SOCIAL PERSPECTIVE-TAKING IN THE FRIENDSHIPS OF ADOLESCENTS:
IMPLICATIONS FOR FRIENDSHIP QUALITY AND EMOTIONAL
ADJUSTMENT

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ABSTRACT

The current research considered social perspective-taking (i.e., taking the perspective of another person, and putting oneself “in their shoes”) in youths’ friendships and associations with friendship quality and emotional adjustment. It was hypothesized that social perspective-taking would be associated with adjustment trade-offs, in that social perspective-taking was expected to be related to positive friendship adjustment, but also to negative emotional adjustment (i.e., symptoms of depression and anxiety) through associations with a new construct, empathetic distress. Empathetic distress refers to the experience of shared negative affect in response to a relationship partner’s distress (here, a best friend). Adolescent youths in 6th, 7th, and 8th grades responded to questionnaires, including a new measure of empathetic distress. Gender differences in social perspective-taking, empathetic distress, and in the relations with adjustment outcomes also were examined. Results provided support for study hypotheses and indicated that girls reported higher social perspective-taking and empathetic distress in their friendships compared to boys. Future research should include longitudinal assessments to address the direction of the effects. Applied implications regarding interventions for youth who experience empathetic distress are discussed.
The developmental importance of understanding other people is highlighted by the multitude of research aimed at examining and explaining interpersonal understanding constructs (e.g., Crick & Dodge, 1994; Dunn, 2004; Flavell & Miller, 1998; Selman, 1980; Shantz, 1983). The ability to understand others has important implications for social functioning (e.g., Flavell & Botkin, 1968; Dunn & Brophy, 2005). Youths’ understanding of other people and of the internal factors that motivate the behavior of others influences youths’ ability to effectively initiate and engage in interactions with others, thus impacting the development and maintenance of social relationships among youth (Crick & Dodge, 1994). In the context of youths’ close friendships, interpersonal understanding is essential for facilitating meaningful social exchanges (Selman, 1981). Social understanding of others likely aids youth in performing social behaviors such as resolving conflict (Selman, 1981; Selman et al., 1986) and providing friends with support. These social behaviors, in turn, are important to youths’ successful friendships (Buhrmester, 1996; Rose & Asher, 1999).
The proposed research focuses specifically on the social understanding construct, social perspective-taking. Social perspective-taking is a social-cognitive process that is central to understanding others (Selman, 1980). This process involves making inferences about the psychological and affective state of another person so as to understand what the other person may be thinking and feeling, without these having been explicitly stated (Selman, 1980). Further, this process involves temporarily suspending one’s own viewpoint in order to actively consider the point of view of the other person (i.e., to imagine things from the other person’s perspective; Selman, 1980).

The extant research on the development of social perspective-taking provides a conceptual framework for how children and adolescents develop the ability to take the perspective of others (Selman, 1980; Yeates & Selman, 1989). Surprisingly, however, little research has investigated (a) social perspective-taking in older youth and adolescents (as opposed to younger children), (b) individual differences in social perspective-taking, (c) how social perspective-taking operates in actual social relationships, such as friendships (as opposed to hypothetical relationships), (d) how individual differences in social perspective-taking affect youth’s overall functioning in friendships, and (e) potential emotional costs of social perspective-taking.

The proposed research will attempt to address these limitations by examining how individual differences in adolescents’ tendency to engage in social perspective-taking in the context of a dyadic friendship influence the quality of their friendships and their emotional well-being (i.e., symptoms of depression and anxiety). Consideration of social perspective-taking in the context of friendships is valuable because friendships
are important in the lives of youth (Bukowski, Newcomb, & Hartup, 1996), and social perspective-taking likely enables youth to be competent friendship partners. It is important to consider the role of social perspective-taking in the friendships of adolescents in particular because friendship becomes increasingly salient as youth move into adolescence (Berndt, 1982). Moreover, social perspective-taking may be especially important to friendships among adolescent youth. In adolescence, perceptions and opinions become increasingly dramatic and exaggerated such that many things that happen to adolescents seem like a “big deal” (Jaffe, 1998). It seems plausible that because everyday events hold such significance for adolescents, they may be especially likely to place high importance on having a friend who is inclined to put him or her self “in their shoes,” and is thus understanding of their plight and validates their concerns over these events.

In the following sections, a rationale for the proposed research is presented. First, the typical developmental progression of social perspective-taking ability is reviewed. Second, the relations between social perspective-taking and peer relationships are examined. Existing research on social perspective-taking and related (but not identical) interpersonal understanding constructs (i.e., understanding of others’ beliefs, emotion understanding) and their impact on peer relationships is reviewed. This research provides a background for addressing possible links between social perspective-taking and youth’s positive friendship quality. Third, the possible contribution of social perspective-taking to youths’ symptoms of depression and anxiety will be discussed. Finally, gender differences will be considered.
The Development of Social Perspective-Taking

As noted, social perspective-taking refers to the social-cognitive process of inferring and actively considering the point of view of another person (Selman, 1980). The following sections describe the developmental progression of social perspective-taking ability. First, children’s theory of mind is considered as an initial step in the developmental progression of social perspective-taking. This is followed by a description of Selman’s (1980) stages of social perspective-taking development. Although the proposed research will not focus on developmental differences in these stages, this work is reviewed to illustrate the nature of the abilities referred to as social perspective-taking, and to provide a background for hypotheses about individual differences in social perspective-taking among youth.

Children’s Theory of Mind as a Precursor to Social Perspective-Taking

Theory of mind refers to children’s understanding that other people have beliefs, desires, emotions, and intentions that (a) are distinct from their own, and (b) influence the way people behave (Bjorklund, 2005). Although there has been some debate on the issue, there is strong evidence that most children develop theory-of-mind abilities by age four (Wellman, Cross, & Watson, 2001). Prior to the development of a theory of mind, children have an egocentric view of the world (Piaget, 1965); they operate under the assumption that whatever they know and want is also what all other people know and want (Astington & Baird, 2005).

Theory-of-mind abilities are typically assessed by false-belief tasks (Wellman et al., 2001). For example, in one of the most common false belief tasks, children witness
a doll named Maxi hiding his chocolate in a cupboard. Maxi then goes outside to play, and while he is out, his mother moves the chocolate to a drawer. Children are then asked where Maxi will look for his chocolate when he returns (Wimmer & Perner, 1983). Children who have not yet developed theory-of-mind abilities are unable to distinguish what Maxi knows from what they know, and thus incorrectly respond that Maxi will look in the new location (the drawer) even though Maxi has not seen the chocolate being moved (Wellman et al., 2001).

Once children have developed a theory of mind, they are able to understand that the subjective experiences of others are independent from their own. Thus, they are able to attribute mental states and emotions to others that are distinct from their own and to make inferences about what others’ unique internal experiences might be like (Astington & Baird, 2005). Importantly, they understand that it is possible for another person to have a belief that is inconsistent with what they themselves know to be true, and they also understand that it is possible for another person to feel sad when they themselves feel happy. Consequently, this emerging interpersonal understanding can be conceptualized as an essential precursor to the ability to take the perspective of another person.

*Selman’s Stages of Social Perspective-Taking Development*

Selman’s (1980; Yeates & Selman, 1989) theory of social perspective-taking is complementary to theory-of-mind theory in that it addresses how interpersonal understanding development continues beyond early childhood into later childhood and through adolescence. Selman’s theory posits that children move through five sequential
stages of increasing interpersonal understanding. As children progress through these developmental stages, they become increasingly able to distinguish the perspectives of others from their own and to understand how these distinct points of view relate to each other.

According to Selman’s theory, children in the first stage of social perspective-taking development have a limited understanding of the social world that is essentially equivalent to an absence of a theory of mind. Selman refers to this as having an undifferentiated perspective; children are essentially unaware that any perspective other than their own exists. In the second stage of social perspective-taking development, children acquire the understanding that other people have points of view that are independent from their own. However, children at this stage believe that others’ independent beliefs will be identical to their own when based on identical information about the state of the world. Children at this stage are able to pass the false-belief task described previously because they understand that Maxi’s belief about where his chocolate is located would be based on information that is incorrect and not identical to what the child knows to be true. In the third stage of social perspective-taking development, children are able to recognize that other people’s perspectives may differ from their own even when based on identical social information and knowledge about the actual state of the world. Children at this stage are both able to consider other people’s viewpoints and also able to appreciate that this process is reciprocal (i.e., that other people may, in turn, consider the child’s own viewpoint). In other words, a child can consider her friend’s perspective and also imagine what her own perspective must
look like from her friend’s point of view. As children move into the fourth stage of social perspective-taking development, they are able to consider how the perspectives of self and other may be seen from the viewpoint of an objective third person. For example, a child understands that an outsider may consider the interaction between the child’s perspective and her friend’s perspective simultaneously (e.g., “Anna thinks this, but Ava thinks that.”) and reciprocally (e.g., “Anna thinks that Ava knows that…;” see Keenan, 2003; Miller, Kessel, & Flavell, 1970). The final stage of social perspective-taking development is characterized by the ability to compare individual perspectives with a generalized perspective, or the perspective that “people in general” might typically adopt. This ability continues to develop throughout adolescence (Selman, 1980).

Selman’s stages of social perspective-taking are typically assessed by evaluating children’s open-ended responses to interview questions about hypothetical scenarios (e.g., Selman, 1976). These scenarios typically involve a social dilemma, such as a young girl breaking a promise to her father not to climb trees in order to help a friend rescue a cat. Developmental stage is assessed by the extent to which children recognize and integrate multiple perspectives in their responses (Selman, 1976).

Additional work by Selman and colleagues (Selman & Demorest, 1984; Selman, Schultz, Caplan, & Schantz, 1989; Selman et al., 1986) has implications for understanding the effects of developmental delays in social perspective-taking ability on youths’ real-life social interactions. First, work by these researchers has suggested that stages of social perspective-taking development correspond with stages of other
interpersonal understanding development, specifically stages of friendship understanding and stages of interpersonal negotiation strategy development (i.e., children in the first stage of social perspective-taking development are also in the first stage of friendship understanding development, and also in the first stage of interpersonal negotiation strategy development; Selman et al., 1986; see Selman, 1980; Selman et al., 1989). Secondly, Selman and colleagues (Selman & Demorest, 1984; Selman et al., 1989) demonstrated that delays in the progression through the stages of friendship understanding and interpersonal negotiation strategy development has a negative impact on youths’ interactions with peers. Considering together the findings from these separate research studies suggests that delays in the progression through the stages of social perspective-taking development also may have a negative impact on youths’ peer relationships.

Moving Toward Consideration of Individual Differences and Impacts on Real-Life Relationships and Adjustment

Selman’s theory of social perspective-taking development has provided an important framework for studying how children come to understand other people. However, there remain important gaps in our knowledge of social perspective-taking among youth that cannot be addressed solely by demarcating stages of development through which all children invariably and universally progress. Moving the focus of research in this area toward a consideration of individual differences and the impacts of social perspective-taking on youths’ actual social relationships and emotional well-being will allow for an understanding of the practical importance of this social-
cognitive construct (for a similar argument concerning theory-of-mind research see Dunn, 1999; Hughes & Leekham, 2004; Repacholi & Slaughter, 2003).

The current research is intended to extend the work of Selman and colleagues in several important ways. First, the proposed research will examine individual differences in social perspective-taking among adolescents. According to Selman’s theory, all typically developing adolescents have reached the final stage of social perspective-taking development. Accordingly, adolescents are capable of actively considering the perspective of another person and coordinating awareness of the other person’s perspective with their own. Importantly, however, there still may be individual differences among adolescents in the tendency to actually engage in social perspective-taking beyond their developmental capacity to do so. These individual differences, in turn, may influence outcomes related to social perspective-taking. Second, the proposed research also will extend past research by utilizing a measure that assesses the extent to which adolescents engage in social perspective-taking in their real-life relationships (specifically in their best friendships). Assessing social perspective-taking using measures of social reasoning in hypothetical situations (as in Selman’s work) provides information about the level of abstract reasoning that youth are capable of (i.e., their potential “best” social perspective-taking performance), but does not address what youth report typically doing in their real-life social relationships. Third, the present research will examine youths’ tendency to engage in social perspective-taking within a specific relationship (i.e., a best friendship). This is important because it is likely that the extent to which adolescents engage in social perspective-taking varies across
specific relationships. An adolescent’s tendency to engage in social perspective-taking in the context of a specific close friendship is likely different from his or her tendency to do so in other social relationships, such as with a teacher or even in other friendships. In sum, the proposed research aims to address important limitations of previous work on social perspective-taking. Addressing these limitations will facilitate examining the impact of adolescents’ social perspective-taking on their real-life social relationships and emotional well-being.

**Social Perspective-Taking and Peer Relationships**

The present research considers social perspective-taking in the context of adolescents’ peer relationships, namely their friendships. Peer relationships play a critical role in the lives of children and adolescents (e.g., Asher & Parker, 1989; Hartup, 1983; Rubin, Bukowski, & Parker, 1998). Peers serve as important socialization agents, and experiences in peer relationships serve as an impetus for growth in cognitive, social, and emotional development (e.g., Piaget, 1970; Sullivan, 1953; also see Dunn & Brophy, 2005). Moreover, problematic peer relations are linked with various socioemotional adjustment difficulties (Parker & Asher, 1987; Parker et al., 1995; Rubin et al., 1998). Thus, positive peer relationship experiences are essential for adaptive developmental outcomes in children and adolescents.

Youths’ understanding of the way others think and feel should be related to their functioning in the peer system (Dunn, 2004; see Deater-Deckard, 2001). In particular, social perspective-taking likely facilitates positive social exchanges among peers. Because social perspective-taking involves taking others’ positions into consideration,
it may be speculated that social perspective-taking helps enable youth to respond appropriately to peers’ emotions and behaviors. In addition, youth with increased ability to coordinate the differing, often competing perspectives of peers with their own perspectives may be better able to negotiate and resolve peer conflicts (Selman, 1981). Thus, it seems that social perspective-taking would make substantial contributions to youths’ successful peer relationship experiences.

**Past Research Related to Social Perspective-Taking and General Peer Functioning**

Much of what is known about the contributions of interpersonal understanding to actual experiences in peer relationships comes from research in early childhood. Findings from research among young children indicate that interpersonal understanding constructs that are related to, but not identical to social perspective-taking, predict various positive peer outcomes. In particular, research on young children’s understanding of others’ beliefs and emotions has demonstrated a link between interpersonal understanding and both acceptance in the peer group and teacher-rated social competence. This research is reviewed in the following sections because it provides indirect support for the hypothesis that the interpersonal understanding construct of interest for the present research, social perspective-taking, may contribute to positive peer relationship outcomes (i.e., positive friendship quality) even in later childhood and adolescence. In further support of this hypothesis, the limited research among older youth and on the specific construct of social perspective-taking also is reviewed.
Relevant research has largely considered two skills related to social perspective-taking: understanding emotions and understanding beliefs. Research on emotion understanding in young children indicates that this type of interpersonal understanding has implications for how well-liked children are among peers. In particular, preschoolers who are better at inferring another child’s emotions in hypothetical situations are also more sociometrically popular with peers (i.e., more peers nominate them as the classmate they like most; Rubin & Maoini, 1975). Methods of this and similar studies utilize hypothetical situations and involve telling participants a story about a child in a certain context (e.g., a child that is going to the zoo) and asking participants to identify how the child in the story is feeling. A similar study by Spence (1987) also used hypothetical situations to assess emotion understanding in preschoolers. Results from this study revealed that emotion understanding significantly predicted sociometric popularity (also assessed with positive peer nominations) when controlling for age, IQ, and gender, providing further support for the relationship between emotion understanding and peer acceptance among preschoolers. This relationship has also been found using different methods. Denham and colleagues (1990) used puppets to enact a series of emotional situations (including both situations where puppets’ emotions were congruent with the situation and those where puppets’ emotions were incongruent with the situation), and asked preschoolers to identify the puppets’ emotions. Preschoolers who were better able to identify the puppets’ emotions were more well-liked by their peers (as assessed using a rating scale measure in which children indicated how much they liked each of their classmates). This research
provides evidence that preschool children who are better able to understand the emotions of others are more well-liked by their peers.

Other research has found that emotion understanding is also important for peer acceptance among school-aged children. Vosk and colleagues (1983) divided elementary school children into accepted and rejected groups (using peer status ratings derived from like-most peer nominations, like-least peer nominations, and a rating scale acceptance measure). Children who scored higher on an emotion understanding task involving inferring the emotions of others in videotaped scenarios were more likely to be accepted rather than rejected. This research, along with the research among younger children, demonstrates that children’s understanding of others’ emotions is an important developmental skill that has an impact on children’s acceptance in the peer group.

In addition to emotion understanding, there is evidence that children’s understanding about the beliefs of others also is important for peer adjustment. Watson and colleagues (1999) conducted a set of studies examining the relation between theory of mind and peer relations among preschoolers. In the first study, these researchers evaluated preschoolers’ social skill with a single-item teacher rating of social ability and assessed theory-of-mind abilities using a traditional false-belief task. They found that theory-of-mind abilities significantly predicted teacher-rated social skills after controlling for age and verbal ability (Watson et al., 1999). In the second study, a multiple item questionnaire was used to obtain teacher ratings of preschoolers’ social skill and popularity (rather than a single item measure of only social skill). Results indicated that total false-belief scores representing an aggregate of scores on two false-
belief tasks were positively related to both social skill and popularity among preschoolers (Watson et al., 1999). Other researchers have obtained similar findings using peer-reported measures of popularity. Slaughter and colleagues (2002) assessed preschoolers’ popularity using like-most and like-least peer nominations. These researchers found that preschoolers with better performance across five theory-of-mind tasks were rated as more popular by peers, whereas preschoolers with poor performances were more likely to be rejected by peers.

All of these findings suggest that understanding of the beliefs of others likely plays an important role in preschoolers’ acceptance among peers. There is some evidence, however, that this relationship may be slightly more complex. In particular, a study by McNab (as cited in Keenan, 2003) indicated that the relationship between preschoolers’ belief understanding and peer acceptance varied according to gender. This study used peer ratings measures of acceptance to obtain separate acceptance scores for each child based on ratings of only female classmates, only male classmates, and an overall acceptance rating. Preschoolers who passed a false-belief test were more well-liked by their female classmates but not by their male classmates. Results from this study suggest that children’s belief understanding may be an important factor for determining likeability, especially among girls.

At least one research study has specifically examined the construct of social perspective-taking as it relates to functioning in the peer group. Bosacki and Astington (1999) investigated the relations between social perspective-taking and social competence among preadolescents. Peer-rated measures of social competence included
a peer rating scale of popularity in which youth indicated how much they liked each of their classmates and a measure of social skill that required students to rate each of their peers’ social ability in hypothetical social situations (e.g., organizing a school play, helping a peer with a problem). To evaluate interpersonal understanding, participants responded to interview questions about hypothetical scenarios. These scenarios involved ambiguous, everyday situations, such as two children approaching the “new girl” on the playground, where it is unclear if the children’s intentions are friendly or malevolent. Interview questions assessed story comprehension and three aspects of social understanding, including youth’s social perspective-taking abilities. Questions related to how the story characters felt and what they might be thinking were used to assess social perspective-taking ability. More sophisticated responses that integrated multiple psychological perspectives received higher scores. Positive relationships were found between social perspective-taking and both peer-rated measures of social competence. Results from this study indicate that there may be important individual differences in social perspective-taking among older youth, and that these differences may have a notable impact on peer relationship outcomes for these youth.

Overall, evidence from research in early childhood provides support for the relation between interpersonal understanding and peer relations outcomes. The relations between social perspective-taking and peer relationships among older youth have rarely been examined. However, the limited available evidence suggests that this social-cognitive process may have important implications for positive peer adjustment outcomes even among older children and adolescents.
Social Perspective-Taking and Dyadic Friendships

Previous research suggests that social perspective-taking may make positive contributions to youth’s functioning in peer group involvement. However, less is known about the impact of social perspective-taking on the quality of youth’s friendships (see Dunn & Cutting, 1999 for relevant research on preschoolers’ theory of mind). The proposed research investigates the relation between social perspective-taking and adolescents’ positive friendship quality. It is important for research to address the relations between social perspective-taking and friendship outcomes separately from relations with peer acceptance because participation in close friendships is distinct from general peer group acceptance (Asher, Parker, & Walker, 1996; Parker & Asher, 1993). Friendship is a special dyadic relationship between two youths, whereas acceptance is an aggregate score representing regard from the peer group in general (Parker & Asher, 1993). More specifically, friendships are unique relationships characterized by reciprocity, affectionate regard for one another, and voluntary participation in the relationship by both individuals (Asher et al., 1996). Having friends is related to acceptance among the peer group in general (e.g., Berndt, 1989), however, these are not one and the same. For example, some youth may have satisfying dyadic friendships despite being less well-liked among the entire peer group, and some well-liked youth may not have reciprocal friendships (Parker & Asher, 1993). Importantly, friendships make significant contributions to youth’s social and emotional development that are unique from those of general peer group involvement (Bukowski et al., 1996). Having friends provides youth with opportunities to
experience companionship, intimacy, assistance, and emotional support (Asher & Parker, 1989). Experiencing these social and emotional benefits in the context of a positive, high quality friendship may serve to help protect youth from poor adjustment outcomes (Parker & Asher, 1993; Rose & Rudolph, 2006). For example, having friends has been found to predict outcomes related to emotional well-being, such as loneliness, over and above the prediction from peer acceptance (Parker & Asher, 1993).

It is relevant to consider social perspective-taking in the context of close friendships because social perspective-taking may be especially important in close relationships. The importance of this process specifically for dyadic friendships may be made apparent by considering how youth characterize friendship. Youth think of friends as people who support each other and understand one another (e.g., Buhrmester, 1990; Berndt & Perry, 1990). Consequently, youth likely expect their friends to demonstrate understanding of their perspective and to be supportive of their viewpoint more than they expect this of nonfriends. Having a friend who is able to express understanding of how the youth must feel might increase the youth’s feeling of being supported.

Accordingly, in the proposed research, social perspective-taking is hypothesized to be related to positive friendship quality among adolescents. When a youth is able to coordinate awareness of their own feelings and desires with those of his or her dyadic friendship partner, then both partners are likely to feel increasingly validated and satisfied with the relationship and to resolve conflicts in the relationship more
effectively. If this is true, then we would expect that youth with increased tendency to engage in social perspective-taking would also have high positive friendship quality.

Although research has yet to consider that social perspective-taking may have implications for youths’ positive friendship quality, indirect support can be found in work that examines social perspective-taking in the close relationships of adults. For example, research on perspective-taking in adult romantic relationships indicates that adults who have romantic partners with greater perspective-taking ability are more satisfied with their relationships (Franzoi, Davis, & Young, 1985). In addition, adults who make attempts to take the perspective of their partner in discordant situations have been found to be more likely to inhibit negative and potentially damaging behavioral responses to their partners (Rusbult et al., 1991). This research suggests that social perspective-taking has important implications for adult dyadic relationship quality. Empirical evidence is needed to provide support for the hypothesis that a similar relation will hold for the close relationships, and friendships in particular, of adolescent youth.

Social Perspective-Taking and Emotional Adjustment

In addition to examining the relations between social perspective-taking and peer relationships, the proposed research also will investigate emotional adjustment outcomes related to social perspective-taking among adolescents. Of particular interest is the contribution of social perspective-taking to adolescents’ symptoms of depression and anxiety. For many youth, the onset of depressive and anxiety disorders occurs in adolescence (Hammen & Rudolph, 2003; Albano, Chorpita, & Barlow, 2003).
Consequently, it is important to delineate the possible pathways leading to the onset of internalizing problems in adolescence. To this end, identifying risk factors for the development of depressive and anxious symptoms in adolescence is critical. The proposed research addresses whether an increased tendency to engage in social perspective-taking in the context of a dyadic friendship serves as a risk factor for the development of these symptoms in adolescence.

As stated previously, the hypothesis that social perspective-taking may contribute to positive friendship adjustment is in accord with the predominant view of social perspective-taking as a beneficial skill with positive consequences for developmental outcomes. However, it also is possible that the tendency to orient oneself to the perspective of another may have emotional costs as well as benefits. A single research study has addressed this idea related to young children’s theory of mind (Cutting & Dunn, 2002). Results from this study indicate that preschoolers with increased theory-of-mind ability are more sensitive to teacher criticism (i.e., they report increased levels of negative affect in response to criticism), indicating that increased interpersonal understanding is not beneficial in all cases. This previous research study provides an important demonstration of the possible negative emotional consequences of advanced theory-of-mind abilities among preschoolers. However, potential costs associated specifically with social perspective-taking in adolescence remain unexplored.

The proposed research considers contributions of social perspective-taking to symptoms of depression and anxiety among adolescents. It is hypothesized that youth
with increased tendency to engage in social perspective-taking in the context of a close friendship will experience increased symptoms of depression and anxiety. More specifically, social perspective-taking is thought to contribute to empathetic distress, which in turn is hypothesized to be linked with symptoms of depression and anxiety. Empathetic distress is a new construct that refers to an exaggerated negative affective response elicited by awareness of another person’s distress. This response is potentially maladaptive in that it involves a strong sharing of negative affect along with another person who is distressed. Empathetic distress is especially likely to be elicited when emotional investment in the other person is high, such as in the context of a close dyadic friendship. A new empathetic distress questionnaire was developed for the proposed research for assessing exaggerated sharing of a friend’s distressed negative affect in response to an upsetting problem or situation experienced by the friend.

   In the present research, it is proposed that social perspective-taking contributes to empathetic distress, which, in turn, leads to symptoms of depression and anxiety. First consider the hypothesized relation between social perspective-taking and empathetic distress. When youth encounter a friend who is troubled or upset, the tendency to take their friend’s perspective and imagine the upsetting situation from their friend’s point of view allows them to be aware of and to share in their friend’s affective state. In this way, increased tendency to engage in social perspective-taking in a close friendship may provoke a strong sharing of negative affect over a friend’s problems or upsetting situation such that it results in a state of emotional distress in the youth.
Empathetic distress may, in turn, contribute to symptoms of depression among adolescents. It is possible that the experience of elevated negative affect associated with empathetic distress serves as a risk for developing depressive symptoms. Previous research has demonstrated that the persistent experience of negative affect may lead to symptoms of depression (Hankin & Abramson, 2001). Close friendships may provide a context where frequent exposure to friends’ difficulties and disclosure related to problems and upsetting life events may increase the likelihood of experiencing empathetic distress and associated negative affect, subsequently resulting in depressive symptoms among youth.

Additionally, empathetic distress may lead to anxiety symptoms among adolescents as well. Research has indicated that persistent worry and preoccupation are characteristic of anxiety in youth (Albano et al., 2003). Strong sharing of a friend’s distressed affect may contribute to worry and preoccupation about the friend’s distress, the source of the friend’s distress (e.g., a troubling situation or problem), and one’s own resulting distress. This, in turn, may contribute to more generalized feelings of anxiety.

Finally, given that empathetic distress is a new construct, it is important to distinguish it from the related constructs of empathy, personal distress, and sympathy. A large literature has been devoted to defining the construct of empathy, and historically there has been little agreement on the issue (see Eisenberg & Strayer, 1987). A commonly held view is that empathy is a broad global construct under which many types of empathic responding are possible (Davis, 1983). For example, Davis’ empathy measure (Interpersonal Reactivity Index; 1980) highlights two types of
empathic response (i.e., personal distress and sympathy). Neither of these types alone represent empathy itself, but rather both are indicative of the types of responses an individual may have to another person’s distress that are subsumed under the broader global construct of empathy. Similarly, empathetic distress is not empathy itself; rather it represents only one possible type of empathic response. Global measures of empathy have included items that assess a construct similar to, but broader than, empathetic distress. For example, Bryant’s (1982) Index of Empathy for Children and Adolescents includes items assessing overall emotional responsiveness (including positive emotionality and negative emotionality) to both positive eliciting events (e.g., laughing in response to another’s laughter) and negative eliciting events (e.g., crying at a sad movie). Items from this measure assess empathic responsiveness both to noninterpersonal events (e.g., watching television, reading a sad book) and to a generalized other (i.e., people in general). In contrast, the measure of empathetic distress developed for the present research assesses a more specific response that is (a) exclusively negative, (b) elicited only by a specific negative event (i.e., the distress of another person), and (c) occurs in the context of a close dyadic relationship.

Empathetic distress also is related to but not identical to personal distress. Personal distress refers to emotional overarousal in “tense interpersonal settings” (Davis, 1983, p. 114) such as emergencies. For example, items from the Personal Distress subscale of Davis’ (1980) Interpersonal Reactivity Index (IRI) assess the ability to remain calm during emergencies and the extent to which one is overcome by apprehension in emergency situations. This reaction may be activated by witnessing
another person in distress, but subsequently results in a preoccupation with one’s own distress at the necessary exclusion of further attention to the other person’s distress. Thus, there is no sense of connection between the original motivator of the emotion (i.e., another person) and one’s own emotional reaction. In contrast, empathetic distress does not preclude attention to the other person’s distress. In fact, continued awareness of the other person’s distress is what allows empathetic distress to persist.

Empathetic distress also is distinct from sympathy. Sympathy refers to warm feelings of concern for another person that motivate an altruistic response aimed at alleviating the other person’s distress (Eisenberg & Miller, 1987). For example, items assessing sympathy from the Empathic Concern (EC) subscale of the IRI (Davis, 1980) assess feelings of pity for and protection towards others that are treated unfairly. This response involves feeling badly for or concern toward another person. It is exclusively an other-oriented, or altruistic, emotion. In contrast, empathetic distress involves feeling distressed because of and along with another person. It is simultaneously self- and other-focused.

Concerning the constructs personal distress and sympathy, the study of these constructs thus far has been guided by the assumption that an empathic response to another person’s distress is necessarily either other-oriented (in the case of sympathy) or self-oriented (in the case of personal distress). The new construct empathetic distress originates from the premise that the experiences of an other-oriented empathic response and a self-oriented empathic response are not necessarily mutually exclusive. The construct of empathetic distress allows for the possibility of a dynamic and
reciprocal connection between awareness of another’s distress one’s own subsequent experience of distress. This possibility has been suggested by previous researchers (Zahn-Waxler & Radke-Yarrow, 1990), however, no research has systematically studied a single empathic response involving both self- and other-oriented components.

Gender Differences

As reviewed, social perspective-taking likely has important implications for social and emotional adjustment outcomes among youth. A goal of the proposed research will be to determine the role of gender in youths’ social perspective-taking and adjustment. Specifically, the proposed research seeks to test (a) if there are mean level differences in social perspective-taking, friendship quality, empathetic distress, depression, and anxiety, (b) if social perspective-taking mediates the relation between gender and friendship quality, and (c) if social perspective-taking and empathetic distress mediate the associations between gender and emotional adjustment outcomes.

Several past research studies have failed to find significant gender differences in mean levels of social perspective-taking among youth in middle childhood (e.g., Bryant, 1985; Rothenberg, 1970). However, recent research has found gender differences in favor of girls among preadolescent and adolescent youth (Schonert-Reichl & Beaudoin, 1998; Bosacki & Astington, 1999), suggesting that gender differences in social perspective-taking may emerge with the onset of adolescence. Moreover, gender differences may be especially apparent when considering social perspective-taking in the context of close friendships. Boys tend to engage in large group interactions more frequently than girls, whereas girls tend to have more extended
dyadic interactions compared to boys (Rose & Rudolph, 2006). Accordingly, boys may develop increased group-level social perspective-taking (i.e., imagining the perspective of “people in general”), whereas girls may emphasize social perspective-taking in dyadic relationships.

Given that empathetic distress is a newly developed construct, whether there are gender differences in empathetic distress is unknown. However, some researchers have cautioned that emotional “costs of caring” may be especially problematic for females (Kessler & McLeod, 1984). Further, given girls’ strong relational orientation compared to boys (Maccoby, 1990), it is hypothesized that empathetic distress in youths’ friendships will be more common for girls than for boys.

If gender differences in social perspective-taking are found, these differences may help to partially explain gender differences in friendship quality. Past research has documented gender differences in friendship quality, with girls reporting more positive friendship quality than boys (Parker & Asher, 1993). Social perspective-taking may be one of multiple factors contributing to this difference.

Similarly, gender differences in social perspective-taking and empathetic distress may contribute to the gender differences found in emotional adjustment difficulties among adolescents. Given that gender differences are expected in each social perspective-taking and empathetic distress, these constructs together may influence gender differences found in depression and anxiety. Past studies have documented gender differences in depression and anxiety emerging in adolescence, with girls experiencing more symptoms of depression (Nolen-Hoeksema & Girgus,
1994) and anxiety (Reynolds & Richmond, 1978) than do boys. Past research has documented multiple factors contributing to gender differences in emotional adjustment, including cognitive, biological, and social factors (e.g., Hankin & Abramson, 2001; Keenan & Hipwell, 2005; Liu & Kaplan, 1999). The possibility that the association of social perspective-taking with empathetic distress may be an additional factor contributing to gender differences in these emotional adjustment difficulties has not yet been addressed.

**Summary of Research Hypotheses**

In summary, social perspective-taking is hypothesized to have significant implications for both friendship adjustment and emotional adjustment among adolescents. It is expected that adolescents’ increased tendency to engage in social perspective-taking in the context of a dyadic friendship will be significantly related to increased positive friendship quality in that friendship. Although social perspective-taking is expected to have positive effects on friendship outcomes, it also is considered whether social perspective-taking will have negative effects on emotional adjustment among adolescent youth. Specifically, adolescents’ increased tendency to engage in social perspective-taking in the context of a dyadic friendship is hypothesized to lead to the experience of empathetic distress. In turn, empathetic distress is expected to be related to increased symptoms of depression and anxiety among adolescents. It also is expected that gender differences in social perspective-taking and empathetic distress will emerge, and that the gender differences in adjustment outcomes will be mediated
by social perspective-taking (in the case of friendship adjustment) or social perspective-taking and empathetic distress together (in the cases of depression and anxiety).
CHAPTER TWO

METHOD

Participants

Participants were sixth-, seventh- and eighth- grade students at a middle school in the St. Louis metropolitan area. The socioeconomic status of residents in the school district is low; 20% of residents age 25 and over are college educated, the median reported household income in the school district is $35,946, and 62% of students in the participating middle school are eligible for free or reduced lunches.

As in past research (e.g., Rose, 2002; Rose, Swenson, & Waller, 2004), consent forms were mailed to the homes of the 692 students in the participating middle school, on which parents and guardians could decline or consent students' participation. Out of a total of 518 returned consent forms, 76 of these declined participation and 442 (64% of all students) gave consent for participation. The challenges of obtaining active consent were increased due to the lower economic and education status of the school district. Even given these increased challenges, the consent rate obtained in this study still is similar to participation rates that previous research has demonstrated to provide valid sociometric data (Crick & Ladd, 1989).

Students whose parents or guardians gave consent for their participation completed assent forms on which they indicated whether or not they agreed to
participate. Two of the students chose not to participate, six students were not present to give assent due to repeated absences, and the remaining 434 students agreed to participate. Of these 434 students, 18 students were identified as having no reciprocal friends and were dropped from analyses. In addition, 52 students were dropped because they could not be paired into a mutually exclusive dyad (details regarding the identification of mutually exclusive friendship dyads are presented in the Measures section). Of the 364 remaining students, 28 students who did not have sufficient data (at least two-thirds of each questionnaire complete) were dropped from analyses, and the 28 friends of these students also were dropped. The final sample used in analyses were 308 youths (154 dyads, $M$ age = 12.94), including 90 sixth-grade youths (52 girls, 38 boys), 82 seventh-grade youths (44 girls, 38 boys), and 136 eighth-grade youths (82 girls, 54 boys). The racial/ethnic composition of the final sample was 46% Caucasian/European American, 29% Black/ African American, 8% Latino(a)/ Hispanic American, 1% Asian American, 1% American Indian/ Native American, 6% Mixed, and 9% classified themselves as “Other.”

*Procedure*

All questionnaire measures were group administered in two classroom sessions. Each session lasted approximately 45 minutes. Items on all questionnaires were read aloud to students, and procedures for completing an example item was demonstrated for each questionnaire. A follow-up visit was made after each initial session in order to collect data with students who were absent during the initial sessions.
Measures

Friendship Nominations

For many study measures, youths answered questions about a specific friendship. Friendship nominations were used in order to determine which friendship each adolescent reported on for these measures. The friendship nomination measure administered in the current study is similar to those used in past research (e.g., Graham & Cohen, 1997; Hoza, Molina, Bukowski, & Sippola, 1995; Parker & Asher, 1993; Rose, 2002; Rose & Asher, 1999). Youths were given a roster of participating students in their grade. For the first step, youths were asked to circle an unlimited number of the names of their friends. Next, youths were asked to indicate their three best friends by marking a star next to the appropriate names. Youths were asked to further indicate which of these their “very best friend” was by marking a second star by the appropriate name.

In order to conduct analyses, it was necessary to pair participants in mutually exclusive dyads so that each adolescent was a member of only one friendship dyad. Further, it was essential that all of the identified friendship pairs were made up of reciprocal friends. That is, both members of the dyad had to nominate the other as a friend. Also, as in previous research, (Parker & Asher, 1993; Rose, 2002; Rose & Asher, 1999), only same-sex reciprocal friendships were considered to facilitate examination of gender differences.

The decision rules used for identifying friendship pairs were similar to those used in past research (Rose, 2002; Rose & Asher, 1999; 2004). First, friendship pairs in
which each youth nominated the other as a very best friend were selected to be included in analyses. Ninety-three friendships of this type were identified. From the remaining sample, 28 friendships were then selected to be included in analyses in which one adolescent nominated a student as his or her very best friend and that student nominated the other adolescent as one of three best friends. Next, 11 friendships were selected for inclusion in analyses in which both adolescents nominated each other as a best friend but neither nominated the other as his or her very best friend. As a next step, 16 friendships were selected for inclusion in analyses in which one adolescent nominated a student as his or her very best friend and that student nominated the other adolescent as a friend but not a best or very best friend. From the remaining sample, 12 friendships were selected in which one adolescent nominated a student as one of his or her best friends and that student nominated the other adolescent as a friend but not a best or very best friend. Last, 22 friendships were selected in which both adolescents nominated each other as a friend but neither nominated the other as a best or very best friend.

Using this method, 182 mutually exclusive reciprocal friendship pairs were identified. As noted in the Participants section, 28 dyads were dropped due to missing data. This resulted in the final sample of 154 friendship pairs (i.e., 308 youths in 154 friendship dyads). Similar to past research, adolescents without a reciprocal friendship (i.e., no student that they nominated as a friend choice nominated them back, N = 18) reported on one of their friend choices for the questionnaires involving friendship, however, these data were not used in analyses (Parker & Asher, 1993; Rose, 2002; Rose & Asher, 1999). In addition, adolescents who could not be paired in a mutually
exclusive friendship dyad (i.e., because their friends were involved in other higher-priority friendships, N = 52) also reported on one of their friend choices, but again this data was not used.

Social Perspective-Taking

Adolescents’ social perspective-taking was assessed using a 19-item questionnaire. This social perspective-taking (SPT) measure includes 13 items adapted from the 60-item Empathy Quotient (EQ; Baron-Cohen & Wheelwright, 2004) and six items adapted from the 7-item Perspective-taking (PT) subscale of the Interpersonal Reactivity Index (IRI; Davis, 1980). These items all assess social perspective-taking in that they assess the tendency to adopt the perspective of others. All 19 items were revised to assess social perspective-taking in the context of dyadic friendships, and customized questionnaires were created for each participant. The name of each participant’s friend (identified using the friendship nominations data) was inserted into each item on the participant’s questionnaire. For example, the original item from the EQ scale (Baron-Cohen & Wheelwright, 2004) “I can usually appreciate the other person’s viewpoint, even if I don’t agree with it” was reworded to read “I can usually appreciate [friend’s name]’s viewpoint, even if I don’t agree with it.” An item adapted from the PT subscale of the IRI (Davis, 1980) is “When I’m upset with someone, I usually try to ‘put myself in his shoes’ for a while” reworded as “When I’m upset with [friend’s name], I usually try to ‘put myself in her/his shoes’ for a while.” As with past research (Parker & Asher, 1993; Rose, 2002; Rose & Asher, 1999; Rose & Asher,
customized questionnaires were used to ensure that youth reported specifically on the friendship with the identified friend.

As noted, some items from the EQ and PT scales were not used in the current research. The EQ was not used in its entirety because many of the scale items did not assess social perspective-taking. As examples, excluded items included “It upsets me to see an animal in pain” and “Friendships and relationships are just too difficult, so I tend not to bother with them.” In addition, one item from the PT subscale (“I believe that there are two sides to every question and try to look at them both”) could not be reworded to assess social perspective-taking specifically in a dyadic friendship, and this item was not used.

Participants indicated how well each item describes them using a 5-point Likert scale ranging from “Does not describe me at all” (0) to “Describes me very well” (4). Total scores for the measure are the mean scores across items. This new scale was found to have good reliability (Cronbach’s α = .88). The social perspective-taking measure is included in Appendix A.

**Empathetic Distress**

Participants responded to an 11-item survey measure of the new construct, empathetic distress. These items assess elevated negative affective responses to a friend’s experience of distress. This measure included two items adapted from Gore, Aseltine, and Colten’s (1993) Interpersonal Caring Orientation scale, two items adapted from Mehrabian and Epstein’s (1972) measure of emotional empathy, and seven original items. As with the social perspective-taking questionnaire, all items were
revised to assess adolescents’ empathetic distress in the context of a specific friendship, and all participants received a customized questionnaire with the name of their identified friend inserted into each item. An example item adapted from the Interpersonal Caring Orientation scale (Gore et al., 1993) is “It hurts me a lot when [friend’s name] is unhappy.” An example item adapted from Mehrabian and Epstein’s (1972) measure is “It’s hard for me to feel ok if [friend’s name] seems depressed.” A new item is “If [friend’s name] is having a tough time, just knowing how bad he/she must feel makes me feel upset too.” Participants indicated how well each item describes them using a 5-point Likert scale ranging from “Does not describe me at all” (0) to “Describes me very well” (4). Total scores for the measure were the mean item scores. The internal reliability was high for the new empathetic distress measure (Cronbach’s $\alpha = .95$). The empathetic distress questionnaire is presented in Appendix B.

Friendship Quality

Adolescents reported on the quality of the friendship with their identified friend. Friendship quality was assessed using Rose’s (2002) shortened and revised version of the Friendship Quality Questionnaire (FQQ; Parker & Asher, 1993). This 18-item scale assesses six aspects of friendship quality: validation and caring, conflict resolution, help and guidance, companionship and recreation, conflict and betrayal, and intimate exchange. Each participant received a questionnaire with the name of his or her friend inserted in each item. Participants indicated how true each item was of their friendship using a 5-point Likert scale ranging from “Not at all true” (0) to “Really true” (4). Given that the aim of the proposed research was to assess the relationship between
social perspective-taking and positive friendship quality, the 3 conflict and betrayal items were not used in analyses. Scores on the remaining 15 items were averaged to create total scores for the measure. Past research using these same 15 items as a single scale of positive friendship quality has demonstrated good reliability of the scale (Cronbach’s α = .90; Rose, Swenson, & Carlson, 2004). The current study obtained high reliability as well (Cronbach’s α = .95). The shortened FQQ is included in Appendix C.

*Depression Symptoms*

Depression symptoms were assessed using the 20-item Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D assesses affective, somatic, interpersonal, cognitive, and behavioral symptoms of depression. Participants indicated how often during the past week they had experienced the feelings or situations described in each item. Items were rated on a 4-point Likert scale ranging from “Rarely or none of the time, less than 1 day” (1) to “Most or all of the time, 5 to 7 days” (4). Item scores were averaged to create total scores for the measure. Past research has demonstrated the validity and internal reliability of the CDI among nonclinical samples, with reliability coefficients ranging from .84 to .90 (Radloff, 1977). In the current sample, the scale also was reliable (Cronbach’s α = .76). The CES-D is included in Appendix D.

*Anxiety Symptoms*

Participants also completed the Revised Children’s Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978). The RCMAS is a 28-item measure of anxiety
symptoms. Participants rated each item on a 5-point Likert scale indicating how true each item is of them, with 1 being “Not at all true” and 5 being “Really true.” Total scores were the mean of all item scores. Past research has documented reliability coefficients for the scale ranging from .78 to .85 (Reynolds & Paget, 1983). In the current study, the reliability for the scale was high (Cronbach’s α = .95). The RCMAS measure is presented in Appendix E.

**Perspective-Taking**

Youths completed the 7-item Perspective-taking (PT) subscale of the IRI (Davis, 1980) in order to provide support for the distinction between the social perspective-taking construct of primary interest in the current study and perspective-taking as typically assessed with the IRI (Davis, 1980). Recall that in creating the new SPT scale, 6 of the 7 items of the PT subscale were revised to assess social perspective-taking in the context of a specific dyadic friendship (i.e., with a specified partner). The original PT subscale assesses perspective-taking more globally (i.e., with people in general). An example item from the PT subscale is “When I’m upset with someone, I usually try to ‘put myself in his shoes’ for a while.” Participants indicated how well each item describes them using a 5-point Likert scale ranging from “Does not describe me at all” (0) to “Describes me very well” (4). Total scores for this measure were the mean of item scores. Past research has demonstrated acceptable internal reliability of the PT subscale (males, α = .71; females, α = .75), and adequate test-retest reliability (males, α = .61; females, α = .62; Davis, 1980). In the current study, the reliability was
good and comparable to past research (Cronbach’s α = .72). The PT scale is included in Appendix G.

*Sympathy*

Sympathy also was assessed in order to demonstrate the distinction between the new construct, empathetic distress, and the previously studied construct of sympathy. In particular, participants completed the 7-item Empathic Concern (EC) subscale of the IRI (Davis, 1980). This subscale assesses warm concern for others, as opposed to shared emotional distress with a friend, and has been used to measure sympathy in previous research (e.g., Carlo & Randall, 2002; Eisenberg et al., 1994; Eisenberg et al., 1991). An example item from this scale is “When I see someone being taken advantage of, I feel kind of protective towards them.” Participants indicated how well each item described them using a 5-point Likert scale ranging from “Does not describe me at all” (0) to “Describes me very well” (4). Total scores for this measure were calculated as the mean of item scores. Past research has demonstrated adequate internal reliability of the EC subscale (males, α = .72; females, α = .70), as well as test-retest reliability (males, α = .72; females, α = .70; Davis, 1980). In the current study, the reliability was comparable to past research (Cronbach’s α = .68). The EC scale is included in Appendix F.

*Personal Distress*

Participants also completed the Personal Distress (PD) subscale of the IRI (Davis, 1980) in order to provide support for the distinction between the new construct empathetic distress and the previously studied construct personal distress. This 7-item
scale assesses emotionally over-aroused responses to witnessing emergencies and alarming situations. An example item from this scale is “In emergency situations, I feel apprehensive and ill-at-ease.” Participants indicated how well each item describes them using a 5-point Likert scale ranging from “Does not describe me at all” (0) to “Describes me very well” (4). Total scores for this measure were calculated as the mean of item scores. Past research has demonstrated the internal reliability of the PD subscale (males, \( \alpha = .78 \); females, \( \alpha = .78 \)), as well as test-retest reliability (males, \( \alpha = .68 \); females, \( \alpha = .76 \); Davis, 1980). Among the current sample, the reliability coefficient was relatively low (\( \alpha = .56 \)), and results presented in a later section that are based on this measure should be interpreted with some caution. The PD scale is presented in Appendix H.
CHAPTER THREE

RESULTS

Reliability and Validity of the New Construct Empathetic Distress

Given that empathetic distress is a new construct, analyses were run to test the psychometric properties, reliability, and validity of the new empathetic distress measure used in the current study. First, an exploratory factor analysis was conducted to assess the construct validity of the measure. Based on the eigenvalues, a single factor was retained. Specifically, the first eigenvalue was 22.04 and the second dropped to .92. One item ("It is easy for me to stay cheerful when [friend's name] talks to me about something bad that happened to him/her") had an unsatisfactory loading value (-.05), and this item was dropped in further analyses. All other items loaded on the single factor and were retained (\(M\) factor loading = .80, range .70 to .86). Next, the internal reliability of the measure was assessed, and results indicated high internal reliability (Cronbach's \(\alpha = .95\)).

Last, correlational analyses were conducted. These analyses first assessed whether the relations of empathetic distress with the other study variables (social perspective-taking, friendship quality, depression, and anxiety) were in the expected direction. It was hypothesized that empathetic distress would be positively and significantly related to social perspective-taking, depression, and anxiety. Results
supported these hypotheses (social perspective-taking, $r = .64, p < .0001$; depression, $r = .14, p < .05$; anxiety, $r = .20, p < .01$). In the current study, the direct relation of empathetic distress with friendship quality was not of primary interest, and no specific hypothesis was put forth regarding this relation. However, it seems reasonable to expect that empathetic distress would be positively associated with friendship quality, given that empathetic distress is an empathy-related construct, and youths expect friends to be empathic (Sharabany, Gershoni, & Hofman, 1981). Not surprisingly, then, the results indicated a significant positive relation between empathetic distress and friendship quality ($r = .72, p < .0001$).

Correlational analyses also tested the distinctiveness of the new construct empathetic distress from previously studied constructs (sympathy, perspective-taking, and personal distress). It was expected that empathetic distress would be positively related to, but not redundant with, these previously studied constructs. Results supported this prediction (sympathy, $r = .50, p < .0001$; perspective-taking, $r = .45, p < .0001$; personal distress, $r = .45, p < .0001$), indicating that empathetic distress was related to the previously studied constructs, but that there was not complete redundancy.

Descriptive Statistics

To provide a summary of the data, descriptive statistics were calculated for the primary variables of interest in the current study. These variables include social perspective-taking, empathetic distress, friendship quality, depression, and anxiety. Descriptive statistics also were computed for sympathy, perspective-taking, and
personal distress. The mean, standard deviation, and range of scores for all variables are presented in Table 1.

Data Analytic Approach

A structural equation modeling (SEM) approach was used to analyze the data, and parameter estimates were obtained using AMOS 17.0 (Arbuckle, 2007). In the current research, a major goal of analyses was to examine relations among variables in cases where one or more of the variables serve both as an outcome variable and as a predictor variable (e.g., for variable B in the case of $A \rightarrow B \rightarrow C$). An SEM approach was preferable over other data analytic approaches (e.g., multilevel modeling) because it allows for the estimation of models in which variables serve simultaneously as outcomes (endogenous variables) and also as predictors (exogenous variables), rather than examining the relations in a piecemeal fashion (e.g., testing $A \rightarrow B$, then testing $B \rightarrow C$ in a separate analysis). Also in the current research, participants were paired in same-sex friendship dyads. Because youths who are friends are more similar to one another than non-friends (Campbell & Kashy, 2002), interdependence of data was a concern in the current study. Accordingly, ordinary analysis of variance and regression analyses were not appropriate in this case because these methods assume independence of observations. Further, typical approaches to SEM share this assumption. Consequently, an alternative SEM approach was used that allowed for taking into account the nonindependence of observations. Specifically, SEM analyses were conducted in which paths were modeled for each friend, and equality restrictions were imposed such that all parameters in the model (e.g., the predictor means, predictor
variances, outcome intercepts, residual variances, and regression coefficients) for both friends were estimated to have the same values.

For example, consider the model presented in Figure 1, Panel 1. In this example, friendship quality is predicted by social perspective-taking. The path from social perspective-taking to friendship quality is modeled both for Friend 1 (Path A) and Friend 2 (Path B). These paths are constrained to be equal because there is no reason to expect these paths will differ for the two dyad members given that the members of the dyad are interchangeable. Dyad members were interchangeable in the current study because the dyad members belong to a single class (i.e., partners are same-age and same-sex) and cannot be distinguished on any nonrandom dimension (e.g., sex). Modeling the covariances (i.e., Cov 1 and Cov 2) accounts for the interdependence between dyad members. For all SEM models that were conducted, this procedure of modeling the regression paths separately for each friend and modeling the covariances was followed, as depicted in Panel 1 of Figure 1. However, for clarity of presentation, the model figures are presented as in Panel 2 of Figure 1, with a single regression path depicted for each association rather than two separate but identical paths.

Fit statistics were computed for all SEM models. Chi-square is a measure of the compatibility of the data with the hypothesis, indicating fit between the estimated and actual covariance matrices. A smaller chi-square statistic indicates better fit for the model. The root mean square error of approximation (RMSEA) is a measure of the closeness of fit, with values less than 0.05 indicating good model fit, and values up to 0.08 indicating reasonable model fit (Browne and Cudeck 1993; Hu and Bentler 1999).
In the following sections, analyses are first presented that test mean-level gender and grade differences in social perspective-taking, empathetic distress, friendship quality, depression, and anxiety. Next, primary analyses are presented that test the hypothesized relations among the study variables. Finally, supplemental analyses are presented that demonstrate the distinctiveness of the constructs of interest in the present research (i.e., social perspective-taking and empathetic distress) from previously studied constructs (i.e., sympathy, perspective-taking, and personal distress).

Mean-Level Gender and Grade Differences

Overall gender and grade differences in variable means, as well as gender differences by grade, were tested for each of the primary variables of interest. Means by gender and grade for social perspective-taking, friendship quality, empathetic distress, depression, and anxiety are presented in Table 2.

In order to test for gender differences, separate SEM models were estimated predicting each variable from gender. SEM models were used in these analyses in order to provide consistency with later analyses using SEM models (i.e., models testing whether additional variables help to account for gender differences reported in this section). For each model, satisfactory model fit was achieved. Further, the path from gender to each construct was significant in each model. Specifically, a significant gender difference emerged for social perspective-taking (β = .28, p < .001, χ² [3] = 2.19, ns, RMSEA = .00), supporting the hypothesis that girls would have increased social perspective-taking skills compared to boys. In addition, support was found for the hypotheses that gender differences in favor of girls would emerge for empathetic
distress ($\beta = .47, p < .0001, \chi^2 [3] = .06, ns, RMSEA = .00$), friendship quality ($\beta = .39, p < .0001, \chi^2 [3] = .49, ns, RMSEA = .00$), depression ($\beta = .22, p < .001, \chi^2 [3] = 2.24, ns, RMSEA = .00$), and anxiety ($\beta = .23, p < .001, \chi^2 [3] = 1.54, ns, RMSEA = .00$).

Grade differences were next examined by testing separate SEM models predicting each variable from grade. No significant grade differences emerged for social perspective-taking ($\beta = -.02, ns$), friendship quality ($\beta = -.08, ns$), or depression ($\beta = -.04, ns$). However, a significant grade difference was found for empathetic distress ($\beta = -.15, p < .05, \chi^2 [3] = .64, ns, RMSEA = .00$). Inspection of the means by grade revealed that empathetic distress was higher among 6th and 7th grade youths, and lower among 8th grade youths. A significant grade effect also was found for anxiety ($\beta = -.15, p < .01, \chi^2 [3] = .62, ns, RMSEA = .00$), such that anxiety steadily decreased with age.

Next it was of interest to test whether the gender differences in study variables were further qualified by grade differences. That is, a model comparison approach (i.e., multi-group comparison) was used to test whether gender differences in the study variables significantly varied by grade. The model comparison approach is illustrated in Figure 2. In this example, a restricted model (presented in Panel 1 of Figure 2) was conducted predicting social perspective-taking from gender in which restrictions were imposed requiring equal path coefficients across each 6th, 7th, and 8th grades. In effect, the model predicting social perspective-taking from gender was fit separately by grade, but constraints were imposed such that the paths were equal across grades. This model was compared to the unrestricted model (presented in Panel 2 of Figure 2) in which
social perspective-taking was predicted from gender separately for each grade and all paths were free to vary by grade. The chi-square values from the restricted and unrestricted models were compared using a chi-square difference test. Finding a nonsignificant difference between the chi-squares indicates that there was no significant improvement in model fit by allowing the paths to vary by grade, compared to when the paths were the same for each grade. In other words, a nonsignificant chi-square difference would indicate that the gender difference in social perspective-taking did not significantly differ by grade. This multi-group comparison approach was used to examine gender by grade differences in each of the study variables (i.e., social perspective-taking, empathetic distress, friendship quality, depression, and anxiety).

For social perspective-taking, the model comparison test indicated no significant improvement in model fit when paths were free to vary across the three grades (restricted model $\chi^2$ [15] = 19.44, $ns$; unrestricted model $\chi^2$ [13] = 15.96, $ns$; $\Delta \chi^2$ [2] = 3.47, $ns$). Similarly, model comparison tests indicated no significant improvement in model fit when paths were free to vary by grade for empathetic distress (restricted model $\chi^2$ [15] = 30.25, $p < .01$; unrestricted model $\chi^2$ [13] = 24.58, $p < .05$; $\Delta \chi^2$ [2] = 5.67, $ns$) or depression (restricted model $\chi^2$ [15] = 19.94, $ns$; unrestricted model $\chi^2$ [13] = 18.74, $ns$; $\Delta \chi^2$ [2] = 1.20, $ns$). Model comparison tests for friendship quality indicated significant improvement in model fit when paths were free to vary by grade (restricted model $\chi^2$ [15] = 17.13, $ns$; unrestricted model $\chi^2$ [13] = 10.02, $ns$; $\Delta \chi^2$ [2] = 7.11, $p < .05$), indicating that the gender difference in friendship quality significantly varied by grade. Although the gender difference was significant in each
grade, the difference was strongest in the 8th grade (6th grade boys $M = .90$, girls $M = 2.61$, $\beta = .30$, $p < .05$; 7th grade boys $M = 2.29$, girls $M = 2.71$, $\beta = .28$, $p < .05$; 8th grade boys $M = 1.57$, girls $M = 2.66$, $\beta = .52$, $p < .001$). Model comparison tests for anxiety also indicated significant improvement in model fit when paths were free to vary by grade (restricted model $\chi^2 [15] = 17.33$, $ns$; unrestricted model $\chi^2 [13] = 9.51$, $ns$; $\Delta \chi^2 [2] = 7.81$, $p < .05$). Results by grade indicated that gender differences were significant in each grade, but the strength of the gender difference in anxiety decreased slightly with age (6th grade boys $M = 2.26$, girls $M = 2.56$, $\beta = .26$, $p < .001$; 7th grade boys $M = 2.14$, girls $M = 2.50$, $\beta = .23$, $p < .001$; 8th grade boys $M = 1.96$, girls $M = 2.27$, $\beta = .16$, $p < .01$).

Relations of Social Perspective-Taking with Adjustment

In this section, analyses test relations of social perspective-taking with friendship and emotional adjustment. For each of the following analyses, the multi-group comparison approach was first used to test whether each model should be specified according to gender or grade. A model comparison test was conducted for gender, for grade, and for gender and grade together for each of the models described in the subsequent sections. For example, in testing the prediction of friendship quality from social perspective-taking, gender differences were examined by comparing a restricted model (i.e., regression paths were restricted to be equal for girls and for boys) with an unrestricted model (i.e., regression paths were freed to vary by gender, so that different estimates were computed for girls and for boys). Then, a parallel analysis examined grade differences. Finally, gender and grade differences were tested together.
by fitting the models separately for boys and girls within each grade (for a total of six separate models, one each for 6th grade boys, 6th grade girls, 7th grade boys, 7th grade girls, 8th grade boys, and 8th grade girls). These six models were run both with and without restricting the regression paths to be equal across models.

Results from chi-square change tests for each of the models are presented in Table 3. Model comparisons revealed no significant improvement in model fit when the paths were freed across gender and/or grade for any of the models. Consequently, the following analyses tested the associations of interest collapsing across gender and grade.

*Relations of Social Perspective-Taking with Friendship Quality*

To test the hypothesis that social perspective-taking would be associated with increased friendship quality, the model predicting friendship quality from social perspective-taking was fit. The model and fit statistics are presented in Figure 3, with the significant path coefficient indicated. The test of this model revealed satisfactory model fit, and social perspective-taking was a significant predictor of friendship quality, such that increased social perspective-taking was associated with increased friendship quality.

*Social Perspective-Taking, Empathetic Distress, and Emotional Adjustment*

Next the hypotheses that social perspective-taking would predict empathetic distress, which would in turn predict emotional adjustment outcomes were tested. First, a model was estimated in which social perspective-taking predicted empathetic distress, and empathetic distress predicted depression (i.e., empathetic distress served as both an
endogenous and an exogenous variable). The model, fit statistics, and significant path coefficients are presented in Figure 4 (Panel 1). Results indicated satisfactory model fit. Social perspective-taking significantly and positively predicted empathetic distress, and empathetic distress in turn significantly and positively predicted depression.

Next, a parallel model was conducted using anxiety as an outcome variable instead of depression. Specifically, a model was fit in which social perspective-taking predicted empathetic distress, and empathetic distress in turn predicted anxiety. This model also is presented in Figure 4 (Panel 2), along with fit statistics and significant path coefficients. The test of the model indicated satisfactory model fit, and each path was significant. Increased social perspective-taking was associated with increased empathetic distress, and increased empathetic distress in turn was associated with increased anxiety.

In order to provide further support for the hypothesis that the associations in these models with emotional adjustment were due to the pathways from social perspective-taking to empathetic distress to emotional adjustment, rather than social perspective-taking having a direct effect on emotional adjustment, additional models were fit. These models tested direct associations of social perspective-taking with each emotional adjustment variable. First, the model predicting depression from social perspective-taking was tested. Results indicated that social perspective-taking in isolation did not significantly predict depression ($\beta = -.07$, $ns$). The model predicting anxiety from social perspective-taking next was tested. Social perspective-taking was not a significant predictor of anxiety ($\beta = -.11$, $ns$).
Considering Gender

Social Perspective-Taking and Friendship Quality

In addition to testing mean-level gender differences in social perspective-taking and in friendship quality, it was of interest to test whether social perspective-taking mediated the gender difference found in friendship quality. To test this hypothesis, a model was constructed that simultaneously tested the direct effect of gender on friendship quality and the indirect effect of gender on friendship quality through social perspective-taking (i.e., the path from gender to social perspective-taking to friendship quality). The model for this test is presented in Figure 5 (Panel 2). The test of the new model revealed good model fit. Examination the indirect effect revealed that gender significantly predicted social perspective-taking, and social perspective-taking significantly predicted friendship quality. In regards to the direct effect, recall that in the original model that only included gender and friendship quality (presented in Figure 5, Panel 1), the effect was highly significant ($\beta = .39, p < .0001$). In the new model in which social perspective-taking was controlled (presented in Figure 5, Panel 2), the direct effect of gender on friendship quality remained significant ($\beta = .20, p < .01$), however, this effect was significantly reduced (Sobel’s test statistic = 4.26, $p < .0001$), indicating that social perspective-taking partially mediated the gender difference in friendship quality.

Social Perspective-Taking, Empathetic Distress, and Emotional Adjustment

Next, it was of interest to test the prediction that the association of social perspective-taking with empathetic distress would mediate the gender differences found
in the adjustment outcomes. First, for depression, a model was constructed that simultaneously tested the direct effect of gender on depression and the indirect effect of gender on depression through social perspective-taking and empathetic distress (i.e., the path from gender to social perspective-taking to empathetic distress to depression). This model is presented in Figure 6 (Panel 2). The test of the new model indicated satisfactory model fit. Examination of the indirect effect revealed that all paths were significant. That is, gender significantly predicted social perspective-taking, social perspective-taking significantly predicted empathetic distress, and empathetic distress significantly predicted depression. In regards to the direct effect, recall that in the original model that only included gender and depression (presented in Figure 6, Panel 1), the effect was significant ($\beta = .22, p < .001$). In the new model that controlled for the association of social perspective-taking with empathetic distress (presented in Figure 6, Panel 2), the direct effect of gender on depression remained significant but was significantly reduced ($\beta = .13, p < .05$, Sobel’s test statistic $= 2.00, p < .05$), indicating that the association of social perspective-taking with empathetic distress partially mediated the gender difference in depression.

Next, for anxiety, a model was constructed that simultaneously tested the direct effect of gender on anxiety and the indirect effect of gender on anxiety through social perspective-taking and empathetic distress (i.e., the path from gender to social perspective-taking to empathetic distress to anxiety). This model is presented in Figure 7 (Panel 2). The test of the new model indicated satisfactory model fit. Examination of the indirect effect revealed that all paths were significant. That is, gender significantly
predicted social perspective-taking, social perspective-taking significantly predicted empathetic distress, and empathetic distress significantly predicted anxiety. In regards to the direct effect, recall that in the original model that only included gender and anxiety (presented in Figure 7, Panel 1), the effect was significant ($\beta = .23, p < .001$).

In the new model that controlled for the association of social perspective-taking with empathetic distress (presented in Figure 7, Panel 2), the direct effect of gender on anxiety was significantly reduced and was no longer significant ($\beta = .11, \text{ns, Sobel’s test statistic} = 2.67, p < .01$), indicating that the association of social perspective-taking with empathetic distress fully mediated the gender difference found in anxiety.

**Supplemental Analyses**

Supplemental analyses were conducted in order to demonstrate the distinctiveness of the constructs of interest in the present research (i.e., social perspective-taking and empathetic distress) compared to related constructs studied in other research (i.e., sympathy, perspective-taking, and personal distress). First, correlations among the previously studied constructs (i.e., sympathy, perspective-taking and personal distress) with all other variables were computed and are presented in Table 4. Of particular interest are the relations between social perspective-taking and each of the previously studied constructs (i.e., sympathy, perspective-taking, and personal distress), and the relations between empathetic distress and each of the previously studied constructs. All of these correlations were positive (ranging .07 to .50). These relations indicated that, as predicted, there was some overlap among the constructs but not complete redundancy.
Second, the unique effects of social perspective-taking and empathetic distress were examined by refitting the original SEM models while controlling for the previously studied constructs (sympathy, perspective-taking, and personal distress). In particular, six original models were refitted. The refitted models were the models (presented in Figure 3, Figure 4 Panel 1, Figure 4 Panel 2, Figure 5 Panel 2, Figure 6 Panel 2, and Figure 7 Panel 2) examining associations of social perspective-taking and empathetic distress with friendship quality, depression, and anxiety. Of interest were the paths that tested relations of social perspective-taking and empathetic distress with other variables. There were six of these paths, and given that each path was refitted three times (once while controlling for sympathy, once controlling for perspective-taking, and once controlling for personal distress), there were a total of 18 paths retested controlling for sympathy, perspective-taking, or personal distress. The same pattern of results emerged in the new analyses that emerged in the original analyses for 15 of the paths. Given that the results generally held while controlling for the related variables, the findings provide support for the unique relations of the constructs examined in the present study.
The present study was the first to consider social perspective-taking in youths' friendships, and to consider potential adjustment trade-offs associated with social perspective-taking in friendships. Social perspective-taking generally has been considered a beneficial social-cognitive skill, and previous research typically has examined positive correlates of social perspective-taking. However, findings from the current study point to important adjustment costs associated with social perspective-taking that previously have been overlooked. The current results indicate that although social perspective-taking is beneficial for friendships, this may come at the expense of emotional well being, especially for girls.

**Social Perspective-Taking and Friendship Adjustment**

Previous research has typically assessed global social perspective-taking (i.e., with people in general), and has not taken relationship context into account. Results from the current study highlight the importance of assessing social perspective-taking in the context of specific dyadic relationships. In the current study, youths' social perspective-taking in a specific friendship was related to but not redundant with their perspective-taking with people in general, and was uniquely associated with friendship adjustment.
As hypothesized, results indicated that youths who take their friend's perspective were afforded the important benefit of positive friendship quality.

The present research was an important first step for learning about social perspective-taking in youths’ friendships. However, a limitation of the current research is that only youths’ self-reported frequency of engaging in social perspective-taking was assessed. Namely, youths were asked to report on how typical it was of them to see things from their friend's perspective. More research is needed to uncover how youths’ motivation and ability to take the perspective of a friend play a role in influencing the quality of youths’ friendships. That is, many youth who score high on the current measure of social perspective-taking may be both motivated to take their friend’s perspective and also have the ability to do so, but that may not always be the case. For example, some youths may be especially motivated to take their friend's perspective, and these youth may report on the measure in the current study frequently taking their friend’s perspective. However, they may lack the ability to do so effectively. These youth still may experience positive friendship quality if their attempts (even if ineffective or inaccurate) at social perspective-taking are appreciated by the friend, although the quality of their friendships would likely be highest if they were more skilled at social perspective-taking. On the other hand, some youths may be capable of taking a friend's perspective but lack motivation and simply choose not to. Youth such as these may report low social perspective-taking on the measure in the current study not because they are not skilled at social perspective-taking but because they refrain from doing so. These youth may be perceived by the friend as lacking a desire to relate
to one another, which may damage feelings of closeness. These effects may be especially strong if the friend senses the youth *could* take their perspective but has chosen not to.

To address these questions it will be important to obtain some measure of accuracy regarding youths’ social perspective-taking skills. For example, friends could report on their perceptions of youths’ thoughts and feelings and an index of agreement between these reports and youths’ reports of their actual thoughts and feelings could be computed. It also would be useful to directly assess youths’ *motivation* to perspective-take. Considering these assessments together may be especially useful for understanding the impact of youths’ social perspective-taking on friendship quality. Moreover, these effects may be mediated by the friend’s perceptions of the degree to which youth are trying to and are able to take their perspective.

An additional limitation of the present study is that only concurrent associations of social perspective-taking with friendship adjustment were assessed. Examining these associations over time will be an important direction for future research, and will provide information about the direction of effects. It was proposed that engaging in social perspective-taking with friends will lead to higher quality friendships. However, it also is plausible that high quality friendships may be especially likely to elicit social perspective-taking from friendship partners. Youths may simply be more motivated to engage in social perspective-taking when it is in the context of a high-quality, highly-valued friendship.
Social Perspective-Taking, Empathetic Distress, and Emotional Adjustment

The present research also provided an important extension of past research that focused on the benefits of social perspective-taking by uncovering adjustment trade-offs associated with social perspective-taking. Although social perspective-taking had positive implications for friendship adjustment, it was not without drawbacks. By considering the new construct, empathetic distress, the current research uncovered emotional adjustment costs of social perspective-taking. Specifically, results from the current study suggest that social perspective-taking contributes to empathetic distress, which in turn leads to symptoms of depression and anxiety.

Importantly, the associations of social perspective-taking with emotional adjustment difficulties were not explained by the direct link of social perspective-taking with either of the emotional adjustment outcomes. The new construct empathetic distress, then, was especially important because without examining this construct, potential costs of social perspective-taking would have been overlooked. Accordingly, a strength of the current study was that this study established the utility of a new empathetic distress measure. Further, the current study found support for the distinction of empathetic distress from constructs studied in previous research (i.e., sympathy and personal distress).

Although these initial results are promising, more research examining empathetic distress is needed. For example, future studies should examine whether there are individual differences in the toll that social perspective-taking and empathetic distress take. A notable finding in the current study was that social perspective-taking and
associated empathetic distress were linked with emotional difficulties using measures of depression and anxiety that are relatively stable over time. This suggests that, for some youth, social perspective-taking and associated empathetic distress may have relatively lasting effects on emotional well being. However, this may not be the case for all youth. For example, some youths may experience empathetic distress during problem talk with friends but recover quickly and not experience longer lasting symptoms of depression and anxiety. If this is the case, it will be important for future research to examine the factors that influence why some youths may be more resilient in the face of empathetic distress while others experience greater threats to emotional well being.

Additionally, longitudinal data will provide information about the direction of effects. It was suggested in the current study that the chain of events moves from social perspective-taking to empathetic distress, which then leads to emotional adjustment difficulties. However, it may be the case that youths with initial emotional difficulties are especially vulnerable to experiencing empathetic distress. Future research will need to test the possibility that these effects are bi-directional.

Gender

Considering the role of gender was important in the current study. Although some past studies have found no gender difference in social perspective-taking in middle childhood (e.g., Bryant, 1985; Rothenberg, 1970), the current finding for gender differences favoring girls provides support for the idea that gender differences in social perspective-taking emerge in adolescence. This current finding is in line with past
research that also found gender differences among preadolescent and adolescent samples (Schonert-Reichl & Beaudoin, 1998; Bosacki & Astington, 1999).

Important findings regarding gender also emerged for friendship quality. Gender differences in friendship quality favoring girls have been consistently documented in past research (e.g., Parker & Asher, 1993), and also were found in the current study. Researchers previously have examined factors such as social competencies (Phillipsen, 1999), goals (Rose & Asher, 1999), and intimate disclosure processes (Rose, 2002) that may help to account for this gender difference. The current study provides an important extension of this past work by indicating that social perspective-taking also mediates or helps to explain why girls report more positive friendship quality than boys.

Although girls benefited from greater social perspective-taking compared to boys in terms of friendship quality, girls' greater social perspective-taking also put them at risk for experiencing greater empathetic distress, depression, and anxiety compared to boys. These findings are in line with Rose and Rudolph (2006)'s proposal that there are adjustment trade-offs associated with sex-typed peer relationship styles. Girls’ friendships may provide a context in which social perspective-taking skills and empathetic distress develop given that they are characterized by greater intimate disclosure (e.g., Camarena, Sarigiani, & Peterson, 1990) and co-ruminating about problems (Rose, 2002) compared to boys’ friendships. Despite the potential benefits of girls' sex-typed disclosure styles for their friendships, if these styles are especially
likely to elicit social perspective-taking and empathetic distress, then they also may put girls at risk for emotional adjustment problems (see also Rose & Rudolph, 2006).

The finding that girls experienced greater empathetic distress and related depression and anxiety also is in line with the suggestion of previous researchers that the emotional “costs of caring” (Kessler & McLeod, 1984) may be especially problematic for females. Although past researchers have examined the impact of having a general interpersonal caring orientation (e.g., worrying about loved ones in general) on boys' and girls' depression (Gore et al., 1993), the current study extends this past work in important ways by a) developing a new construct (empathetic distress) that focuses on the shared experience of distress, b) examining this new construct specifically in the context of youths' friendships, c) considering the effects of empathetic distress on both depression and anxiety, and d) testing a process model (i.e., social perspective-taking → empathetic distress → emotional adjustment) that helps to explain gender differences in emotional well being.

Limitations and Future Directions

The current study provided an important first look at social perspective-taking in youths’ friendships. Still, there were limitations of the study, and corresponding future directions that should be noted. As mentioned previously, a limitation of the present study is that only concurrent associations were assessed. Consequently, as noted throughout the Discussion, the current findings are limited in that they do not speak to the direction of effects. Longitudinal studies are needed to provide more information
about whether social perspective-taking is an antecedent to friendship and emotional adjustment outcomes.

In addition, future studies that include a broader age range of participants would be beneficial. The current study included adolescent youths because Selman’s (1980) work suggests that adolescence is a critical time in the development of social perspective-taking skills, in that youths are expected to reach the highest level of social perspective-taking ability in adolescence. Findings from past studies on children’s theory of mind suggest that prior to adolescence, youths may experience the benefits of social perspective-taking, such as acceptance in the general peer group (e.g., Watson et al., 1999). However, whether youths in early and middle childhood also experience the costs found in this study to be associated with social perspective-taking is unknown. It may be that the beginnings of social perspective-taking ability in childhood are associated with benefits (e.g., peer group acceptance) because these emerging social-cognitive skills are linked with more general social competencies, whereas experiencing the cost of social perspective-taking and associated empathetic distress requires more sophisticated social perspective-taking skills that are not fully developed until adolescence.

Finally, despite the ethnically diverse sample used in the current study, a limitation of the study is that it is unclear whether the findings would be generalizable cross-culturally or cross-nationally. In particular, given that the new construct empathetic distress is an interpersonal caring construct that refers to shared distress with another person, it will be of interest to examine this construct among youths in cultures that
value collectivism and adopt a different concept of the relation between self and other compared to American culture. For example, whereas American culture strongly emphasizes the self as unique and independent from others, many Asian cultures emphasize interdependence and connectedness between individuals (Markus & Kitayama, 1991). It may be the case that youths in the latter type of culture experience even greater empathetic distress because the division between self and other is blurred, making it more likely that youths will take on the distress of another as their own. Future studies should be conducted cross-culturally and cross-nationally in order to help address these issues.

Applied Implications

Results from the current study point to the challenges for intervening with youths who experience empathetic distress and related emotional difficulties. Importantly, given their higher levels of social perspective-taking, youth who experience high levels of empathetic distress probably do not exhibit social skills deficits, and therefore social skills training is likely to be ineffective. To the contrary, these youths probably are quite skilled socially. Efforts to diminish social perspective-taking would likely be a mistake, given the benefits that this social-cognitive skill affords, including that it is a protective factor against friendship problems. Further, it is not even clear that efforts to eliminate empathetic distress in youths would be desirable. Some level of empathic responding to friends is a natural part of friendship, and youths expect friends to be empathic (Sharabany, Gershoni, & Hofman, 1981). Interventions, then, likely will need to focus on developing healthy interpersonal boundaries, and
balancing the care for another person with regard for youths' own emotional well-being so that the distress of a friend does not become the youths' distress as well.
REFERENCES


Table 1

*Means, Standard Deviations, and Ranges of Scores for Study Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
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</thead>
<tbody>
<tr>
<td>Social Perspective-Taking</td>
<td>2.31</td>
<td>.66</td>
<td>0.21 – 3.89</td>
</tr>
<tr>
<td>Empathetic Distress</td>
<td>2.28</td>
<td>1.06</td>
<td>0.00 – 4.00</td>
</tr>
<tr>
<td>Friendship Quality</td>
<td>1.95</td>
<td>.99</td>
<td>0.00 – 3.73</td>
</tr>
<tr>
<td>Depression</td>
<td>2.05</td>
<td>.38</td>
<td>1.00 – 3.25</td>
</tr>
<tr>
<td>Anxiety</td>
<td>2.10</td>
<td>.69</td>
<td>1.00 – 4.25</td>
</tr>
<tr>
<td>Sympathy</td>
<td>2.17</td>
<td>.75</td>
<td>0.00 – 4.00</td>
</tr>
<tr>
<td>Perspective-Taking</td>
<td>2.08</td>
<td>.69</td>
<td>0.57 – 4.00</td>
</tr>
<tr>
<td>Personal Distress</td>
<td>1.51</td>
<td>.70</td>
<td>0.00 – 3.67</td>
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Table 2

*Means by Gender and Grade for Social Perspective-Taking, Empathetic Distress, Friendship Quality, Depression, and Anxiety*

<table>
<thead>
<tr>
<th></th>
<th>6th grade</th>
<th>7th grade</th>
<th>8th grade</th>
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<tbody>
<tr>
<td></td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td></td>
<td>[178]</td>
<td>[130]</td>
<td>[90]</td>
</tr>
<tr>
<td>SPT</td>
<td>2.70 (.63)</td>
<td>2.33 (.64)</td>
<td>2.50 (.62)</td>
</tr>
<tr>
<td>EmpD</td>
<td>2.66 (.76)</td>
<td>1.74 (.99)</td>
<td>2.41 (.94)</td>
</tr>
<tr>
<td>FQ</td>
<td>2.66 (.77)</td>
<td>1.93 (.96)</td>
<td>2.39 (.90)</td>
</tr>
<tr>
<td>Dep</td>
<td>2.11 (.40)</td>
<td>1.96 (.33)</td>
<td>2.05 (.41)</td>
</tr>
<tr>
<td>Anx</td>
<td>2.41 (.85)</td>
<td>2.10 (.69)</td>
<td>2.43 (.89)</td>
</tr>
</tbody>
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*Note. Ns for each group are given in brackets. Standard deviations are given in parentheses.*
Table 3

Results for Multi-Group Comparisons Testing for Gender and Grade Differences in the Models Predicting Outcomes from Social Perspective-Taking

<table>
<thead>
<tr>
<th>Model</th>
<th>Gender</th>
<th>Grade</th>
<th>Gender by Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPT → FQ</td>
<td></td>
<td>Δχ² (2) = 4.89</td>
<td>Δχ² (4) = 5.24</td>
</tr>
<tr>
<td>SPT → EMPD → DEP</td>
<td></td>
<td>Δχ² (4) = 7.23</td>
<td>Δχ² (8) = 3.75</td>
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<tr>
<td>SPT → EMPD → ANX</td>
<td></td>
<td>Δχ² (4) = 6.65</td>
<td>Δχ² (8) = 8.21</td>
</tr>
</tbody>
</table>

*Note.* All values ns.
Table 4

Correlations Among Study Variables with Previously Studied Constructs Sympathy, Perspective Taking, and Personal Distress.

<table>
<thead>
<tr>
<th></th>
<th>Sympathy</th>
<th>Perspective Taking</th>
<th>Personal Distress</th>
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</thead>
<tbody>
<tr>
<td>Social Perspective-Taking</td>
<td>.39****</td>
<td>.50****</td>
<td>.07</td>
</tr>
<tr>
<td>Empathetic Distress</td>
<td>.50****</td>
<td>.45****</td>
<td>.36****</td>
</tr>
<tr>
<td>Friendship Quality</td>
<td>.36****</td>
<td>.35****</td>
<td>.15**</td>
</tr>
<tr>
<td>Depression</td>
<td>.17**</td>
<td>.05</td>
<td>.26****</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.14**</td>
<td>.04</td>
<td>.36****</td>
</tr>
<tr>
<td>Sympathy</td>
<td>---</td>
<td>.52****</td>
<td>.18***</td>
</tr>
<tr>
<td>Perspective Taking</td>
<td>---</td>
<td>---</td>
<td>.09</td>
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Notes. **p < .01. ***p < .001. ****p < .0001.
1) **Path A = Path B = Path C**

![Diagram 1](image1)

2) **Path A, Path B, and Path C are free to vary**

![Diagram 2](image2)

The multi-group comparison approach compares model 1 to model 2.
Figure 3

Note. Value given is the standardized regression coefficient. ****p < .0001. Model fit: \( \chi^2 (6) = 11.31, \text{ns}, \text{RMSEA} = .08. \)
Note. Values presented are standardized regression coefficients. **p < .01, ****p < .0001. Panel 1 model fit: $\chi^2 (13) = 14.32$, ns, $RMSEA = .03$. Panel 2 model fit: $\chi^2 (13) = 10.42$, ns, $RMSEA = .00$. 

Figure 4
Figure 5

Panel 1

Panel 2

Note. Values presented are standardized regression coefficients. **p < .01, ***p < .001, ****p < .0001. Indirect effect was significant, Sobel’s test statistic = 4.26, p < .0001. Panel 2 Model fit: $\chi^2$ (8) = 12.49, ns, RMSEA = .06.
Note. Values presented are standardized regression coefficients. *p < .05, ***p < .001, ****p < .0001. Indirect effect was significant, Sobel’s test statistic = 2.00, p < .05. Panel 2 Model fit: $\chi^2$ (14) = 15.75, ns, RMSEA = .03.
Appendix A

*Social Perspective-Taking Measure Items*

Participants responded to the question “How well does each of the following statements describe you?” for each of the following items.

1. I sometimes find it difficult to see things from [friend’s name]’s point of view.

2. I try to look at [friend’s name]’s side of a disagreement before I make a decision.

3. I sometimes try to understand [friend’s name] better by imagining how things look from her/his perspective.

4. If I’m sure I’m right about something, I don’t waste much time listening to what [friend’s name] has to say about it.

5. When I’m upset with [friend’s name], I usually try to put myself in his/her shoes for a while.

6. Before I criticize [friend’s name], I try to imagine how I would feel if I were in her/his place.

7. I can easily tell if there’s something [friend’s name] wants to talk about.

8. When I talk to [friend’s name], I tend to focus on my own thoughts rather than on what [friend’s name] might be thinking.

9. I can pick up quickly if [friend’s name] says one thing but means another.

10. It is hard for me to see why some things upset [friend’s name] so much.

11. I am good at predicting how [friend’s name] will feel about something.

12. [Friend’s name] tells me I am good at understanding how he/she is feeling and what he/she is thinking.

13. I can easily tell if [friend’s name] is interested or bored with what I am saying.

14. [Friend’s name] usually talks to me about her/his problems because she/he says that I am very understanding.

15. I can sense if I am intruding even if [friend’s name] doesn’t tell me that I am.
16. I can tell if [friend’s name] is pretending not to be bothered by something that upset him/her.

17. I am good at predicting what [friend’s name] will do.

18. I can usually appreciate [friend’s name]’s viewpoint, even if I don’t agree with it.

19. I find it easy to put myself in [friend’s name]’s shoes.
Appendix B

Empathetic Distress Measure Items

Participants responded to the question “How well does each of the following statements describe you?” for each of the following items.

1. It hurts me a lot when [friend’s name] is unhappy.

2. When [friend’s name] talks to me about a problem he/she has, it bothers me that something is making him/her feel bad.

3. When [friend’s name] talks to me about this problem, I imagine how it must feel to be in her/his place, and I start to feel upset.

4. Sometimes when we talk about [friend’s name]’s problem, I get upset because it makes me think of similar problems that I have.

5. I tend to get emotionally involved with [friend’s name]’s problems.

6. I feel bad if [friend’s name] is upset.

7. It’s easy for me to stay cheerful when [friend’s name] talks to me about something bad that happened to him/her.

8. If [friend’s name] is having a tough time, just knowing how bad she/he must feel makes me feel upset too.

9. It bothers me that sometimes when [friend’s name] is feeling down, it makes me feel down too.

10. It makes me sad to see [friend’s name] get her/his feelings hurt.

11. I worry a lot about [friend’s name] when I know something is bothering him/her.

12. It’s hard for me to feel OK if [friend’s name] seems depressed.
Appendix C

Friendship Quality Questionnaire Items

Participants indicated how true each of the following items were of their friendship.

1. [Friend’s name] and I get mad at each other a lot.

2. If [Friend’s name] had to move away, I would miss [Friend’s name].

3. [Friend’s name] and I tell each other that we’re good at things.

4. [Friend’s name] and I make each other feel important and special.

5. I feel happy when I’m with [Friend’s name].

6. When there is free time at school, [Friend’s name] and I are always together.

7. If [Friend’s name] and I get mad at each other, we always talk about how to get over it.

8. I think about [Friend’s name] even when [Friend’s name] is not around.

9. [Friend’s name] and I talk about the things that make us sad.

10. [Friend’s name] and I make each other feel good about ideas that [Friend’s name] or I have.

11. [Friend’s name] accepts me no matter what I do.

12. [Friend’s name] and I do fun things together a lot.

13. [Friend’s name] and I argue a lot.

14. [Friend’s name] and I go to each other’s houses after school and on weekends.

15. [Friend’s name] understands what I’m really like.

16. When [Friend’s name] or I are having trouble figuring out something, we usually ask each other for help and advice.

17. When [Friend’s name] and I are mad about something that has happened to us, we can always talk to each other about it.

18. [Friend’s name] is important to me.

19. [Friend’s name] and I always make up easily when we have a fight.
20. [Friend’s name] and I fight.
21. [Friend’s name] and I often help each other with things so we can get done quicker.
22. I am satisfied with my relationship with [Friend’s name]
23. [Friend’s name] and I always get over our arguments really quickly.
24. [Friend’s name] and I always count on each other for ideas on how to get things done.
25. I can think of lots of secrets [Friend’s name] and I have told each other.
Appendix D

Depression Symptoms Measure Items

Participants indicated how often during the past week each of the following items described how they were feeling.

1. I was bothered by things that didn’t usually bother me.

2. I did not feel like eating; my appetite was poor.

3. I felt that I could not shake off the blues even with help from my family and friends.

4. I felt I was just as good as other people.

5. I had trouble keeping my mind on what I was doing.

6. I felt depressed.

7. I felt that everything I did was an effort.

8. I felt hopeful about the future.

9. I thought my life had been a failure.

10. I felt fearful.

11. My sleep was restless.

12. I was happy.

13. I talked less than usual.


15. People were unfriendly.

16. I enjoyed life.

17. I had crying spells.

18. I felt sad.
19. I felt that people dislike me.

20. I could not get “going.”
Appendix E

Anxiety Symptoms Measure Items

Participants indicated how true each of the following statements was for them.

1. I have trouble making up my mind.

2. I get nervous when things do not go the right way for me.

3. Others seem to do things easier than I can.

4. Often I have trouble getting my breath.

5. I worry a lot of the time.

6. I’m afraid of a lot of things.

7. I get mad easily.

8. I worry about what my parents will say to me.

9. I feel that others do not like the way I do things.

10. It’s hard for me to get to sleep at night.

11. I worry about what other people think of me.

12. I feel alone even when there are people with me.

13. Often I feel sick in my stomach.

14. My feelings get hurt easily.

15. My hands feel sweaty.

16. I am tired a lot.

17. I worry about what is going to happen.

18. Other children are happier than I.

19. I have bad dreams.
20. My feelings get hurt when I am fussed at.
21. I feel someone will tell me I do things the wrong way.
22. I wake up scared some of the time.
23. I worry when I go to bed at night.
24. It’s hard for me to keep my mind on my schoolwork.
25. I wiggle in my seat a lot.
26. I am nervous.
27. A lot of people are against me.
28. I often worry about something bad happening to me.
Appendix F

*Perspective-taking Measure Items*

Participants indicated how well each of the following items described them.

1. I sometimes find it difficult to see things from the "other guy's" point of view.
2. I try to look at everybody's side of a disagreement before I make a decision.
3. I sometimes try to understand my friends better by imagining how things look from their perspective.
4. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.
5. I believe that there are two sides to every question and try to look at them both.
6. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.
7. Before criticizing somebody, I try to imagine how I would feel if I were in their place.
Appendix G

*Sympathy Measure Items*

Participants indicated how well each of the following items described them.

1. I often have tender, concerned feelings for people less fortunate than me.

2. Sometimes I don't feel very sorry for other people when they are having problems.

3. When I see someone being taken advantage of, I feel kind of protective towards them.

4. Other people's misfortunes do not usually disturb me a great deal.

5. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

6. I am often quite touched by things that I see happen.

7. I would describe myself as a pretty soft-hearted person.
Appendix H

*Personal Distress Measure Items*

Participants indicated how well each of the following items described them.

1. In emergency situations, I feel apprehensive and ill-at-ease.
2. I sometimes feel helpless when I am in the middle of a very emotional situation.
3. When I see someone get hurt, I tend to remain calm.
4. Being in a tense emotional situation scares me.
5. I am usually pretty effective in dealing with emergencies.
6. I tend to lose control during emergencies.
7. When I see someone who badly needs help in an emergency, I go to pieces.