 2003; Laursen, 1996).

Like best friendships, romantic relationships offer positive benefits, such as social support, self-esteem and intimacy development (Collins, 2003; Connolly & Goldberg, 1999). However, adolescents in romantic relationships also report higher levels of internalizing symptoms than those who are not romantically involved, suggesting that romantic relationships may also have negative effects in adolescence (Davila, Steinberg, Kachadourian, Cobb & Finchman, 2004; Joyner & Udry, 2000). Additionally, research

has found that negative qualities of friendships and romantic relationships have unique positive associations with adolescent internalizing symptoms, even while controlling for the effects of one another (La Greca & Harrison, 2005). These findings highlight the importance of examining adolescent romantic relationships, interpersonal processes, and internalizing symptoms. In particular, research on excessive reassurance seeking in romantic relationships has found higher excessive reassurance seeking to be related to lower relationship satisfaction and depression (Katz & Beach, 1997; Katz, Beach, & Joiner, 1999). However, despite findings that romantic relationships are important in adolescence, research on excessive reassurance seeking in romantic relationships has been limited to college students and older adults (Katz & Beach, 1997; Katz, Beach, & Joiner, 1999).

In summary, adolescent close relationships, specifically best friendships and romantic relationships, offer many positive benefits to adolescent emotional and social functioning. However, they can also contribute to interpersonal stress and internalizing symptoms. Because the current study seeks to examine linkages between interpersonal behaviors, like excessive reassurance seeking, and internalizing symptoms, the unique contexts of best friendships and romantic relationships must be considered. Specifically, excessive reassurance seeking may differ in frequency and meaning between the context of a friendship or a romantic relationship. Furthermore, because this study will examine the validity of close peer raters (either friends or romantic partners), it is necessary to understand and consider that perceptions of excessive reassurance seeking and associations with social and emotional functioning may differ due to the type of relationship that exists between adolescents and close peer informants.

Linkages Between Interpersonal Processes and Adolescents' Internalizing Symptoms

One of the aims of this study is to examine the association between the interpersonal behavior of excessive reassurance seeking and adolescents' internalizing symptoms. Research has previously documented the links between internalizing symptoms and interpersonal behaviors among older adolescents and young adults. Individuals who are socially anxious tend to have interpersonal styles that are classified by dependence, lack of assertiveness, and avoidance (Grant, Beck, Farrow & Davila, 2007). In turn, these interpersonal styles, particularly avoidance, have been linked to depression longitudinally (Grant et al., 2007). Furthermore, the interpersonal model of depression has highlighted a cyclical pattern in which maladaptive interpersonal behaviors increase the likelihood that an individual will be rejected and that this interpersonal rejection and isolation then leads to increases in depressive symptoms (for review, see Joiner, Coyne, & Blalock, 1999). As mentioned previously, past research has also identified the maladaptive interpersonal behavior of excessive reassurance seeking as one specific interpersonal process that appears to be linked to increases in depressive symptoms in older adolescents and young adults (Joiner et al., 1992).

As alluded to above, most past research on excessive reassurance seeking has focused predominately on older adolescents and young adults (i.e., college students; Davila, 2001; Joiner et al., 1992; Joiner & Metalsky, 2001). Thus, the current study expanded our understanding of excessive reassurance seeking and its links to interpersonal functioning in several ways.

The current study focused on excessive reassurance seeking exclusively among adolescents, an understudied population. A recent meta-analytic review of excessive

reassurance seeking identified only five published studies examining excessive reassurance seeking in children or adolescents (Starr & Davila, 2008). Similar to older populations, the results of these studies found that excessive reassurance seeking in adolescents is related to higher rates of depressive symptoms (Abela, Zurhoff, Ho, Adams, & Hankin, 2006; Joiner, 1999; Prinstein et al., 2005). However, four of these studies have been limited to samples of children of affectively ill parents (Abela, Hankin, Haigh, Adams, Vinokuroff & Trayhern, 2005; Abela et al., 2006), or inpatient youth (Joiner, 1999; Joiner, Metalsky, Gencoz, & Gencoz, 2001). In the one study that examined excessive reassurance seeking among a community sample of adolescents (N = 520), Prinstein and colleagues (2005) found unique gender differences in the relationship between excessive reassurance seeking, depression and friendship quality. Specifically, boys who engaged in greater reassurance seeking had higher levels of depressive symptoms over an 11 month period, but for girls there was an interaction between high reassurance seeking and low positive friendship quality, such that low levels of friendship lead to increases in depression over time only in the context of high excessive reassurance seeking. Despite the importance of these findings, there is a need to further evaluate several aspects of excessive reassurance seeking among adolescents, which was a goal of the present study.

Additionally, this study addressed the role of excessive reassurance seeking in adolescents' romantic relationships as well as close friendships, another area that has received little empirical attention. Research on older adolescents and young adult populations (e.g., college students) suggests that excessive reassurance seeking within a romantic relationship may be particularly pernicious (Starr & Davila, 2008); however,

this has not been looked at in younger adolescents. Furthermore, there is little data that examines the relative strength of associations between excessive reassurance seeking and internalizing symptoms across different close interpersonal relationships. Given these findings, as well as findings suggesting that romantic relationships become more important in middle to late adolescence (Collins, 2003), examining excessive reassurance seeking and internalizing symptoms within the context of romantic relationships as well as close friendships is of critical importance. Additionally, this period of middle to late adolescence is the only developmental age group between childhood and young adulthood not studied by past literature on excessive reassurance seeking in a community sample.

In summary, the current study addressed limitations of existing research in several critical ways. First, it examined excessive reassurance seeking in adolescents, a population that has been understudied in this literature, despite the importance of peer relations at this age. Second, it examined associations between excessive reassurance seeking and internalizing symptoms in adolescents while considering the role of both friendships and romantic relationships. Past research has not considered the role of romantic relationships in excessive reassurance seeking with adolescents. Additionally, past research with both adolescent and adult populations has not examined excessive reassurance in the context of both friends and romantic partners simultaneously. In addition to addressing these limitations of previous research, this study also examined the role of close peers as informants for adolescents' excessive reassurance seeking.

Close Peers as Informants of Adolescent Behavior

A second aim of the present study was to examine the correspondence between adolescents and their close peers' reports of excessive reassurance seeking; past research has examined excessive reassurance seeking using only via self-report data (e.g., Joiner et al., 1992; Prinstein et al., 2005). This is a key limitation because depressed individuals have been shown to exhibit a variety of biased self-perceptions, such as underestimation of competence and peer acceptance, overestimations of peer victimization, or biases towards more negative stimuli (De Los Reyes & Prinstein, 2004; Joormann & Gotlib, 2007; Rudolph & Clark, 2001). Thus, it is important to examine whether adolescents' self reports of excessive reassurance seeking are concordant with their close peers' reports of the same interpersonal behavior.

An additional reason to examine the concordance between self and close peer reports of excessive reassurance seeking is because excessive reassurance seeking is, by nature, an interpersonal process. Thus, examining its presence from both individuals in the close dyadic relationship is likely to be informative. Furthermore, as Coyne's (1976) interpersonal theory describes, the damaging effects of reassurance seeking come from the elicitation of frustration and interpersonal rejection from close relationships that occurs as a result of this behavior. Thus, close peers may become frustrated with the excessive reassurance-seeker before they begin to reject that individual. As such, close peers may notice that these reassurance-seeking behaviors have become "excessive" in advance of the reassurance seeker. Furthermore, close peers may recognize this behavior at a point when it has not yet led to such severe frustration and rejection that the reassurance seeker has noticed. While research has not focused on the emergence of

excessive reassurance seeking, it is possible that peers may recognize this behavior earlier than individual's own self-perception for the reasons described above. Earlier recognition of this behavior may, in turn, improve understanding of the development of internalizing symptoms in adolescence, as well as its treatment.

A final aim of this study was to empirically examine the predictive validity of close peer reports of excessive reassurance seeking. It is important to note that there is little research examining the presence of excessive reassurance seeking from multiple informants. Peer reports of other interpersonal processes, including peer victimization, peer acceptance and friendship status, have been widely used in past research (Grotpeter & Crick, 1996; La Greca & Prinstein, 1999; Schwartz, Gorman, Dodge, Bates & Pettit, 2008). Furthermore, the utility of teachers and parents as informant source decreases in adolescence (La Greca & Lemanek, 1996). In consideration of this, close peers may aid in the assessment of excessive reassurance seeking as a reliable informant source. In line with this perspective, research with a community sample of 126 adolescents in 63 mutually reciprocal best friendship dyads that examined peer reports of excessive reassurance seeking provided promising results. Using adolescents aged 14-15 years old, Landoll and Prinstein (2008) examined the utility of best friends as informants of adolescents' excessive reassurance seeking. Results suggested that peer reports of excessive reassurance seeking, but not self-reports, marginally predicted increases in adolescents' depressive symptoms six months later.

However, these preliminary findings did not address the association between excessive reassurance seeking and broader internalizing symptoms as a potential outcome. Nor did this study examine the potential moderating influence of gender or

relationship quality. In fact, using close peer informants, Swenson and Rose (2009) considered the moderating role of gender and friendship quality, finding that girls and friends with higher positive friendship quality demonstrated greater concordance with an individuals' self report of internalizing symptoms than did boys or those with low friendship quality. This encouraging work suggests that close friends may be good informants for other aspects of adolescents' functioning. The current study extended this line of research by examining the concordance between close friends' and adolescents' self reports of excessive reassurance seeking, and also evaluating variables that might moderate the informant concordance, such as gender and relationship quality.

Current Study

In view of the issues outlined above, the current study had three specific aims. These aims are detailed in the following section.

Specific Aim #1 was to examine the relationship between excessive reassurance seeking and anxious and depressed internalizing symptoms in adolescents, both concurrently and longitudinally. Short-term longitudinal analyses allowed for the evaluation of whether or not excessive reassurance seeking was related to increases in internalizing symptoms and could provide stronger evidence for the potential causal role of excessive reassurance seeking in adolescents' internalizing symptoms. Past research has suggested that a two month time frame is sufficient and appropriate in order to capture the rapid fluctuations that occur developmentally within peer relationships in adolescence (Siegel, La Greca, & Harrison, 2009). It was expected that higher levels of excessive reassurance seeking would be related to higher levels of internalizing symptoms both concurrently and over time. This hypothesis is consistent both with

previous research on excessive reassurance seeking and internalizing symptoms in adults (Davila, 2001; Joiner et al., 1992; Joiner et al., 2001), as well as past research utilizing a longer longitudinal time frame with an adolescent population (Prinstein et al., 2005).

Specific Aim #2 was to examine the concordance between self- and close peer-reports of excessive reassurance seeking, and to examine whether gender and relationship quality moderate this relationship. It was predicted that self- and close peer-reports would be strongly positively correlated as excessive-reassurance seeking is an observable, interpersonal behavior; however, it was also expected that they would be unique constructs. Furthermore, it was predicted that gender and relationship quality would moderate this relationship, such that there would be higher concordance among girls than boys, and among relationships with higher (than lower) positive quality. These moderating relationships for excessive reassurance seeking were predicted based on past research with peer informants of depression (Swenson & Rose, 2009).

Specific Aim #3 was to examine the predictive validity of close peer reports of adolescents' excessive reassurance seeking, over and above self-reports of excessive reassurance seeking, on adolescents' internalizing symptoms. It was predicted that these peer reports would provide incremental validity beyond self reports to the prediction of both concurrent and longitudinal levels of internalizing symptoms, as close peers may be acutely attune to the excessive reassurance seeking behaviors of their friends, as the recipients of these behaviors.

CHAPTER 2: METHOD

Participants

Participants were 458 tenth through twelfth graders recruited from two local public high schools in Miami-Dade County. Participants were 39% male and 61% female, and ranged in age from 15-18 years (M = 17.0 SD = .94). Inclusion criteria included enrollment in a Miami-Dade public high school, written parental consent, and age 18 years or younger. The sample was 65% Hispanic, 19% White non-Hispanic, 6% Black (African-American and Caribbean American) and 10% mixed ethnicity or other. This sample was part of a larger study of 600 tenth through twelfth graders who completed relevant study measures. Reasons for exclusion from this study included failure to complete the full study protocol, or being older than age 18. The participation and attrition rates for the entire study are shown in Figure 1.

The sample for the current study had a higher percentage of females than the larger study who completed demographic information, t (598) = 3.81, $p < .001$. The larger sample also had a different ethnic composition with slightly more White participants and slightly fewer Hispanic and Black participants, χ^2 (5) = 15.15, p = .01. Additionally, within the larger sample, 20 participants completed measures of excessive reassurance seeking but not other study variables, and these participants reported higher levels of excessive reassurance seeking than the sample used for analysis, t (476) = 2.14, p = .03.

Of the 458 participants who participated at Time 1 and completed relevant study measures, 391 (85%) were available and participated at Time 2. The primary reason that students were lost to follow-up was being absent on the day of testing. Other reasons

included having left the school between the two time points, failure to complete all relevant study measures, and refusal to participate at Time 2. The 391 participants used for analyses involving data collected at both Time 1 and Time 2 were 40% male and 60% female, and ranged in age from 15-18 years (M = 16.9 SD = .94); their ethnicity was 65% Hispanic, 20% White non-Hispanic, and 5% African-American and Caribbean American non-Hispanic and 10% mixed ethnicity or other. These 391 adolescents did not differ from the 67 adolescents who only participated at Time 1 on any demographic variables or key study variables.

In order to evaluate close peer-reports of adolescent excessive reassurance seeking, a subsample of 44 participants of the original 458 participants (10%) was used. These 44 adolescents had a best friend or romantic partner who also participated in the study and completed relevant study variables, thus providing a rating for the adolescents' excessive reassurance seeking at Time 1. Twenty of these adolescents were in 10 reciprocal best friendship dyads (i.e., each friend reported on the other's excessive reassuring seeking). Nine adolescents had a report by a non-reciprocal best friend, meaning that they were identified by another adolescent as that individual's best friend (and thus were rated by that individual on their excessive reassurance seeking); however, the target adolescent only listed that individual as one of their close friends and did not provide a rating for that friend's excessive reassurance seeking. Finally, eight romantic relationship dyads (i.e., 16 adolescents) were identified, but one member of an identified dyad had missing data on individual key study variables and thus could not be included in the analyses, even though they were able to serve as an informant for their partner. This left 15 adolescents in romantic relationships. Three participants had information from

both a reciprocal best friend and a romantic partner, thus the average of these two raters was taken to calculate a peer informant score.

These 44 adolescents with peer informant ratings for excessive reassurance seeking were 32% male and 68% female, and ranged in age from 15-18 years (M = 17.2 SD = .83); their ethnicity was 59% Hispanic, 32% White non-Hispanic, 2% African-American and Caribbean American non-Hispanic and 7% mixed ethnicity or other. This subsample did not differ from the 414 adolescents who did not have a close peer's report on any demographic variables or most key study variables. However, adolescents without peer-reports reported higher levels of excessive reassurance seeking in their best friends, t (72.41) = 2.65, p = .01. Of these 44 participants who had peer-reports of behavior, 8 of them did not complete relevant study measures at Time 2. They did not differ significantly from those whose completed all measures at Time 2 in demographic and most key study variables, however, those who did not complete all study measures had lower self-reports of excessive reassurance seeking, t (41.84) = 2.07, p = .04.

Procedure

First, approval was obtained from the University's Institutional Review Board and the Miami-Dade Public School system. Informed consent forms, requesting active parental consent for adolescents' participation, as well as letters explaining the study, were distributed to students by participating teachers. There was an option on the consent form for parents/guardians to refuse to grant permission for their child to participate in the research study. In addition, the consent form requested permission to contact parents/guardians with questions about their children after the school-based part of the study was completed. Approximately 55% of students returned their parental permission

forms, however this number is likely to be lower than the actual response rate, as many students were enrolled in classes taught by several participating teachers or took several classes with the same teacher. Of the students who did return a parental permission form, 637 (83%) were given permission to participate.

Time 1 data collection occurred at the beginning of the spring semester during two days at each participating school. During the scheduled data collection days, research staff administered questionnaires during participating teachers' classes. Students who did not have parental permission were either given another assignment by their teacher or puzzles to complete by the research staff. Students who were 18 years old were asked if they wished to participate.

In order to identify the subsample of 44 adolescents who reported on a best friend or romantic partner who was also a study participant, the following procedure was used. As part of data collection at Time 1, adolescents listed the first names and last initial of their closest friends and dating partners, as well as demographic information (e.g., age, gender, and ethnicity). This information was used by research personnel to match participants' data with that of their best friend and/or romantic partner. Trained research personnel looked for matching friendship and romantic partner pairs by taking each adolescent's identified best friend's first name and last initial, and checking for this name in the participant pool. If a potential match was found, that packet was examined to see if the potential friend had identified any close friend whose first name and last initial matched the name of the original participant. In order to reduce the likelihood that participants' data was mismatched with friends, matched subject pairs were only analyzed if they agreed on all demographic data, including age, gender and ethnicity.

If the potential match was confirmed, and that individual had also ranked the original participant as their best friend, then that packet was flagged as a reciprocal nomination. If the potential match was confirmed and that individual had not ranked the original participant as their best friend (but was listed on their report of close friends) then that packet was flagged as a non-reciprocal nomination. Thus, an adolescent could be a peer informant for an individual who was not an informant for them. For example, if adolescent A reported adolescent B as his or her very best friend, and adolescent B reported adolescent C as his or her very best friend, there would be a non-reciprocal relationship between adolescents A and B. However, provided that adolescent B reported adolescent A as a close friend (in his or her list of top 8 friendships), then adolescent A could serve as an informant for adolescent B, since he or she had rated adolescent B's level of excessive reassurance seeking as part of the study measures. Information would not be available on adolescent A, because adolescent B had completed relevant study measures about a different best friendship (adolescent C). A similar matching procedure was used to match romantic partners; however, reciprocity was required for all identified romantic partners. This matching process is illustrated in Figure 2.

Time 2 data collection occurred two months later, also during two days at each participating school. Procedures were similar to those at Time 1. Time 2 packets were shorter, taking students approximately 30 minutes to complete.

Measures

Background Information. (See Appendix A). At Time 1 only, adolescents completed a basic demographic questionnaire that collected information on participants' age, grade, gender, ethnicity, language, family composition, as well as close family and

peer relationships. In addition, adolescents provided information on the relative "rank" order of his or her close relationships.

Excessive Reassurance Seeking. At Time 1 only, adolescents completed part of the *Depressive Interpersonal Relationships Inventory* (DIRI; Joiner & Metalsky, 2001; Appendix B) to assess their own self report of excessive reassurance seeking; that is, the constant solicitation of validation from one's close relationships that they are truly needed and liked. These 4 items have been designed to elicit reassurance seeking that is excessive and also causes interpersonal frustration, and includes items, such as "Sometimes when you ask your friends and peers if they like you, they tell you to stop asking?" Adolescents are given four statements and asked to rate the extent to which they engage in each behavior on a scale of 1 (not at all) to 7 (very much). The items used from DIRI have been previously established as a reliable subscale assessing the specific behavior of excessive reassurance seeking in young adult samples, with α = .87-88 in initial samples (Joiner et al., 1992), and similar reliability in subsequent samples (Joiner & Metalsky, 2001). Fewer studies have utilized adolescent samples, but those that have report satisfactory and similar reliability (Prinstein et al., 2005). Scores can range from 4 – 28, with higher scores corresponding to more excessive reassurance seeking. Past research has found older adolescents who meet criteria for Major Depression or Dysthymia report significantly higher levels excessive reassurance seeking than those who do not (Joiner & Metalsky, 2001).

In addition to adolescents rating their own excessive reassurance seeking, adolescents additionally provided two peer reports of excessive reassurance seeking. Specifically, using similar items, adolescents rated the extent to which their best friend

and their romantic partner (if applicable) engaged in excessive reassurance seeking. The same response scale of scale of 1 (not at all) to 7 (very much) was used to generate ratings of the best friends' and the romantic partners' excessive reassurance seeking. If a participant had a peer informant that was identified using the subject matching procedures described above, then that informant's rating of the participant's excessive reassurance seeking was used as a peer report of their behavior. In the current sample, reliability for adolescents' self-reports of excessive reassurance seeking was acceptable, $\alpha = .77$. Additionally, adolescents' reports of their best friends' and romantic partners' excessive reassurance seeking were acceptable, $\alpha = .89$ and $\alpha = .87$, respectively, however, it is important to note that past research has not previously utilized peer reports of excessive reassurance seeking.

Close Relationship Quality. The *Network of Relationships Inventory-Revised* (NRI-R; Furman & Buhrmester, 1985; Appendix C) assesses the qualities of close friendships and romantic relationships. At Time 1 only, a shortened version of the NRI-R containing items for the positive and negative subscales was used (Furman, 1996; La Greca & Harrison, 2005). Each item on the NRI-R is rated on a scale of 1 (little or none) to 5 (the most), asking adolescents to rate the degree that statements apply to their best friendships and romantic relationships, if applicable. These items comprise two composite scores; 7 items assess positive qualities in a best friendship or romantic relationship (e.g., "How much does this person treat you like you're admired and respected?") and 6 assess negative qualities in a best friendship or romantic relationship (e.g., "How much do you and this person get upset with or mad at each other?"). These scores served as two indicators of the quality of adolescents' best friendships and

romantic relationships in the study analyses. Composite scores were calculated by averaging participants' responses to each of the items, and possible scores for each composite ranged from 1-5. The NRI-R has demonstrated excellent reliability and validity in past multiethnic studies (La Greca & Harrison, 2005). Using the full sample at Time 1, reliability was acceptable in the current sample for best friendships' positive friendship quality, $\alpha = .80$, and negative friendship quality, $\alpha = .86$, as well as for romantic relationships' positive quality, $\alpha = .86$, and negative quality, $\alpha = .90$.

Internalizing Symptoms. In order to assess adolescents' symptoms of anxiety and depression, participants completed the *Youth Self Report* (YSR; Achenbach, 1991; Appendix D) at Time 1 and Time 2. A shortened version of the YSR, containing only four of the eight subscales was administered. This version contains 54 items and 16 items were used to assess a composite scale of anxious and depressive symptoms (i.e., "I feel lonely", "I am nervous or tense"). Participants responded to these items on a scale of 0 – 2 by indicating if these items are "Not True", "Somewhat/Sometimes True" or "Very/Often True." The Anxious/Depressed subscale was calculated by summing scores across the 16 relevant items; thus scores could range from 0 – 32 on this subscale, with higher scores reflecting higher levels of internalizing symptoms. The YSR is widely used and well validated (Doyle, Mick, & Biederman, 2007; Ivanova et al., 2007), and reliability for the Anxious/Depressed subscale was acceptable in the current sample at Time 1, $\alpha = .88$, and at Time 2, $\alpha = .88$.

CHAPTER 3: RESULTS

Preliminary Analyses and Descriptive Information

Distribution of Variables and Missingness. All study variables were examined for normality and found to be within acceptable limits (Skewness < 3, Kurtosis < 10); thus, no transformations were made. Data was also analyzed for missingness. Individual items were missing from scales in less than 20% of cases, thus scale scores were computed provided individuals missed less than one item per scale. Additionally, each key study variable was missing in less than 20% of participants. However, as some participants were missing certain study variables and not others, use of list-wise deletion in analyses eliminated 24% of cases in the full sample. Adolescents without missing data, who are included in the analyses below, had a higher percentage of girls, more minorities, and lower levels of excessive reassurance seeking than the full sample (see Method, page 17). Given that data was not missing completely at random, imputation was not used on the full sample. Within the matched sample, only 4 cases of the 48 (8%) had to be eliminated due to missing data.

Means and Demographic Differences for Key Study Variables. Next, mean levels for study variables were examined in comparison to past community samples. Means and standard deviations for all study variables are presented for the full sample of 458 adolescents in Table 1, with the exception of Time 2 Internalizing Symptoms, which is presented for the 391 participants who completed the YSR at Time 2, and relationship variables for romantic partners, which is presented for the 234 (51%) adolescents who reported having a dating partner and provided ratings on that relationship. Adolescents who reported having a romantic partner at Time 1 did not differ from those who did not

report having a romantic partner at Time 1 in age or ethnicity, but more girls did report romantic partners than boys, $\chi^2(1) = 7.00$, $p < .01$, consistent with prior research (Carver et al., 2003; La Greca & Mackey, 2007). Additionally, adolescents who reported a romantic partner reported higher positive relationship quality with their best friend, t (441) = 3.94, p < .001 and lower levels of internalizing symptoms at Time 2, t (379) = 2.20, p = .03. Means and standard deviations for key study variables broken down by romantic relationship status (dating or non-dating at Time 1) are shown in Table 2[1].

For relationship variables, adolescents reported relatively high levels of positive relationship quality for best friends ($M = 4.14$, $SD = .71$) and romantic partners ($M = 4.19$ $SD = .77$). Additionally, they reported relatively low levels of negative friendship quality for best friends ($M = 1.68$, $SD = .75$), as well as romantic partners ($M = 1.96$, $SD = .88$). In general, these means were similar to those reported in other community samples (e.g., La Greca & Harrison, 2005; Prinstein et al., 2005).

Adolescents reported low levels of excessive reassurance seeking ($M = 6.42$, $SD = 3.61$), and reported their friends to engage in similar levels of excessive reassurance seeking, ($M = 6.59$, $SD = 4.24$). However, adolescents also reported their dating partner to engage in more excessive reassurance seeking ($M = 7.10$, $SD = 4.41$) than both themselves, t (325) = 2.93, p < .01, and their best friends, t (322) = 2.05, p = .04.

Lastly, adolescents' levels of internalizing symptoms (Anxious/Depressed subscale of the YSR) were relatively low at both Time 1 ($M = 6.37$, $SD = 5.62$) and Time 2 ($M = 5.80$, $SD = 5.42$). Using T-scores from the standardization sample (Achenbach,

[1] Separate analyses were conducted examining differences between adolescents dating at Time 1 and those not dating both including 9 same-sex romantic relationships and excluding these relationships, as the sample size was too small to directly test differences between these relationship types. Differences between daters and non-daters did not differ whether or not these relationships were included, thus in order to report on the most complete sample of adolescents, they are included in Table 3.

1991), these means were well within the average range, both at Time 1 (M = 55.00, SD = 7.65) and Time 2 (M = 54.32, SD = 7.07). Analyses were conducted using both raw scores and T-scores and no differences were found, thus, analyses are presented based on raw scores. Internalizing symptoms also demonstrated extremely high stability over time, r = .75, $p < .001$.

In addition to data for the full sample, means and standard deviations for all study variables within the match subsample of 44 adolescents are presented in Table 3. For most study variables, means were not significantly different from the full sample. However, adolescents in the matched sample rated their friend as lower in excessive reassurance seeking (M = 5.53 SD = 2.51), t (72.41) = 2.65, p = .01 than did adolescents who were not part of the matched sample.

As indicated in Tables 1 and 3, key study variables were also examined for demographic differences within the full and matched samples, respectively. As can be seen in Table 1, for the full sample, both Time 1 and Time 2 internalizing symptoms were found to differ by age, such that internalizing symptoms peaked at age 16 and declined afterwards.

Regarding ethnicity, Time 1 and Time 2 internalizing symptoms were found to differ by ethnicity, such that Hispanics reported lower levels of internalizing symptoms than other ethnic groups[2]. Post-hoc contrasts found that Hispanics had significantly lower internalizing symptoms than Whites at Time 1, t (116.83) = 2.19, p = .03. Furthermore, Hispanics reported significantly lower internalizing symptoms than Others at Time 1, t (21.81) = 2.09, $p < .05$, and Time 2, t (17.81) = 2.36, p = .03. Finally, Hispanics also

[2] These results were seen using both raw scores and standardized T-scores of internalizing symptoms to control for gender and age. Results presented are based on raw scores.

reported significantly lower internalizing symptoms than Blacks at Time 2, t (15.66) = 2.50, p = .02. Ethnic differences were also found with positive friendship quality, such that Hispanics reported higher positive friendship quality than all other ethnic groups (Whites: t (450) = 3.01, p < .01; Blacks: t (450) = 2.46, p = .01; Other: t (450) = 2.64, p < .01).

Regarding gender, differences were found in several key study variables. Boys reported higher excessive-reassurance seeking than did girls in their self-reports, as well as their reports of their romantic partner. Past research among adolescents reported no gender differences in self report excessive reassurance seeking (Prinstein et al., 2005) and has not examined reports of others' excessive reassurance seeking. Girls reported higher positive relationship quality and lower negative relationship quality with their best friends than did boys, similar to findings reported previously (La Greca & Harrison, 2005). Lastly, girls reported more internalizing symptoms at Time 1 and Time 2 than did boys. Means and standard deviations for internalizing symptoms were similar to those reported in the original normative sample for the Youth Self Report by gender (Achenbach, 1991). Given these significant differences, demographic variables were controlled for in subsequent analyses involving internalizing symptoms.

As can be seen in Table 3, for the matched sample, Time 1 internalizing symptoms were found to differ by gender, with girls reported higher levels of internalizing symptoms. Due to the restricted sample size, ethnicity was grouped into White and Non-White. Fifteen and 16 year olds were grouped together also due to restricted sample size. Significant differences were not seen within key study variables by

either age or ethnicity. Nor were there any significant differences within key study variables for ratings provide by a friend or romantic partner.

Correlations Among Key Study Variables. Bivariate correlations are shown in Table 4 for the full sample and in Table 5 for the matched sample of adolescents. With respect to the full sample (see Table 4), significant correlations emerged in expected directions. Specifically, there were significant positive associations between negative relationship quality, excessive reassurance seeking, and internalizing symptoms, and significant negative associations between positive friendship quality, excessive reassurance seeking, and internalizing symptoms. Within the matched sample (see Table 5), significant correlations also emerged in the expected direction, although fewer correlations reached significance with a reduced sample size. Significant positive associations were seen between excessive reassurance seeking and Time 1 internalizing symptoms. Additionally, adolescents who reported that they engage in more excessive reassurance seeking also reported that their best friend and romantic partner engaged in more excessive reassurance seeking.

Specific Aim 1: Concurrent and Prospective Associations Between Excessive Reassurance Seeking and Internalizing Symptoms

Next, in order to test the first specific aim that excessive reassurance seeking is associated with internalizing symptoms both concurrently and longitudinally, two regression analyses were conducted. The first regression predicted internalizing symptoms at Time 1 (YSR scores on anxiety/depression). Demographic variables (age, gender and ethnicity) were entered on the first step, and self-report of excessive reassurance seeking was entered on the second step. The R^2 values, R^2 change values, and betas for this model are presented in Table 6. The demographic variables were significant

and contained several significant predictors. Age was found to be a significant predictor, such that younger adolescents reported higher internalizing symptoms (see Table 6). Gender was also found to be a significant predictor, with girls reporting more internalizing symptoms than boys. Lastly, being Hispanic was a significant predictor of lower internalizing symptoms compared to White adolescents. The addition of excessive reassurance seeking was also significant and accounted for an additional 12% of the variance. The final model was significant, F (6, 458) = 14.52, $p < .001$ and accounted for 16% of the variance in internalizing symptoms. In line with the study hypothesis, higher levels of excessive reassurance seeking were related to higher levels of internalizing symptoms at Time 1.

In order to examine longitudinal associations between excessive reassurance seeking and Time 2 internalizing symptoms, a second linear regression model was examined. This model was identical to the first, except that Time 1 Internalizing Symptoms was also entered on the initial step. The R^2 values, R^2 change values, and betas for this model are presented in Table 6. While the final model was significant, F (7, 383) = 73.92, $p < .001$, and accounted for 58% of the variance, inconsistent with the study hypothesis, excessive reassurance seeking was not a significant predictor, $\beta = .04$, $p = .23$. Given the high degree of correlation between Time 1 and Time 2 internalizing symptoms ($r = .75$), an exploratory analysis was conducted predicting Time 2 internalizing symptoms from a reduced model that did not include Time 1 internalizing symptoms. In this reduced model, excessive reassurance seeking was a significant predictor of Time 2 internalizing symptoms, $\beta = .26$, $p < .001$.

Specific Aim 2: Concordance Between Self and Peer Reports of Excessive Reassurance Seeking and Moderating Effects of Relationship Quality and Informant Type

The second set of analyses examined the concordance between self and peer reports of excessive reassurance seeking, as well as the role of gender and relationship quality as potential moderators of this relationship. In general, it was predicted that peer- and self-reports would be related and that higher correspondence would be seen among girls than boys and among relationships with higher versus lower positive quality. These analyses utilized the matched subsample of 44 participants who had a peer report of excessive reassurance seeking (by their best friend or romantic partner).

A linear regression model was conducted predicting an individual's own report of excessive reassurance seeking. As no significant demographic differences were found for either self or peer reports of excessive reassurance seeking, they were not included in these analyses. The R^2 values, R^2 change values, and betas for this model are presented in Table 7. In the first step, an adolescent's best friend or romantic partner's report of the target individual's excessive reassurance seeking was entered. As can be seen in Table 7, this step was significant and accounted for 19% of the variance. In the next step, main effects of an adolescent's gender and positive relationship quality (as rated by the adolescent's self report) with their peer rater were entered; this step did not reach significance. The third step contained all two-way interactions between the peer-report of excessive reassurance seeking, gender, and positive relationship quality. This step was not significant but included a significant interaction between positive relationship quality and peer-report of reassurance seeking. The three-way interaction entered on the fourth step was not significant. Because the three-way interaction was not significant and two of the two-way interactions were not significant, these interactions were dropped from the

regression analysis. The final model, then, included peer-report of excessive reassurance seeking (step 1), positive relationship quality (step 2), and the interaction between them (step 3). This model was significant, F (3, 31) = 4.58, $p < .01$, and accounted for 31% of the variance in adolescents' self report of excessive reassurance seeking.

Accordingly, the interaction was probed following procedures outlined by Aiken and West (1991), and further elaborated by Holmbeck (2002). The interaction was graphed and is presented in Figure 3. Simple slope analyses indicated that when relationship quality was low (-1 *SD* below the mean), peer-report of excessive reassurance seeking did not predict self-report. When adolescents reported high positive relationship quality (+1 *SD* above the mean), peer-reports of excessive reassurance were significantly related to self-reports of excessive reassurance seeking, $\beta = .64$, t (31) = 3.58, $p < .01$. This finding is partially consistent with the study hypothesis, in that positive relationship quality moderated concordance between adolescent and peer reports of excessive reassurance seeking, but inconsistent in that gender was not found to moderate this relationship. Additionally, these findings were also consistent with the study hypothesis in that overall peer and self reports of excessive reassurance seeking were significantly related.

Additional, exploratory post-hoc analyses were conducted to examine whether or not the concordance between self and peer reports of excessive reassurance seeking differed between friends and romantic partners, or differed between relationships that were or were not reciprocal. For the 3 individuals who had both friend and romantic partner reports, only the score from their romantic partner was used to allow for

additional power by increasing the total number of romantic partner informants[3]. As with the analyses above, in the first step, an adolescent's best friend or romantic partner's report of the target individual's excessive reassurance seeking was entered. In the second step, aspects of the close relationship were coded as two dichotomous variables: one for relationship type (friendship or romantic partnership) and one for whether it was reciprocal or not (reciprocal best friends and romantic partners were coded as reciprocal, non-reciprocal friendships were not). This second step did not reach significance in the regression equation. The third step contained two-way interactions between the peer-report of excessive reassurance seeking and relationship type, and between peer-report and relationship reciprocity. This step was significant and included a significant interaction between relationship type and peer-report of reassurance seeking. This model was significant, F (5, 38) = 2.99, p = .02, and accounted for 28% of the variance.

The significant interaction between peer-report of excessive reassurance seeking and relationship type is presented in Figure 4. Simple slope analyses indicated that among friendship pairs, peer-report of excessive reassurance seeking did not predict self-report of excessive reassurance seeking, β = -.29, t (38) = 1.21, p = .23. However, among romantic partnerships, peer-reports of excessive reassurance seeking did significantly predict adolescents' self-reports of excessive reassurance seeking, β = .57, t (38) = 3.26, p < .01. The small subsample size did not allow for the testing of whether or not concordance between reports was moderated by having a friend or romantic partner of the same or opposite sex; however, in all but 2 cases, adolescents had either a same-sex best friend or an opposite-sex romantic partner.

[3]. Findings were identical when friends' reports were used for these three individuals in parallel analyses.

Specific Aim 3: Examining Peer- and Self-Report of Excessive Reassurance Seeking and Internalizing Symptoms

The final study hypotheses proposed that peer-reports of excessive reassurance seeking would predict internalizing symptoms concurrently and longitudinally. Additionally, it was hypothesized that peer-reports of excessive reassurance seeking would predict internalizing symptoms, even after controlling for self-report. The matched subsample was used to examine concurrent and prospective associations between internalizing symptoms and peer- and self-report of excessive reassurance seeking.

To explore the relative predictive power of both peer- and self-reports, a linear regression model was conducted to predict Time 1 internalizing symptoms (YSR anxiety/depression), entering demographic variables on the first step, peer-reports of excessive reassurance seeking entered on the second step, and self-reports of excessive reassurance seeking on the final step. The R^2 values, R^2 change values, and betas for this model are presented in Table 9. As can be seen in Table 9, the initial step with demographic variables was significant; girls reported significantly higher internalizing symptoms. Both the second and final steps were significant. The final model was significant, F (6, 37) = 4.24, $p < .01$, and accounted for 41% of the variance. As shown in Table 9, in partial support of study hypotheses, peer-reports of excessive reassurance seeking was a significant predictor of internalizing symptoms when entered on the second step. However, inconsistent with study hypotheses, it was no longer significant in the final model when self-reports of excessive reassurance seeking were added.

Finally, a linear regression was conducted to examine longitudinal associations between excessive-reassurance seeking and internalizing symptoms. Demographic variables and Time 1 internalizing symptoms were entered on the first step, with peer-

reports of excessive reassurance seeking entered on the second step and finally, self-reports of excessive reassurance seeking on the third step. The R^2 values, R^2 change values, and betas for this model are presented in Table 9. Only the first step was significant, revealing that internalizing symptoms at Time 1 were highly associated with internalizing symptoms at Time 2. Inconsistent with study hypothesis, peer-reports of excessive reassurance seeking was not a significant predictor of changes in internalizing symptoms over time. Similar to analyses using the full sample, given the high degree of correlation between Time 1 and Time 2 internalizing symptoms (r = .80), an exploratory analysis was conducted using a reduced model that did not include Time 1 internalizing symptoms. In this model, peer report of excessive reassurance seeking was a significant predictor when first entered in the model on the second step, β = .35, p < .05, but not in the final model when self-report was included. Interestingly, when self-report of excessive reassurance seeking was entered first, neither self- nor peer-report significantly predicted Time 2 internalizing symptoms.

CHAPTER 4: DISCUSSION

The importance of understanding interpersonal processes and the role they play in adolescents' emotional functioning has been emphasized in previous research (Demir & Urberg, 2004; Borelli & Prinstein, 2006; La Greca & Harrison, 2005; La Greca & Mackey, 2007; Prinstein et al., 2001; Rudolph & Hammen, 1999). Close friendships and romantic relationships can provide protection against psychological distress (Bishop & Inderbitzen, 1995; La Greca & Lopez, 1998), as well serve as a risk factor for poor psychological outcomes (Hussong, 2000; La Greca & Harrison, 2005; La Greca & Mackey, 2007; Prinstein et al., 2005; Rose, 2002; Stice, Ragan, & Randall, 2004).

One such maladaptive interpersonal behavior is that of excessive reassurance seeking. Previous research has identified strong associations between excessive reassurance seeking, interpersonal rejection, and internalizing symptoms, particularly among older adolescents and adults (Davila, 2001; Joiner et al., 1992; Joiner & Metalsky, 2001). Yet, despite these findings, research examining excessive reassurance seeking among younger adolescents has been less extensive. While findings suggest that excessive reassurance seeking predict higher rates of depression among younger adolescents (Prinstein et al., 2005), research has not fully explored the contexts within which this excessive reassurance seeking may occur.

In addition, research examining the role of close relationships in adolescence has, for the most part, focused on an individual's perception of these relationships. Given findings suggesting that individuals with internalizing symptoms may be prone to overestimate negative experiences and underestimate acceptance and support (De Los Reyes & Prinstein, 2004; Rudolph & Clark, 2001), this is a limitation of self reports. The

use of peer report may offer a more complete understanding of the association between excessive reassurance seeking and adolescents' internalizing symptoms, especially because excessive reassurance seeking is, by nature, an interpersonal process.

The current study addressed several limitations of existing research in this area by utilizing both peer- and self-reports of excessive reassurance seeking. Additionally, this study made use of both romantic relationships and close friendships to explore the concordance between peer- and self-reports of excessive reassurance seeking. As such, this study is one of the first to examine the predictive validity of a close peer informant's report of interpersonal processes associated with internalizing symptoms. Findings generally support the notion that excessive reassurance seeking is associated with internalizing symptoms among adolescents. Findings also suggest that peer informants may be more concordant with self-report within romantic relationships (versus within close friendships) and for relationships with higher positive qualities (versus lower positive qualities). In the sections below, each of the main study goals and findings are discussed.

Excessive Reassurance Seeking and Adolescents' Internalizing Symptoms

Consistent with the study hypothesis and past research, higher levels of excessive reassurance seeking were found to be positively associated with an adolescents' internalizing symptoms. Past research has documented the association between excessive reassurance seeking and internalizing symptoms in older adolescents and young adults. Thus, the current findings extend these associations to mid-adolescence, and indicate that excessive reassurance seeking is an important interpersonal behavior at a younger point in development.

However, excessive reassurance seeking did not prospectively predict increases in adolescents' internalizing symptoms. This was in contrast with past research on excessive reassurance seeking and internalizing symptoms (Davila, 2001; Joiner & Metalsky, 2001; Prinstein et al., 2005). There are several potential explanations for these non-significant findings. The first is that the high level of stability of adolescents' internalizing symptoms between the two time points reduced the power available to detect changes in adolescents' internalizing symptoms. The exploratory analysis conducted without controlling for Time 1 internalizing symptoms supports this explanation.

A second explanation may be that the nature of the relationship between excessive reassurance seeking and internalizing symptoms is different among high school aged adolescents than among older adolescents and young adults. Most research with older populations has suggested excessive reassurance seeking precedes internalizing symptoms; however, among younger adolescents, it is possible that internalizing symptoms predict subsequent excessive reassurance seeking. This type of pathway was not evaluated in the current study, as the measure of excessive reassurance seeking was only available at one time point. Further research that addresses potential bi-directional pathways would be important and desirable.

A final explanation may be that the two-month time period used in this study was too brief to evaluate the prospective relationship between excessive reassurance seeking and internalizing symptoms. Joiner and colleagues (1992) suggested that the relationship between excessive reassurance seeking and internalizing symptoms may be mediated through interpersonal rejection. If this is the case, it may take a longer period of time for excessive reassurance seeking to lead to feelings of interpersonal rejection, and

eventually to increases in internalizing symptoms. This suggestion is also supported by the longer time frame employed by Prinstein and colleagues (2005) of 11 months. Thus, it may be useful to examine this potential mediating pathway (i.e., interpersonal rejection) and to employ multiple time points over a longer period of time.

Overall, the most likely explanation for non-significant prospective findings is the high stability of internalizing symptoms across the two time points, thereby reducing the likelihood of finding a significant prospective association between excessive reassurance seeking and internalizing symptoms. Future research that examines potential bi-directional associations, that evaluates the constructs of interests over multiple time points, and that uses a measure of internalizing symptoms that is more sensitive to change, may be able to detect prospective associations between excessive reassurance seeking and internalizing symptoms among younger adolescents.

Concordance Between Self- and Peer-Reports of Excessive Reassurance Seeking

The second study goal was to examine concordance between self- and peer-reports of excessive reassurance seeking and potential moderators of this relationship. As predicted, peer-report and self-reported of excessive-reassurance seeking were significantly related to one another. While this association was significant, it was modest in magnitude (r = .32), which suggests that each informant source may capture unique aspects of excessive reassurance seeking. However, this magnitude is higher than concordance rates for related constructs, such as adolescents' internalizing or externalizing symptoms, which show agreement between self and friend reports ranging from r = .18 to r = .25 (Swenson & Rose, 2009).

The findings from this study also revealed that, as expected, the concordance between peer- and self-reports were moderated by gender and relationship quality. Specifically, when adolescents' perceived a close relationship as low in quality, their peer's report of excessive reassurance seeking did not agree with their own self-report. However, when relationship quality was perceived as high, there was higher concordance between peer and self-report. These findings are consistent with other research examining concordance between self and peer reports of internalizing symptoms (Swenson & Rose, 2009).

These findings advance our understanding of discrepancies and similarities between multiple informants by providing further evidence that the concordance between peer and self reports is better for higher quality close relationships. This is not surprising in that high quality close relationships have been found to be high in self-disclosure and intimacy (Asher & Parker, 1989; Furman & Buhrmester, 1985), which might facilitate being a good informant for each other's interpersonal behaviors. Additionally, research on homophily in adolescents suggests that high quality relationships may exist between adolescents that share similar viewpoints and personalities (Aboud & Mendelson, 1998) and thus may also assess behaviors in much the same way.

More interesting, however, is the findings that concordance was low between self- and peer-reports when an adolescent reported lower levels of positive relationship quality. One possible explanation is that lower quality close relationships lack the aforementioned qualities of intimacy and self-disclosure, thus leading to discrepant reports. An alternative hypothesis may be that differences among close peers on whether or not an individual engages in excessive reassurance seeking may cause tension in the

relationship, which in turn might reduce relationship quality. This explanation is in line with research on excessive reassurance seeking that suggests it leads to interpersonal rejection (Joiner et al., 1992).

Inconsistent with past research and study hypotheses was the finding that gender did not moderate the concordance of self- and peer-reports of excessive reassurance seeking. There are several potential explanations for these findings. The first is the small sample size used for the analyses of concordance may have limited the power to detect such moderation effects, especially if gender moderation effects were of small magnitude. It is also possible that gender does not moderate the association between excessive reassurance seeking and internalizing symptoms. Future research with larger samples would be able to address this issue.

In addition to planned analyses, exploratory analyses of other potential moderators revealed that the concordance between peer and self reports of excessive reassurance seeking was significantly greater for romantic partners than for friends. As mentioned before, studies have not examined excessive reassurance seeking in adolescents within a romantic relationship. Thus, the current findings suggest an important area of future research would be to more closely examine excessive reassurance seeking within the context of younger adolescent romantic relationships. Since past research has examined excessive reassurance seeking in romantic relationships of older adolescents and young adults (i.e., Benazon, 2000; Katz & Beach, 1997) and this context is understudied in younger populations, it may be important to examine whether or not maturity or length of relationship moderates the concordance between peer- and self-reports of excessive reassurance seeking.

The finding that self- and peer-reports were not concordant between friendship pairs was surprising. It also suggests the need for further research that examines how excessive reassurance seeking is viewed across friendships and romantic relationships in adolescence. Few studies on reassurance seeking have compared excessive reassurance seeking across several domains of close relationships, and to date, none have done so in an adolescent sample. This study represents the first step in examining differences in self and peer reports of excessive reassurance seeking in friendships and romantic relationships, as results suggest at the very least, there are differences in perception of these behaviors across contexts.

Taken together, the current study found that peer-reports are not concordant with self-reports in relationships of lower quality versus higher quality and within best friendships as compared to romantic relationships. This suggests that caution should be used with peer reports of interpersonal behaviors, such as excessive reassurance seeking, and that the value of peer reports depends both on the type and quality of the informant's relationship to the adolescent. Further research is necessary to examine what additional information, if any, divergent reports provide.

Peer Report of Excessive Reassurance Seeking and Adolescents' Internalizing Symptoms

Finally, this study examined the incremental validity of peer reports of excessive reassurance seeking to the prediction of internalizing symptoms over time. Given aforementioned limitations of self-report due to potential bias (De Los Reyes & Prinstein, 2004), and the decline in utility of parent and teacher informants in adolescence (La Greca & Lemanek, 1996), understanding the utility of peer reports is of critical importance.

In line with study hypotheses and past research, peer-reports of excessive reassurance seeking were found to be related to higher levels of internalizing symptoms concurrently. This is an important finding, as it highlights the potential utility of peer-reports in the assessment of interpersonal processes related to internalizing symptoms, and replicates findings from self-reports in the current study.

However, inconsistent with study hypotheses, yet similar to findings with self-report, peer-report was not associated with changes in internalizing symptoms over time. As discussed previously, the high stability in internalizing symptoms over time limited the ability to detect changes. This was further exacerbated by a lack of power in the matched subsample due to the small sample size.

While peer-reports did not provide significant incremental validity over self-reports, it is important to note that the exploratory analysis that did not control for Time 1 internalizing symptoms did find positive associations between peer-report of excessive reassurance seeking and Time 2 internalizing symptoms. Furthermore, self-reports of excessive reassurance seeking were not found to be significantly associated with Time 2 internalizing symptoms, even when not controlling for Time 1 internalizing symptoms. These findings are similar to Landoll & Prinstein (2008), who found that peer-report of excessive reassurance seeking marginally predicted increases in depression six months later, but self-reports did not predict changes in depression. Thus, taken together, this pattern of findings suggests that peer-reports may be a unique predictor of internalizing symptoms prospectively. Given the aforementioned results examining the concordance between self- and peer-reports of excessive reassurance seeking, the lack of incremental validity for peer reports may also be a result of additional related factors, such as

relationship quality and type. Unfortunately, the limited sample size reduced the ability to analyze higher-order interactions.

Limitations and future directions

Despite the promise of these findings, this study also contains several limitations. First, and perhaps most importantly, this study is limited by the small sample size used for assessing peer report and the resulting lack of power for certain analyses. The small sample size is primarily due to a study design limitation, which prevented identifying potential participant matches during initial data collection. Nevertheless, given the nascence of research in this area, these findings offer encouraging directions of future research. Future studies should employ a larger sample by directly recruiting adolescents in close relationships dyads, thus eliminating the needing for complex matching procedures within the context of a large community study.

Second, the matching procedure used in the current study may not be as effective as other procedures for identifying reciprocal peer relationships. For example, other researchers have directly recruited adolescents from a community-based sample in friendship dyads to serve as peer informants. Additionally, peer nomination procedures, similar to those used in research on peer acceptance and rejection (Coie, Dodge, & Kupersmidt, 1990), may also be beneficial to use in a community based sample as a more effective means of identifying potential close peer informants.

Third, the current study is limited by the global assessment of internalizing symptoms, rather than assessing specific internalizing disorders, or assessing distinct measures of anxiety and depression. This measurement limitation is important, as research suggests excessive reassurance seeking may be related to depression

specifically, rather than other forms of internalizing distress (i.e., anxiety; Joiner & Schmidt, 1998). In addition, the global assessment of internalizing symptoms, the YSR, is highly stable, potentially making it unsuitable for capturing changes in internalizing symptoms in a two-month prospective study. In the future, studies may wish to utilize measures that are more sensitive to depressive and anxious symptoms, and which are more sensitive to change over short term periods.

Fourth, this study did not examine additional measures of interpersonal rejection, such as broader measures of peer acceptance and rejection, which may be an important mediator between excessive reassurance seeking and internalizing symptoms. Research on excessive reassurance seeking has measured interpersonal rejection in a variety of ways (for a review see Starr & Davila, 2008), and assessing this construct in a variety of different ways may be particularly helpful when examining new methods of gathering data, such as the use of peer informants. For example, future research may benefit from using a peer nomination methodology as described above (Coie et al., 1990) to have adolescents generate both accepted and rejected classmates, as well as classmates with whom they are close friends or romantic partners.

Finally, this study is limited by use of a community sample that had relatively low levels of internalizing symptoms and excessive reassurance seeking. Furthermore, within the matched sample, peer reports of excessive reassurance seeking were even lower than in the larger sample. Thus, it is possible that the associations between internalizing symptoms and excessive reassurance seeking, as well as the concordance between self- and peer-reports may differ when compared to more clinically severe populations. Further research that examines these hypotheses among a clinical sample

would increase the generalizability of these findings and their applicability in clinical research and practice.

Conclusions

Despite these limitations, this study represents an important advancement, not only in the understanding of interpersonal processes in internalizing problems in adolescence, but also in the conceptualization and assessment of these difficulties and related constructs. Moving beyond self-report methodology, the incorporation of multiple informants aides in the assessment of both clinical and research questions, provided a conceptual framework exists to understand the context and characteristics surrounding informants (De Los Reyes & Kazdin, 2005; La Greca & Lemanek, 1996). Beyond adding an additional source of data, measuring peer-report of behavior also allows for the study of more complicated aspects of dyadic relationships. Additionally, within the context of clinical practice, a better understanding of an adolescents' peer relationships is likely to aid in the treatment of a variety of clinical disorders, given the well-documented influence peer processes have on psychological distress (Demir & Urberg, 2004; Borelli & Prinstein, 2006; Hussong, 2000; La Greca & Harrison, 2005; La Greca & Mackey, 2007; La Greca & Mackey, 2007; Prinstein et al., 2001; Prinstein et al., 2005; Rose, 2002; Rudolph & Hammen, 1999; Stice, Ragan, & Randall, 2004).

The promising findings of this study emphasize the need for future research that uses methodology allowing for both a larger sample, as well as an assessment of more features of the adolescent dyad to better understand the role peer-report may play in conceptualizing an individual's risk or resilience for psychopathology. In particular, excessive reassurance seeking in the context of romantic relationships in adolescence

merits further consideration. Additionally, future studies that are able to examine a both friendships and romantic relationships may be able to explore different associations with internalizing symptoms for excessive reassurance seekers who do so in a specific context (either within a friendship or romantic relationship) versus those who are more generalized and exhibit this behavior in multiple contexts. The ability to identify specific interpersonal processes, and the specificity and intensity of their association with internalizing symptoms would aid both research and practice.

In addition, the current study offers preliminary and tentative support for expanding the use of peer informants into other interpersonal constructs. Furthermore, given the findings on differences between romantic partners and best friends as informants, research that examines these two types of relationships simultaneously may provide context-specific results across various domains that would enrich our understanding of multi-informant research. Before peer reports are widely used, a more complete study of peer informants is needed. Research that examines both individual and dyadic relationship factors, as well as the potential biases of peer raters, is necessary to support the validity of peer informants.

Table 1. *Means (Standard Deviations) and T-tests and ANOVAs by Demographics for Key Study Variables in Full Sample (n = 458)*

	Partner PRQ[a, f]	Partner NRQ[b, f]	Friend PRQ[a]	Friend NRQ[b]	Self ERS[c]	Friend ERS[c]	Partner ERS[c]	Time 1 Int.[d]	Time 2 Int.[d, e]
Full Sample	4.19	1.96	4.14	1.68	6.42	6.59	7.10	6.37	5.80
	(.77)	(.88)	(.71)	(.75)	(3.61)	(4.24)	(4.42)	(5.62)	(5.42)
Gender (t-test, two-tailed)	.78	1.23	6.08***	3.86***	2.66**	.91	2.65**	2.05*	2.10*
Male	4.24	2.06	3.90	1.85	7.02	6.36	7.92	5.70	5.10
	(.67)	(.97)	(.67)	(.81)	(4.26)	(4.12)	(4.76)	(5.41)	(5.16)
Female	4.16	1.92	4.30	1.56	6.04	6.74	6.56	6.80	6.26
	(.82)	(.97)	(.69)	(.69)	(3.06)	(4.32)	(4.10)	(5.72)	(5.54)
Age (ANOVA)	1.52	2.12	.87	.65	.61	.08	.28	4.68**	3.73*
15	3.91	1.93	4.25	1.56	6.25	6.58	7.16	5.67	5.19
	(.99)	(.87)	(.64)	(.56)	(2.84)	(3.85)	(3.61)	(3.66)	(4.31)
16	4.14	1.73	4.06	1.65	6.74	6.76	7.38	7.77	6.97
	(.68)	(.78)	(.80)	(.72)	(3.91)	(4.23)	(4.44)	(6.88)	(6.71)
17	4.18	2.10	4.18	1.66	6.51	6.51	6.80	6.73	6.22
	(.82)	(1.00)	(.67)	(.75)	(3.72)	(3.89)	(4.44)	(5.85)	(5.53)
18	4.30	1.97	4.13	1.73	6.16	4.69	7.19	5.26	4.69
	(.70)	(.76)	(.69)	(.81)	(3.44)	(4.67)	(4.57)	(4.54)	(4.26)
Ethnicity (ANOVA)	.71	.45	5.68**	.09	.18	.94	.78	2.79*	4.63**
White	4.18	1.94	3.97	1.68	6.41	6.57	7.17	7.48	6.14
	(.79)	(.87)	(.75)	(.76)	(3.76)	(4.36)	(4.62)	(6.60)	(5.38)
Black	3.99	2.20	3.89	1.65	6.52	6.46	8.37	7.11	9.05
	(.77)	(1.29)	(.65)	(.69)	(4.22)	(4.35)	(4.50)	(5.58)	(6.43)
Hispanic	4.18	1.97	4.24	1.68	6.36	6.76	7.06	5.82	5.20
	(.78)	(.86)	(.68)	(.76)	(3.51)	(4.35)	(4.44)	(4.89)	(5.02)
Mixed Ethnicity/Other	4.41	1.81	3.96	1.63	6.77	5.63	6.37	7.38	7.32
	(.77)	(.80)	(.72)	(.76)	(3.64)	(3.04)	(3.66)	(7.39)	(6.58)

Note. *$p < .05$. **$p < .01$. ***$p < .001$. [a]PRQ = Positive Relationship Quality [b]NRQ = Negative Relationship Quality [c]ERS = Excessive Reassurance Seeking [d]Internalizing Symptoms (YSR Anxious/Depressed) [e]For Time 2, $n = 391$, [f]$n = 234$

Table 2. *Means (Standard Deviations) and T-tests (two-tailed) by Dating Status for Key Study Variables in Full Sample (n = 458)*

	t	Dating	Non-Dating
Friend Positive Relationship Quality	3.94**	4.26 (.68)	4.00 (.70)
Friend Negative Relationship Quality	1.09	1.63 (.78)	1.71 (.72)
Self Excessive Reassurance Seeking	1.18	6.24 (3.60)	6.64 (3.66)
Friend Excessive Reassurance Seeking	.01	6.56 (4.43)	6.56 (3.86)
Time 1 Internalizing Symptoms	1.73	5.91 (5.56)	6.82 (5.55)
Time 2 Internalizing Symptoms[a]	2.20*	5.14 (5.10)	6.35 (5.61)

Note. *$p < .05$. **$p < .001$. [a]For Time 2, $n = 391$

Table 3. *Means (Standard Deviations) and T-tests and ANOVAs by Demographics for Key Study Variables in Matched Sample* (n = 44)

	Close Peer PRQ[a]	Close Peer NRQ[b]	Self ERS[c]	Peer Rater ERS[c]	Time 1 Int.[d]	Time 2 Int.[d, e]
Matched Sample (n = 44)	4.22 (.54)	1.79 (.70)	6.03 (3.36)	6.31(3.75)	5.72 (4.71)	5.32 (4.91)
Gender (t-test, two-tailed)	1.58	1.54	.54	1.31	2.83**	1.91
Male	4.43 (.41)	2.12 (.98)	6.43 (4.29)	7.68 (5.38)	3.00 (3.94)	3.04 (4.07)
Female	4.12 (.58)	1.64 (.49)	5.83 (2.90)	5.67 (2.56)	7.00 (4.54)	6.32 (4.98)
Age (ANOVA)	.67	1.00	.51	.38	2.45	1.58
15-16	4.01 (.64)	1.48 (.28)	7.00 (4.17)	5.62 (2.44)	7.25 (4.83)	5.24 (4.40)
17	4.30 (.54)	1.79 (.79)	6.05 (3.42)	6.05 (2.88)	6.79 (4.67)	6.61 (5.47)
18	4.25 (.54)	1.93 (.76)	5.53 (2.98)	6.91 (5.02)	3.82 (4.29)	3.42 (3.87)
Ethnicity (t-test)	.08	.11	.80	.76	.46	.30
White	4.21 (.47)	1.81 (.82)	5.43 (1.70)	5.68 (2.54)	6.21 (4.51)	5.67 (4.46)
Other	4.22 (.59)	1.78 (.65)	6.30 (3.90)	6.60 (4.21)	5.50 (4.85)	5.14 (5.20)
Relationship Type (t-test)	.18	1.82	1.60	1.86	1.10	1.54
Romantic Partner	4.24 (.59)	2.03 (.74)	7.13 (4.36)	8.00 (5.03)	6.80 (5.28)	7.18 (5.64)
Best Friend	4.20 (.52)	1.61 (.64)	5.45 (2.63)	5.43 (2.58)	5.17 (4.38)	4.50 (4.43)

Note. *p < .05. **p < .01. ***p < .001. [a]PRQ = Positive Relationship Quality [b]NRQ = Negative Relationship Quality [c]ERS = Excessive Reassurance Seeking [d]Internalizing Symptoms (YSR Anxious/Depressed) [e]For Time 2, n = 36

Table 4. *Bivariate Correlations Among Key Study Variables in Full Sample (n = 458)*

	T2 Int.[a]	Friend PRQ[b]	Friend NRQ[c]	Partner PRQ[b, e]	Partner NRQ[c, e]	Self ERS[d]	Friend ERS[d]	Partner ERS[d, e]
Time 1 Internalizing Symptoms	.75***	-.16**	.17***	-.18**	.16**	.34***	.18***	.16**
Time 2 Internalizing Symptoms	-	-.24***	.14**	-.07	.12	.25***	.15**	.15*
Time 1 Best Friend								
Positive Relationship Quality		-	-.13**	.13*	-.02	-.15**	-.04	-.12*
Negative Relationship Quality			-	-.08	.20**	.15**	.10*	.18**
Time 1 Romantic Partner								
Positive Relationship Quality				-	-.21**	-.12*	-.09	-.12*
Negative Relationship Quality					-	.06	.12	.23***
Time 1 Excessive Reassurance Seeking								
Self						-	.43***	.43***
Friend							-	.39***

Note. *$p < .05$. **$p < .01$. ***$p < .001$. [a]Int. = Internalizing Symptoms (YSR Anxious/Depressed) [b]PRQ = Positive Relationship Quality [c]NRQ = Negative Relationship Quality [d]ERS = Excessive Reassurance Seeking, [e]$n = 235$

Table 5. *Bivariate Correlations Among Key Study Variables in Matched Sample (n = 44)*

	T2 Int.	Rater PFQ[a]	Rater NFQ[b]	Self ERS[c]	Peer Rater ERS[c]
Time 1 Internalizing Symptoms	.80***	-.21	.16	.38*	.17
Time 2 Internalizing Symptoms	-	-.21	.08	.31	.25
Time 1 Close Peer Positive Relationship Quality		-	.05	.12	.20
Time 1 Close Peer Negative Friendship Quality			-	-.08	.27
Time 1 Self Rating of Excessive Reassurance Seeking				-	.32*

Note. $*p < .05$. $**p < .01$. $***p < .001$. [a]Int. = Internalizing Symptoms (YSR Anxious/Depressed) [b]PRQ = Positive Relationship Quality [c]NRQ = Negative Relationship Quality [d]ERS = Excessive Reassurance Seeking

Table 6. *Regression Analyses Examining Self-Report of Excessive Reassurance Seeking as a Concurrent and Longitudinal Predictor of Internalizing Symptoms using Full Sample*

	DV = Time 1 Internalizing Symptoms (n = 458)				DV = Time 2 Internalizing Symptoms (n = 391)			
	β	t value	R^2	R^2 change	β	t value	R^2	R^2 change
Step 1:			.04	.04**			.56	.56***
Age	-.10	2.19*			.00	.10		
Gender (1 = Boys)	-.10	2.10*			-.05	1.54		
African/Caribbean American	-.02	.40			.08	2.28*		
Hispanic	-.15	2.66**			-.02	.43		
Other	-.01	.11			.05	1.30		
Time 1 Internalizing Symptoms	*(used in T2 analysis only)*				.73	21.51***		
Step 2:			.16	.12***			.57	.01
Excessive Reassurance Seeking	.35	8.12***			.03	1.26		

Note. *$p \leq .05$. **$p < .01$. ***$p < .001$.

Table 7. *Regression Analyses Examining Gender and Positive Relationship Quality as a Moderator of Concordance between Self and Peer Report of Excessive Reassurance Seeking using Matched Sample (n = 44)*

	DV = Self-Report ERS[a]			
	β	*t* value	R^2	R^2 change
Step 1:			.19	.19*
Peer Report ERS[a]	.43	2.75*		
Step 2:			.19	.00
Gender (1 = Boys)	.07	.41		
Positive Relationship Quality	.02	.09		
Step 3:			.33	.14
Gender x Peer Report ERS[a]	-.02	.09		
Gender x PRQ[b]	-.16	.86		
PRQ[b] x Peer Report ERS[a]	.54	2.29*		
Step 4:			.33	.00
Gender x Peer Report ERS[a] x PRQ[b]	-.04	.08		

Note. *$p < .05$. [a]ERS = Excessive Reassurance Seeking [b]PRQ = Positive Relationship Quality

Table 8. *Exploratory Post-Hoc Regression Analyses Examining Type of Relationship as a Moderator of Concordance between Self and Peer Report of Excessive Reassurance Seeking using Matched Sample (n = 44)*

	DV = Self-Report ERS[a]			
	β	*t* value	R^2	R^2 change
Step 1:			.11	.11*
Peer Report ERS[a]	.33	2.28*		
Step 2:			.14	.04
Reciprocity (1 = Reciprocal)	.13	.85		
Relationship Type (1 = Dating)	.10	.59		
Step 3:			.29	.14*
Reciprocity x Peer Report ERS[a]	-.30	.60		
Relationship Type x Peer Report ERS[a]	.86	2.11*		

Note. *$p < .05$. [a]ERS = Excessive Reassurance Seeking. Romantic partner used as informant if available.

Table 9. *Regression Analyses Examining Self- and Peer-Reports of Excessive Reassurance Seeking as Concurrent and Longitudinal Predictors of Internalizing Symptoms using Matched Sample*

	DV = Time 1 Internalizing Symptoms (n = 44)				DV = Time 2 Internalizing Symptoms (n = 36)			
	β	t value	R^2	R^2 change	β	t value	R^2	R^2 change
Step 1:			.23	.23*			.64	.64***
Age	-.25	1.56			.05	.42		
Gender (1 = Boys)	-.31	2.07*			-.04	.29		
Hispanic	-.17	1.00			-.04	.30		
Other	.08	.49			-.04	.32		
Time 1 Internalizing Symptoms	*(used in T2 analysis only)*				.80	6.61***		
Step 2:			.32	.09*			.65	.01
Peer ERS[a]	.31	2.21*			.08	.68		
Step 3 [FINAL MODEL]:			.41	.09*			.65	.00
Age	-.24	1.60			.04	.27		
Gender	-.39	2.84**			-.06	.42		
Hispanic	-.20	1.28			-.06	.41		
Other	-.02	.18			-.05	.36		
Time 1 Internalizing Symptoms	*(used in T2 analysis only)*				.77	5.37***		
Peer ERS[a]	.21	1.48			.08	.67		
Self ERS[a]	.32	2.32*			-.01	.06		

Note. *$p \leq .05$. **$p < .01$. ***$p < .001$. [a]ERS = Excessive Reassurance Seeking

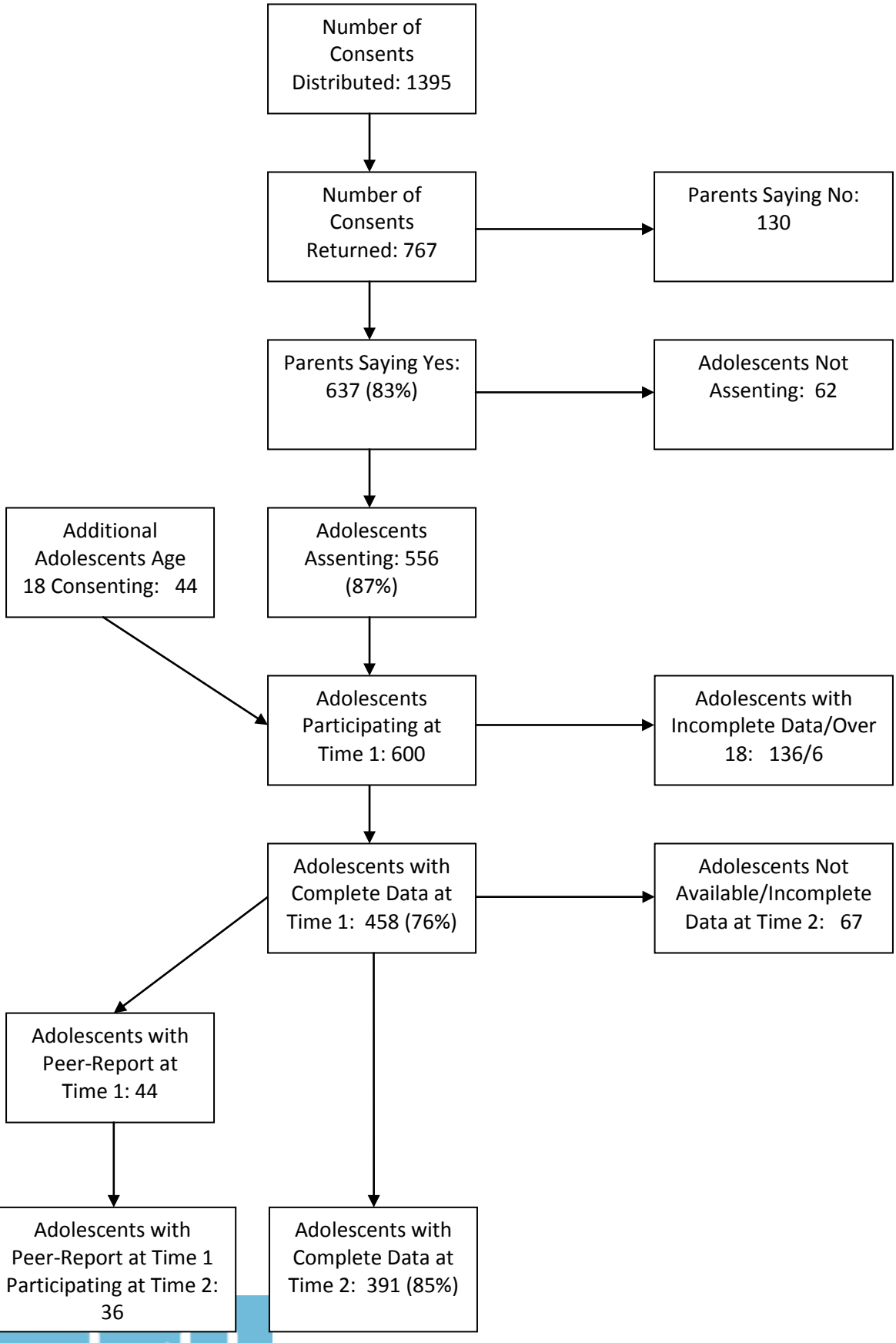
Figure Caption

Figure 1. Explanation of participant attrition from recruitment to Time 2 participation

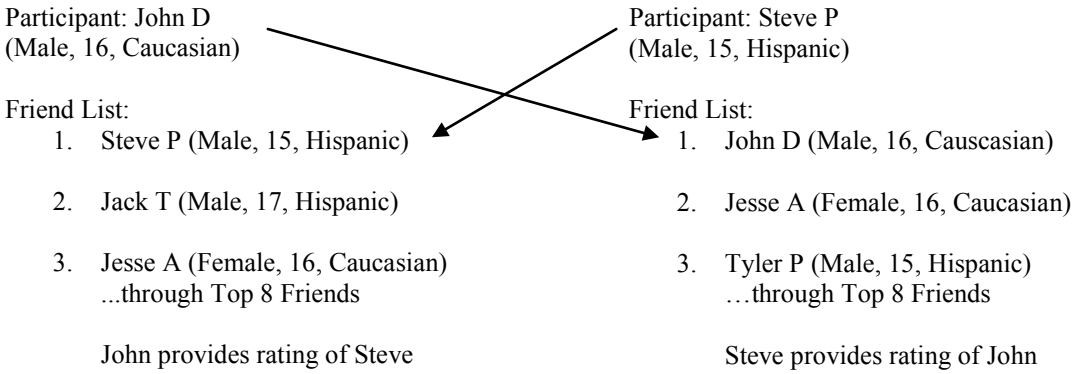
Figure 2. Explanation of subject matching procedure for matched subsample

Figure 3. Concordance of peer rating of excessive reassurance seeking with self-report for adolescents reporting high or low positive relationship quality with peer rater

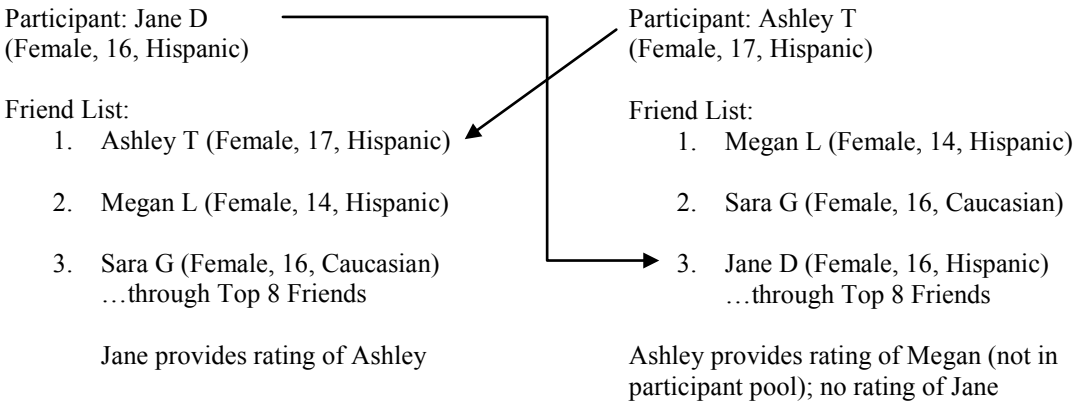
Figure 4. Concordance of peer rating of excessive reassurance seeking with self-report for adolescents with a friend or romantic partner peer rater



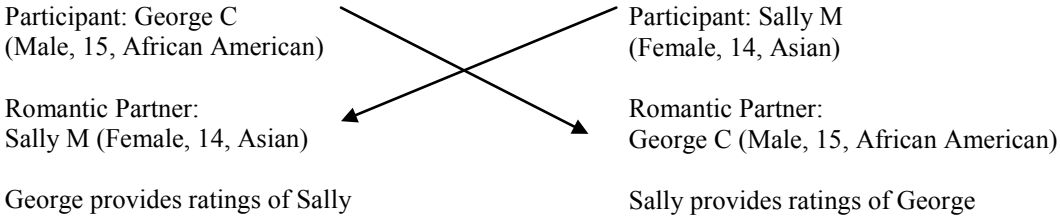
RECIPROCAL FRIENDSHIP

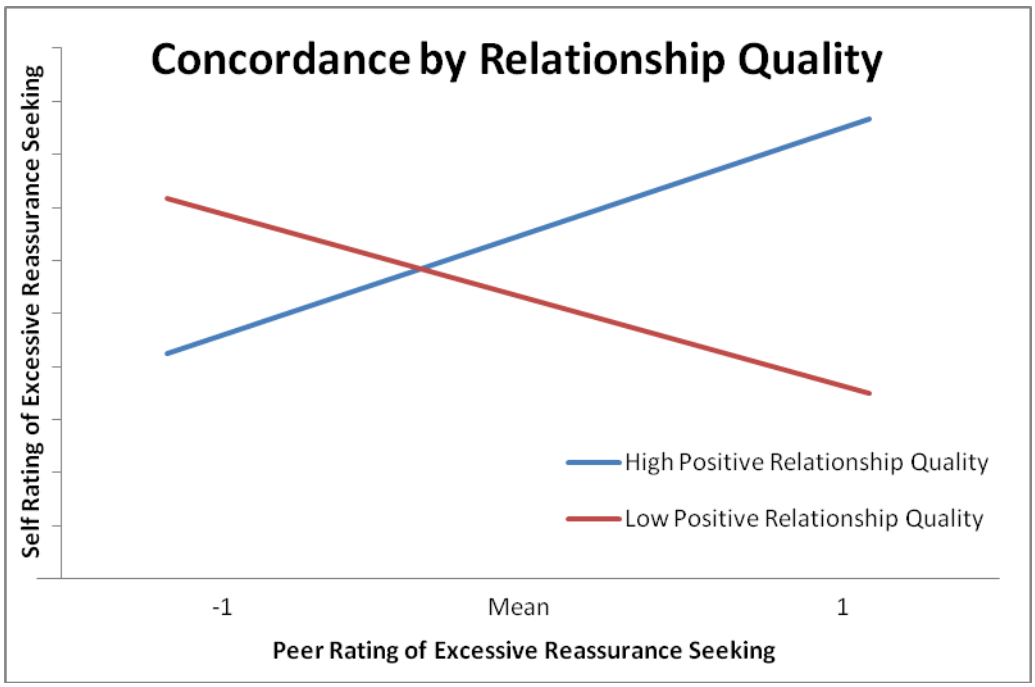


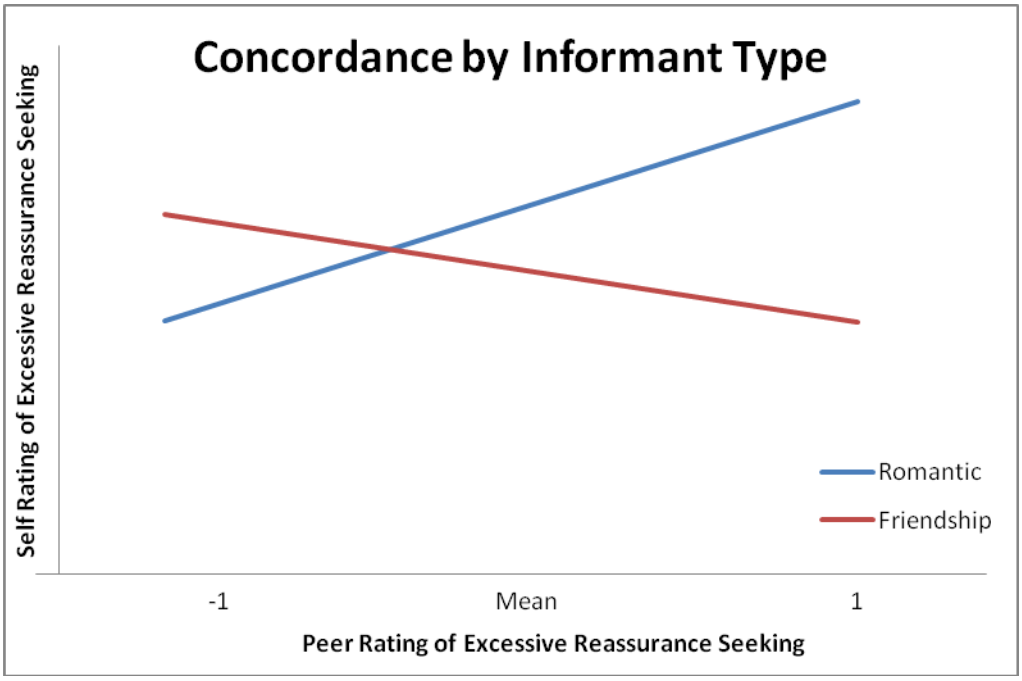
NON-RECIPROCAL FRIENDSHIP



ROMANTIC RELATIONSHIP







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APPENDIX A

BACKGROUND INFORMATION – T1

1. Gender ____Male ____Female

2. Grade ____9 ____10 ____11 ____12

3. Date of Birth (Month/Day/Year) _____/_____/_____

4. What is your ethnic background? Check the one that BEST fits your background

____ White/Caucasian (not Hispanic)
____ African American (not Hispanic)
____ Caribbean-American (e.g., Haitian, Jamaican)
____ Hispanic or Latino (e.g., Cuban, Columbian, Puerto Rican, Mexican) *circle all that apply*
____ Asian
____ Mixed Ethnicity/Other (please list)_____

5. From the above list, which ethnicity do you identify with the most?
_____

6. What language did you FIRST speak as a child? (circle) English Spanish Other (explain)

7. Who do you currently live with?
_____ Biological (birth) mom only
_____ Biological (birth) dad only
_____ Both biological parents
_____ Biological mom and her significant other (e.g. step-parent)
_____ Biological dad and his significant other (e.g. step-parent)
_____ Adoptive parents
_____ Other relatives
_____ Other (explain) _____

8. How many brothers and sisters do you live with at home? _____
9. How many of them are older than you? _____

10. PARENTS' OCCUPATION (answer the questions about the parent(s), you live with).

What is your mother's (or step-mother's) occupation? _____

What is her job title? _____

What is your father's (or step-father's) occupation? _____

What is his job title? _____

I. Starting with your *closest friend*, please complete the information below, about each of your close friends. Start with your very best friend, then your next best friend, and so on. You do not have to list 8 people; just your *closest* friends.

For **ethnicity**, you can use these letters: **W** = White (not Hispanic), **AA** = African-American (not Hispanic),
CA = Caribbean-American, **H** = Hispanic/Latino, **A** = Asian, **M** = Mixed Ethnicity or other

Friend's first name and last initial	Sex (M or F)	Age	Ethnicity	How Long Have You Been Friends?	Does this person go to the same school as you? (Yes/No)
Example *Allison B.*	*F*	*17*	*H*	*__2__ years, __3__ months*	*yes*
1.				_____ years, _____ months	
2.				_____ years, _____ months	
3.				_____ years, _____ months	
4.				_____ years, _____ months	
5.				_____ years, _____ months	
6.				_____ years, _____ months	
7.				_____ years, _____ months	
8.				_____ years, _____ months	

II. Starting with your *closest relative*, please complete the information below, about each of your family members that you have a *close relationship* with. Start with your very closest relative, then your next closest relative, and so on. You do not have to list 5 people; just your relatives you feel *closest* to.

For **ethnicity**, you can use these letters: **W** = White (not Hispanic), **AA** = African-American (not Hispanic),
CA = Caribbean-American, **H** = Hispanic/Latino, **A** = Asian, **M** = Mixed Ethnicity or other

Relative's Initials	Sex (M or F)	Age	Ethnicity	How is this person related to you? (Mother, Father, Brother, Sister, etc.)
Example *B.C.*	*F*	*17*	*H*	*Sister*
1.				
2.				
3.				
4.				
5.				

III. The following questions are about romantic partners, boyfriends or girlfriends, or dating partners.
Please answer questions **1** and **2** *even if you do not* have a boyfriend or girlfriend right now.

1. Do you have a romantic partner, boyfriend/girlfriend, or dating partner right now (circle one)?

YES **NO (skip to #2)**

Romantic partner's first name and last initial	Sex (M or F)	Age	Ethnicity	How Long Have You Been Dating?	Does this person go to the same school as you? (Yes/No)
				____ years ____ months	

2. **Everyone Answer This Question:** How many romantic partners, boyfriends/girlfriends, or dating partners have you ever had (including your romantic partner right now, if you have one)? _____

APPENDIX B

DIRI-ERS-R

The questions below ask about certain behaviors of you, your *best friend* and your *current romantic partner, boyfriend/girlfriend, or dating partner*, if you are now dating or in a romantic relationship.

First think about your behaviors and circle the number most appropriate to you.

	Not at all			I'm not sure			Very Much
1. Do you always need to ask your friends and peers if they like you?	1	2	3	4	5	6	7
2. Do you always need to ask your friends and peers if they care about you?	1	2	3	4	5	6	7
3. Sometimes when you ask your friends and peers if they like you, they tell you to stop asking?	1	2	3	4	5	6	7
4. Sometimes when you ask your friends and peers if they like you, they get mad?	1	2	3	4	5	6	7

Now think about your *closest same-sex friend* (you can enter your friend's first name in the _____ if you would like. Please circle the number that best describes how your friend feels.

	Not at all			I'm not sure			Very Much
1. Does _____ always need to ask his/her friends and peers if they like him/her?	1	2	3	4	5	6	7
2. Does _____ always need to ask his/her friends and peers if they care about him/her?	1	2	3	4	5	6	7
3. Sometimes when _____ asks his/her friends and peers if they like him/her they tell _____ to stop asking?	1	2	3	4	5	6	7
4. Sometimes when _____ asks his/her friends and peers if they like him/her, they get mad?	1	2	3	4	5	6	7

Now do the same for the person you are *dating*. If you are dating more than one person, please answer the questions for the person you like best or feel closest to. If it helps, you can enter his or her name in the _____ if you would like.

	Not at all			I'm not sure			Very Much
1. Does always need to ask his/her friends and peers if they like him/her?	1	2	3	4	5	6	7
2. Does _____ always need to ask his/her friends and peers if they care about him/her?	1	2	3	4	5	6	7
3. Sometimes when _____ asks his/her friends and peers if they like him/her they tell _____ to stop asking?	1	2	3	4	5	6	7
4. Sometimes when _____ asks his/her friends and peers if they like him/her, they get mad?	1	2	3	4	5	6	7

APPENDIX C

NRI-R

The questions below ask about your relationships with **two people**
The first is your ***best friend***
The second is your ***current romantic partner, boyfriend/girlfriend, or dating partner***, if you are now dating or in a romantic relationship. If you are dating more than one person, please answer the questions for the person you like best or feel closest to.
Please do not disclose any names on this form.

First think about your "best friend" and circle the number that describes your relationship the best. Then do the same for the person you are dating.

Initials of your best friend _____ Initials of the Person you are dating _____

Use this scale:
1 = Little or none 2 = Somewhat 3 = Very Much 4 = Extremely Much 5= The Most

	Best Friend	Person You are *Dating*
1. How much do you and this person get upset with or mad at each other?	1 2 3 4 5	1 2 3 4 5
2. How much do you and this person get on each other's nerves?	1 2 3 4 5	1 2 3 4 5
3. How much does this person treat you like you're admired and respected?	1 2 3 4 5	1 2 3 4 5
4. How sure are you that this relationship will last no matter what?	1 2 3 4 5	1 2 3 4 5
5. How much do you play around and have fun with this person?	1 2 3 4 5	1 2 3 4 5
6. How much do you and this person disagree and quarrel?	1 2 3 4 5	1 2 3 4 5
7. How much does this person help you figure out or fix things?	1 2 3 4 5	1 2 3 4 5
8. How much do you and this person get annoyed with each other's behavior?	1 2 3 4 5	1 2 3 4 5
9. How much do you share your secrets and private feelings with this person?	1 2 3 4 5	1 2 3 4 5
10. How much does this person really care about you?	1 2 3 4 5	1 2 3 4 5
11. How much do you and this person argue with each other?	1 2 3 4 5	1 2 3 4 5
12. How much do you and this person hassle or nag one another?	1 2 3 4 5	1 2 3 4 5
13. How much do you take care of this person?	1 2 3 4 5	1 2 3 4 5

APPENDIX D

Youth Self-Report

Below is a list of items that describe kids. For each item that describes you *now or within the past 6 months*, please circle the *2* if the item is *very true or often true* of you. Circle the *1* if the item is *somewhat or sometimes true* of you. If the item is *not true* of you, circle the *0*. **Please be sure to answer all the following questions.**

0 = Not True 1 = Somewhat or Sometimes True 2 = Very True or Often True

	Not True	Somewhat/ Sometimes True	Very True/ Often True
1. I argue a lot.	0	1	2
2. I act like the opposite sex.	0	1	2
3. I brag.	0	1	2
4. I feel lonely.	0	1	2
5. I cry a lot.	0	1	2
6. I am mean to others.	0	1	2
7. I deliberately try to hurt or kill myself.	0	1	2
8. I try to get a lot of attention.	0	1	2
9. I destroy my own things.	0	1	2
10. I destroy things belonging to others.	0	1	2
11. I disobey at school.	0	1	2
12. I don't feel guilty about doing something I shouldn't.	0	1	2
13. I am jealous of others.	0	1	2
14. I am afraid of going to school.	0	1	2
15. I am afraid I might think or do something bad.	0	1	2
16. I feel that I have to be perfect.	0	1	2
17. I feel that no one loves me.	0	1	2
18. I feel that others are out to get me.	0	1	2
19. I feel worthless or inferior.	0	1	2
20. I get in many fights.	0	1	2

	Not True	Somewhat/ Sometimes True	Very True/ Often True
21. I hang around with kids who get in trouble.	0	1	2
22. I would rather be alone than with others.	0	1	2
23. I lie or cheat.	0	1	2
24. I am nervous or tense.	0	1	2
25. I am too fearful or anxious.	0	1	2
26. I feel too guilty.	0	1	2
27. I physically attack people.	0	1	2
28. I would rather be with older kids than kids my own age.	0	1	2
29. I refuse to talk.	0	1	2
30. I run away from home.	0	1	2
31. I scream a lot.	0	1	2
32. I am secretive or keep things to myself.	0	1	2
33. I am self-conscious or easily embarrassed.	0	1	2
34. I set fires.	0	1	2
35. I show off or clown.	0	1	2
36. I am shy.	0	1	2
37. I steal at home.	0	1	2
38. I steal from places other than home.	0	1	2
39. I am stubborn.	0	1	2
40. My moods or feelings change suddenly.	0	1	2
41. I am suspicious.	0	1	2
42. I swear or use dirty language.	0	1	2
43. I think about killing myself.	0	1	2
44. I talk too much.	0	1	2
45. I tease others a lot.	0	1	2
46. I have a hot temper.	0	1	2
47. I threaten to hurt people.	0	1	2

	Not True	Somewhat/ Sometimes True	Very True/ Often True
48. I cut classes or skip school.	0	1	2
49. I am unhappy, sad, or depressed.	0	1	2
50. I am louder than other kids.	0	1	2
51. I use drugs for nonmedical purposes (don't include drugs or alcohol).	0	1	2
52. I wish I were of the opposite sex.	0	1	2
53. I keep from getting involved with others.	0	1	2
54. I worry a lot.	0	1	2