How Gender Typicality Moderates the Relation between Preadolescents' Empathy and

Acceptance by Peers

by

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ABSTRACT

Previous research has shown that highly empathic children are generally more emotionally positive, sociable, and altruistic compared to their less empathic peers (Miller & Jansen op de Haar, 1997). These traits and behaviors linked with empathy have been associated with positive outcomes such as popularity in the peer group (Decovic & Gerris, 1994). However, a negative relation between these constructs has been found when studied in the context of preadolescence for boys (Oberle, Schonert-Reichl, & Thomson, 2010), suggesting a potential moderating effect of gender typicality since empathy is classified as a communal and therefore stereotypically feminine trait. The current study examines the relation between the constructs of gender, empathy, gender typicality, and peer acceptance in a preadolescent sample, and mixed findings suggest differential effects of empathy on peer acceptance for preadolescent boys and girls. Future research should continue examining these differential effects for boys and girls throughout childhood and adolescence.

To my family. The words "thank you" could not possibly express the amount of gratitude

I have for the support and love I received from you throughout this process. Your

encouragement was, at times, all that I had to keep me going. Thank you for being my

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Experience within the peer group in early adolescence provides opportunities for the

development of critical social-emotional skills such as empathy and cooperation

(Sullivan, 1953). Constructs within both the social-emotional skills literature, such as

empathy, and the peer relationships literature, such as peer acceptance, have been found

to yield positive outcomes for children. For example, previous research on empathy

within childhood and adolescence has found that empathic responding is related to a host

of positive outcomes such as popularity in the peer group (Decovic & Gerris, 1994),

increased prosocial behavior and altruistic responding (e.g. Aronfreed, 1970; Batson &

Coke, 1981; Eisenberg, Fabes, & Spinrad, 2006; Eisenberg & Miller, 1987; Feshbach,

1978; Hoffman, 1984; Staub, 1978), and higher cognitive competencies in areas such as

reading (Feshbach, 1978). These positive links between empathy and peer-related factors

can be explained by research findings that suggest highly empathic children are generally

more emotionally positive, especially sociable, and more frequently altruistic compared

to their less empathic peers (Miller & Jansen op de Haar, 1997). Similarly, previous

studies examining the effects of peer acceptance in childhood and adolescence have

found an array of positive outcomes such as early adolescents' adjustment to school, self-

worth, and self-esteem (Connell & Wellborn, 1991), and academic development, social

functioning, and well-being (e.g. Nangle & Erdley, 2001; Wentzel, 2009). Clearly, since

social-emotional competence impacts social status and social status impacts social-

emotional competence, the relationship between these constructs is bidirectional

(Dougherty, 2006).

While these concepts have been studied in previous literature, there are gaps in the field. First, gender-specific associations between social-emotional competence and peer acceptance have been understudied, and a call for research related to gender differences in peer relationships and the contributing factors has been made (Erdley, Nangle, Newman, & Carpenter, 2001; Oberle, Schonert-Reichl, & Thomson, 2010; Rose & Smith, 2009; Rubin, Bukowski, & Parker, 2006). Previous research has yielded mixed results for boys and girls regarding whether or not there is a positive relation between empathy and peer acceptance in preadolescence. For example, Oberle and colleagues (2010) found that possession of empathy was inversely related to peer acceptance of boys. These findings can possibly be explained by prior research which has shown that children and adolescents who exhibit gender atypical behavior often experience peer relationship problems such as rejection (Young & Sweeting, 2004). This is likely the effect of gender stereotypes, which suggest that males are expected to possess agentic skills and traits (e.g. assertiveness) whereas females are expected to exhibit communal traits (e.g. concern for others; emotional expressivity)(Eagly & Karau, 1991). Given these gender stereotypes, it is possible that boys who possess high levels of social-emotional skills such as empathy could yield negative outcomes, such as peer rejection, if those skills are deemed "atypical" for boys.

The current study aims to address this gender gap, as well as another gap in the research, which is the failure to take a strengths-based approach and investigate positive dimensions of social-emotional skills, rather than negative dimensions such as bullying, in relation to young adolescents peer relationships (e.g. Benson et al., 2006; Damon, 2004). A final gap in the field that the current study aims to address is, when studying the

more positive dimensions of social-emotional well-being such as peer acceptance, very few researchers take care to examine not only differences between genders but also differences within gender of both reporters and participants; mainly, a general peer acceptance variable is most often used when conducting research on the topic, whereas separating out peer acceptance by same-sex and other-sex peers is very infrequently examined. Only one study examining the effects of empathy on peer acceptance to date has been identified as separating out the construct of peer acceptance by gender (Oberle et al., 2010).

The purpose of the current study is to fill these gaps in the literature by conducting a short-term longitudinal study that (1) examines gender-specific associations between empathy and peer acceptance, (2) takes a strengths-based approach by studying positive dimensions of social-emotional skills and peer relationships rather than negative dimensions, and (3) examines children's acceptance by same-sex peers and by other-sex peers separately as opposed to studying general peer acceptance. The present study aims to examine these constructs within preadolescence, as this is a period of development ripe with challenging and critical social, biological, and cognitive transitions (Eccles, 1999). One such critical change involves the increasingly stringent gender norms and roles that preadolescents are pressured to follow (i.e. "gender intensification", or the increase of gender related behavioral, attitudinal, and psychological traits of boys and girls with age) (Galambos, Almeida, & Petersen, 1990). For that reason, gender typicality, or an individual's felt or perceived compatibility within their own gender group (Egan & Perry, 2001), becomes an important variable to consider when examining social relationships and the predictors of them in preadolescence.

The present study extends knowledge of these constructs -- empathy, peer acceptance, and gender typicality-- in preadolescence, in two ways. First, I propose to evaluate gender differences in the relation between empathy and peer acceptance. The relation between children's empathy and their general acceptance by peers will be examined prior to evaluating the effect of empathy on acceptance by same- and other-sex peers separately. Like Oberle and colleagues (2010), gender-specific predictions will be made. Positive relationships among these constructs were expected for girls; for example, I expected that girls who report being highly empathic in the Fall at Time 1 (T1) would be accepted by both same-sex and other-sex peers in the Spring at Time 2 (T2), as well as experience high general acceptance by all peers at T2 (*Hypothesis 1*). In contrast, because empathy carries with it a stereotype associated with femininity, I expected to find a negative relationship between high levels of empathy at T1 and peer acceptance at T2 for boys (*Hypothesis 2*). I also propose to test the relationship between empathy and peer acceptance with gender typicality as a moderating variable since preadolescence, again, is a time period in which this construct is extremely important to consider when examining traits, such as empathy, that carry with them ties to and affect outcomes based on gender. Given the gendered nature of these constructs, I again predicted different outcomes for boys and girls. For girls who self-report being either high or low in gender typicality at T1, I predicted a positive association between empathy at T1 and peer acceptance by same- and other-sex peers as well as by peers in general at T2 (*Hypothesis 3*). I expected to see these positive associations for both high and low gender typical girls because of the stereotypic nature of empathy as a trait. That is, because girls are stereotypically expected to possess communal skills, typicality to own gender, or lack thereof, is not expected to

make a difference in the relationship between empathy and peer acceptance for girls. Additionally, previous research has shown that consequences for breaking gender norms or being atypical are less harsh for girls in comparison to boys (Leaper, 1994). In contrast, for boys who self-report as gender atypical at T1, I predicted a negative relationship between empathy at T1 and acceptance by peers in general as well as by same- and other-sex peers at T2, with peer acceptance by same-sex peers being lower than peer acceptance by other-sex peers (*Hypothesis 4*). This prediction can be explained best by research that stresses the importance of gender typicality for peer acceptance, especially for adolescent boys (Young & Sweeting, 2004). Alternatively, for boys who self-report as gender typical at T1, I predicted a positive relationship between empathy at T1 and acceptance by peers in general as well as same- and other-sex peers at T2, with peer acceptance by same-sex peers being higher than peer acceptance by other-sex peers (*Hypothesis 5*). Although empathy is a communal trait and is therefore stereotypically seen as feminine, it is possible that boys who self-report as gender typical prove to be masculine in other ways, such as a competitive nature or high achievement in math and science. In these cases, high gender typicality could serve as a protective factor for boys who are empathic, and therefore, increase their acceptance by peers despite their high levels of self-reported empathy.

Secondly, in order to further examine the relationship between the constructs of empathy, peer acceptance, and gender typicality, exploratory extreme group analyses will be conducted to evaluate where on an empathy spectrum (i.e. very low/moderate/very high empathy designated by +1/-1 SD) boys and girls accepted by their peers in general, accepted by their same-sex peers, and accepted by their other-sex peers are; additionally,

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a fourth extreme groups analysis will be conducted to examine how gender typical (self-reported) very low/moderate/very high empathy boys and girls are. While some have suggested that social-cognitive characteristics such as empathy lead to high acceptance of children by their peers throughout childhood (e.g., Decovic & Gerris, 1994), other research has shown that gender and gender typicality constructs can prohibit boys from experiencing such positive outcomes from the trait of empathy (e.g., Oberle et al., 2010) because of it's communal nature. The ability to evaluate not only where gender typical boys and girls, and boys and girls accepted by their same- and other-sex peers and by their peers in general, lie within a very low, moderate, or very high variable of empathy allows me to not only compare within gender (e.g., "Do girls that are highly accepted by same- and other-sex peers reside in the same empathy category?"), but also across gender (e.g., "Do boys and girls that are not accepted much by peers in general reside in the same empathy category?"). Given that the nature of this approach is primarily exploratory, no predictions will be made for these analyses.

To review, there are five hypotheses being made within the context of this thesis. They are as follows:

*Hypothesis 1:* For girls, empathy and peer acceptance (by all, same-sex (SS), and other-sex (OS) peers) will be positively related

*Hypothesis 2:* For boys, empathy and peer acceptance (by all, SS, and OS peers) will be negatively related

*Hypothesis 3:* For both typical and atypical girls, empathy and peer acceptance (by all, SS, and OS peers) will be positively related

*Hypothesis 4:* For atypical boys, empathy and peer acceptance (by all, SS, and OS peers) will be negatively related

*Hypothesis 5:* For typical boys, empathy and peer acceptance (by all, SS, and OS peers) will be positively related

Literature Review

The following literature review addresses theory and research related to the proposed study. First, Social Role Theory, a social-cognitive theory, will be presented as the underlying conceptual framework for this study. Next, a variety of topics within the construct of empathy will be discussed, including definitional issues, components of empathy (i.e. affective vs. cognitive), measurement, and age and gender distinctions. Then, the construct of peer acceptance in preadolescence will be discussed. Lastly, gender typicality will be discussed in terms of gender distinctions and measurement.

**Social Role Theory as a Conceptual Framework**

Social Role Theory (Eagly, 1987) emerged from research on sex differences and gender stereotypes (e.g. Eagly & Carli, 1981; Eagly & Crowley, 1986; Eagly & Steffen, 1984; Eagly & Wood, 1982) and emphasizes that the various ways males and females differ in social-emotional traits and behaviors are rooted in social roles (e.g. gender roles). In fact, this theory suggests that most behavioral differences between males and females exist because of cultural stereotypes about gender (Eagly, 1987). These stereotypes are taught, both implicitly and explicitly, starting in childhood and continue to be fostered throughout life. The cultural approach that this theory takes to explain gender group differences emphasizes the common beliefs and values that children and adults within a society acquire because of socialization and the pressures to conform that come with it throughout life.

Gender roles, as defined by Eagly (1987), are "shared expectations about appropriate qualities and behaviors that apply to individuals on the basis of their socially identified gender" (Eagly, 1987, p.12). Not only do gender roles set individuals on track

for how they should behave, according to society, they also possess generality (Sarbin & Allen, 1968) in that many of these expectations regarding gender are at the level of general qualities, characteristics, or traits one would expect to see in either females or males as opposed to specific behaviors they would expect to see (Eagly, 1987). Therefore, according to Social Role Theory, individuals behave because of the considerable power and influence that these roles have; particularly, behaviors exhibited by males and females often occur because of both subtle (e.g. nonverbal reactions) and obvious (e.g. inclusion or exclusion) rewards and punishments that individuals would expect to elicit as a result of certain behaviors. For example, when examining the relationship between empathy, typicality to one's gender, and acceptance by peers, Social-Role Theory would suggest that certain behaviors associated with empathic ability (e.g. sadness or sympathy for others' conditions) might elicit punishments for individuals in which empathy is not seen as a typical trait (e.g. males). Alternatively, this theory would also suggest that when traits and behaviors are seen as typical for one's gender (e.g. empathy for females), the individual might expect to elicit rewards for said traits and behaviors (e.g. acceptance by peers).

The suggestion that individuals operate based on how they perceive their behavior will be accepted by others is in line with expectancy theories that often demonstrate that "attitude toward a behavior is a major determinant of engaging in the behavior and is itself a function of the perceived consequences of the behavior" (Eagly, 1987, p. 30). As such, "gender stereotypic behavior arises from a desire to behave consistently with one's attitudes and self-concept or from an effort to manage an impression of oneself" (Eagly, 1987, p.19). In the case of highly empathic boys potentially being viewed as atypical for

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their gender role, and being less accepted by their peers as a result, it could be that this mismatch between the stereotype (e.g. boys are not empathic) and what the person is doing (e.g. being empathic), yields a negative consequence (e.g. less acceptance by peers). Research has shown that individuals often comply with other's expectations of them, with concepts such as normative influence (Deutsch & Gerard, 1955) and self-fulfilling prophecy (Merton, 1948) being cited as potential reasons. Further, individuals who respond and act appropriately to others' expectations of them often yield positive outcomes (Eagly, 1987).

These gender stereotypes, and most all others, are more than just beliefs about what attributes females and males possess. Many of these expectations describe tendencies, either behavioral or characteristic, that are believed to be desirable for females and males. These expectations for both genders create social norms, and these social norms in turn are applied to a group of people and thus constitute social roles (Eagly, 1987). When an individual's behavior does not match that of their observers' social expectations or stereotypes for them, negative consequences often follow. Further research examining the relationship between this social-cognitive theory, socially constructed gender roles and stereotypes, and the outcomes they yield for children within their social interactions should be conducted.

**Empathy: Definitions, Measurement, Components, and Distinctions within the Field**

*Establishing a Definition*

Studying empathy is important because empathic ability sets the stage for the quality of relationships that individuals develop and maintain with one another throughout life. Despite its importance, there is considerable inconsistency in the field

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regarding the definition of empathy and this adds to the difficulty of studying and measuring the construct. Although some scholars conceptualize the construct as a purely cognitive reaction, others suggest that it is more of a visceral, emotional response to others (Davis, 1983). Added confusion exists regarding the related constructs of sympathy and personal distress, both of which are vicarious emotional responses that are hypothesized to evolve out of empathy (Eisenberg & Eggum, 2009). Sympathy describes the emotional response one often feels as a result of witnessing another's state of apprehension in which the individual feels concern, grief, or sadness for the other (Eisenberg et al., 1988). Personal distress, in contrast, is an aversive reaction to the apprehension of some other's emotion or condition, but is associated not on that apprehensive individual but rather on the self. The construct of personal distress most often implies a desire to alleviate one's own distress in the situation rather than the distress of the other (Eisenberg et al., 1988). Lastly, the term projection, like empathy, refers to the sharing of emotions between self and other (Feshbach & Feshbach, 1963); however, for projection, characteristics of the observer are attributed to the stimulus object, while when empathizing, the observer assumes the emotional characteristics of the stimulus (Feshbach, 1975). Confusion regarding these constructs has stemmed from the relatedness of constructs, as well as the inaccurate interchanging of terms (e.g. sympathy often defined as empathy) (e.g. Batson, 1991; Hoffman, 2000). Regardless of these inconsistencies, general agreement exists among researchers in the area regarding three main aspects of empathy: (1) empathy as an affective response that sometimes matches the observed person's emotional state, (2) empathy as having a cognitive component with which another person's perspective can be shared, and (3) empathy as

having some emotion regulating and monitoring mechanisms that control inner states (Decety, 2007).

The definition of empathy that will be used in the current study is that of Eisenberg and colleagues, which states that empathy is "an affective response that stems from the apprehension or comprehension of another's emotional state or condition, and which is similar to what the other person is feeling or would be expected to feel" (Eisenberg & Eggum, 2009, p. 71). This definition of empathy is congruent with the definition used by Bryant (1982) in construction of the Index of Empathy for Children (IEC), which was used in the current study. Additionally, conceptualizing empathy as an affective, rather than as more of a mere cognitive ability, has been suggested as most appropriate when examining sex differences within this construct; it is this type of empathy that seems to be most tied to gender stereotypes such as the stereotype that females are more emotionally responsive than males (Eisenberg & Lennon, 1983), which could have implications for the effects it has on children's acceptance by peers.

*Affective and Cognitive Components of Empathy*

Historically, the components that comprise empathy (i.e. cognitive and affective) have been debated upon as to their utility when discussing empathic ability in individuals. Although some have regarded either the cognitive or affective component as more important, others have taken a combinatory approach to explain the significance of both. When taking a combinatory approach to evaluating these two components of empathy, it is helpful to consider empathy in *process* or *product* terms – for instance, some have suggested that empathy requires cognitive processes that precede an affective product, or response (e.g. Feshbach, 1975; Strayer, 1987). When considering empathy in this way, it

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becomes clear that while a cognitive component, or process, is necessary for an affective product or response to follow, the inverse is not true. To understand the relationship between these components better, and how they are manifested in an individual's empathy, we will discuss both components separately.

From a purely cognitive standpoint, empathy is seen as understanding another's inner psychological state (i.e. their emotions, feelings, thoughts, intentions, etc.) (Strayer, 1987). As explained by George Herbert Mead, regarded as one of the founders of social psychology, cognitive empathy can be seen as "the capacity to take the role of the other and to adopt alternative perspectives vis à vis oneself" (1934, p.27). Examining the cognitive component of empathy as a process helps to explain the mental processes presumably involved in understanding another's thoughts, feelings, and perspectives. Mainly, as suggested by Strayer (1987), measuring the cognitive component of empathy falls into three general categories: testing an individual's accuracy of social predictions, examining a person's recognition of affect from various forms of cues, and role-taking tests.

Testing an individual's accuracy of social predictions is done through use of narratives, audiotapes, or videotapes that depict various social situations between characters and asks the study participant to predict what the character/s are feeling. However, these studies can lead to flawed results, as these tests often assume synonymy between empathy and role taking (Strayer, 1987). Consequently, results of these studies often measure individuals' stereotypes of others and what they think others are feeling based on similarities between themselves and others, not actual empathic "predictions" (Cronbach, 1955).

Recognition of affect or emotions is another method of testing cognitive empathy. This recognition could follow either nonverbal cues (e.g. facial or expressive emotional cues) or situational or verbal content. These tests, while able to be performed through use of vignettes, are also often done in naturalistic settings. Some studies, for example, have relied on mixed messages (e.g. fabricated displays of emotion that do not logically follow a situational cue or scenario), which resulted in confusion rather than empathy in the target children (e.g. Mayhew & Strayer, 1985; Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979). This test, and others that study recognition of affect or emotion, rely on children's knowledge of social display rules for emotion, as children are aware of what is and what is not an appropriate emotional response.

Lastly, tests of cognitive empathy often utilize role-taking; however, a confusion exists between role-taking and empathy in the social cognition field. While affective role taking does have a direct bearing on empathy, and role-taking of another has been used successfully to prompt empathy in adults (e.g. Toi & Batson, 1982), the link between role-taking and empathy needs further examination with respect to children (Strayer, 1987). Nevertheless, studies assessing the cognitive component of empathy have employed role-taking to assess children's empathy. These studies, again, often use narratives or videotape stimuli that depict certain social situations and ask the participants to describe the feelings of the stimuli and of themselves; then, researchers are able to probe the participants for what strategies they used when reacting empathically to the stimuli. If they imagined themselves in the stimuli's role, that was viewed as role-taking, whereas if they said they imagined the events that happened to the stimuli happening to them, that was viewed as projection (Chovil, 1985). These tests of social predictions,

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recognition of affect or emotion, and role-taking allow researchers in the field to measure empathy from more of a cognitive viewpoint, although affective components are often involved.

Although cognitive empathy is concerned mainly with an individual's ability to detect and understand a person's internal emotional state, affective empathy revolves around an individual's capacity for vicariously shared affect between themselves and a stimulus (Strayer, 1987). Explained a different way, affective empathy can be described as "feeling into" as opposed to "feeling with" (i.e. sympathy) another person (Lipps, 1907). Researchers studying the construct of empathy from an affective perspective stress that affective responses are the sine qua non (i.e. the essential ingredients or components) of empathy (Strayer, 1987).

Whereas researchers studying the cognitive component of empathy tested children's social predictions, recognition of affect, and role-taking through use of audio, video, or pictographic vignettes, researchers examining affective empathy most often rely on other methods of measurement; mainly, because children's understanding of an individual's emotions in a story is not often accompanied by a shared feeling with that fictitious individual, researchers studying affective empathy often rely on self-report, observational, physiological, and facial expressive means to measure the construct (Strayer, 1987). For example, a multitude of self-reported survey measures testing affective empathy exist for both children and adults and are widely used (e.g. Bryant, 1982; Davis, 1983; Feshbach & Roe, 1968; Mehrabian & Epstein, 1972) (see *Measurement of Empathy* section for a detailed review of these measures). Another method of measurement is physiological measures (e.g. heart rate monitoring, skin

conductance tests) that are taken over a period of time as the research participant is observing a social interaction or an observed individual. Although there is some evidence that affective arousal produces physiological arousal (e.g. Craig & Wood, 1969), the difficulty with physiological measures used in empathy research is tying the physiological stimulation to specific affect (Strayer, 1987). Lastly, and in contrast to physiological measures, facial expressive measures allow trained researchers to reliably detect and differentiate types of expressions that result from a participant observing a social interaction or individual (Izard, 1979). Although individual's facial expressions portray emotions, they also are influenced directly by how the expresser feels; however, limitations of this means of collecting affective empathy data also exist. For example, social desirability may have little to no effect on physiological measures such as heart rate or skin conductance, it can have an effect on facial expressions, as cultural display rules suggest that it is often desirable to match the emotional climate of the social interaction or individual at hand (Strayer, 1987).

Both the cognitive and affective components of empathy are necessary and important to consider when studying the construct of empathy. In the current study, however, the affective component is of greater interest. More than just being able to detect another's emotion, the current study was also interested in whether or not that detection led to a vicarious emotional response in the individual. This is apparent in the definition of empathy that has been adopted for this study: "an affective response that stems from the apprehension or comprehension of another's emotional state or condition, and which is similar to what the other person is feeling or would be expected to feel" (Eisenberg & Eggum, 2009, p. 71). Additionally, the social nature of the outcome

variables (i.e. acceptance by same- and other-sex peers) might suggest that for empathy to have an effect, one would have to not only empathize cognitively to a situation or person, but affectively, by exhibiting an emotional response, as well in order to have a potential effect on peer acceptance. For these reasons, selection of Bryant's Index of Empathy for Children and Adolescents (IEC) (Bryant, 1982), a measure of the affective arousal component of empathy, was selected. In the following section, this measure and others in the field will be discussed.

*Measurement of Empathy*

The following section will describe four of the most widely used measures to assess empathy. The first two measures that will be discussed were developed to assess both cognitive and affective components of empathy. The last two measures, the last of which is the measure used for the current study, narrow their focus to assess mostly affective empathy in individuals.

A dispositional measure of empathy, the Interpersonal Reactivity Index (IRI; Davis, 1980), was developed based on a multidimensional approach, which aimed to study empathy from both cognitive and emotional, or affective, perspectives. This approach was taken under the assumption that empathy is best considered as a set of related, but discriminable, constructs (Davis, 1983). The 28-item measure is comprised of four 7-item subscales, two affective and two cognitive subscales, that focus on different aspects of the global concept of empathy: Empathic Concern and Personal Distress (i.e. affective aspects) and Perspective Taking and Fantasy (i.e. cognitive aspects). The Empathic Concern scale assesses "other-oriented" feelings of concern and sympathy for others (e.g. "I often have tender, concerned feelings for people less fortunate than me"),

while the Personal Distress subscale taps into "self-oriented" feelings of unease when observing others (e.g. "Being in a tense emotional situation scares me") (Davis, 1983). Both fall under the umbrella of an affective empathy assessment. Davis (1980) also used two measures to assess cognitive empathy. The Perspective Taking subscale assesses an individual's tendency to take the viewpoint of others (e.g. "I sometimes try to understand my friends better by imagining how things look from their perspective"), while the Fantasy subscale measures individuals tendencies to imagine themselves "into" the roles, feelings, and actions of fictitious characters (e.g. "I really get involved with the feelings of the characters in a novel") (Davis, 1983). Though the ability to measure both affective and cognitive components of empathy is the focus of some research studies, other studies desire more focus on one component over the other. Additionally, this scale was created for use with adult populations.

Feshbach and Roe (1968) also developed a measure that aimed to examine empathy as both a vicarious emotional response to observed others and as a cognitive social insight that matched another's emotions accurately. In this assessment, children are individually tested by viewing a series of slides depicting affective situations. The children are then asked questions pertaining to how they themselves feel (i.e. affective empathy) and also how the characters in the story felt (i.e. cognitive empathy). While some of the studies conducted by Feshbach and Roe used a specific scoring procedure that required the participants to be accurate in labeling emotions of others, other studies of theirs used a general scoring procedure, which did not require accuracy of predictions.

Although both Feshbach and Roe's (1968) and Davis's (1980) measures are well known and widely used in the field, the most widely used measure of dispositional

empathy in adults is that of Mehrabian and Epstein (1972). This 33-item measure, unlike the two described before, focuses on affective empathy in individuals rather than both affective and cognitive components. Mehrabian and Epstein's (1972) global index of empathy also measures related constructs such as emotionality (e.g. "I tend to get emotionally involved with a friend's problems") and sympathy (e.g. "It makes me sad to see a lonely stranger in a group"), in addition to empathy-related concepts (e.g. "I cannot continue to feel ok if people around me are depressed").

Mehrabian and Epstein's (1972) measure evaluates individuals' affective empathy; however, this scale was created for use with adult populations. Seeing a need for a child-friendly measure of affective empathy, the Index of Empathy for Children and Adolescents (IEC; Bryant, 1982) was created as a modified scale of Mehrabian and Epstein's measure. Both measures assess affective responsivity of individuals, and both contain items targeted towards measuring emotionality and sympathy as well as empathy. Examples of items in Bryant's scale (1982) are "Even when I don't know why someone is laughing, I laugh too"(emotionality), "It makes me sad to see a girl who can't find anyone to play with"(sympathy), and "I really like to watch people open presents, even when I don't get a present myself"(empathy). Lastly, both measures adopt the same definition of empathy (i.e. empathy as a vicarious emotional response to the perceived emotional experience/s of another). Bryant's 22-item measure demonstrated satisfactory reliability and validity with children of all ages (i.e. first, fourth, and seventh graders) (Bryant, 1982).

This section and the previous section (see *Affective and Cognitive Components of Empathy*) highlighted various means of assessing empathy, and described specific

measures used within the field. While there are pros and cons to each approach, one overarching benefit to using self-reported measures of empathy, such as Bryant's IEC (1982), which the current study uses, is the decreased potential effect of social desirability. With empathy being a construct susceptible to social rules and desirability, use of self-report measures, where participants can anonymously fill out surveys recording their personal feelings, helps to elicit more accurate responses in regards to an individual's cognitive and/or affective empathy. Additionally, Bryant's Index of Empathy, created for children populations, measures affective empathy, which has definitive ties to social outcomes such as peer acceptance. Although this measure of empathy has been tested in child populations for reliability and ease of use, it is also important when examining empathy to discuss the overall development of empathy throughout childhood. The next section of this literature review addresses age distinctions and developmental milestones in the growth process of empathy in individuals.

*Development of Empathy*

Empathy has been studied as early as in infancy through observation of reactive newborn crying (e.g. Simner, 1971; Sagi & Hoffman, 1976), the responsive cry of an infant to the sound of another's cry (i.e. not in response to another noxious stimulus). Although reactive newborn crying does suggest a degree of empathic arousal, it is not until children are 2 to 3 years of age when they gain role-taking abilities and become aware that their emotions can be, and often are, different from others (Hoffman, 1982). This change comes about as a result of a decline in children's cognitive egocentrism (Piaget, 1932), in which children start to learn that perspectives and perceptions they hold are largely based on their own thoughts and feelings, and that, therefore, others do not

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hold those same perceptions (Hoffman, 1982). More importantly, because these children are starting to realize that their perceptions and reality might differ, and that the thoughts and feelings of others can be different from their own, they are able to start emotionally responding to others in more appropriate ways (i.e. ways that are other-person centered instead of self-centered) (Hoffman, 1982).

Around ages 3 and 4 years, children begin to be more responsive to others' emotions, such as happiness or sadness, in certain situations (e.g. Borke, 1971; Feshbach & Roe, 1968). Additionally, the development and refinement of language allows children to, for the first time, form meaning from symbolic cues, which helps them to emotionally respond to a host of other emotions such as disappointment and betrayal (Hoffman, 1982). Although children start out by only being able to respond to and comprehend one emotion at a time, they later develop the ability to empathize with several emotions at once, even if they are contradictory emotions (Hoffman, 1982). Overall, research suggests that children between the ages of five and eight years become more empathic with age, as the child's capacity to empathize grows with experiences and developmental advances (Fay, 1970; Feshbach & Feshbach, 1969).

Upon entrance into late childhood and preadolescence, children continue to expand their ability to separate self from other, and they now have the awareness that others have thoughts and feelings outside of the immediate situation. Although this added awareness increases the child's ability to empathize for and with another individual, it also can leave them vulnerable to concern or distress when they realize that another's negative state could be chronic rather than transitory (Hoffman, 1982).

An overarching and significant cognitive component of empathy exists in older children, since perspective taking skills are considered minimal until the developmental period of concrete operational thought (Piaget, 1932). Up until this point, younger children experience a less cognitive form of empathy as a result of a lack of ability to differentiate between the self and others (Hoffman, 1982). One can imagine how a child's ability to differentiate between self and other, or lack of said ability, might have an effect on one's social relationships. For example, a younger child trying to console an upset peer might utilize soothing methods that work for themselves, whereas older children have the ability to cognitively differentiate between self and other, and therefore, affectively will respond in the best way they see fit (e.g. a method of soothing that they know, or think, will soothe their upset peer).

Studies examining the development of empathy throughout childhood are important for the understanding of empathy as a construct as well as its relationship with social outcomes such as peer acceptance. In addition, the importance of longitudinal work in this area helps to further understand the role that empathy and related constructs play in affecting social functioning. Eisenberg and colleagues (e.g. Eisenberg et al., 1995; Eisenberg et al., 1997; Eisenberg et al., 1998), for example, have found that aspects of emotionality (e.g. empathy) are associated with social functioning and the effects of these relationships are long-term. In sum, children's age and developmental stage affects empathy as well as empathy's influence on their acceptance by peers. In the next section, the influence of a child's gender in regards to empathic differences will be discussed.

*Gender and Empathy*

Much research has been done on differences in boys' and girls' empathic ability (for a review, see Lennon & Eisenberg, 1987). Previous research (e.g. Baron-Cohen & Wheelwright, 2004; Hoffman, 1977) has suggested that empathy seems to be generally higher in females than in males. Females are stereotypically thought of as more emotional and sensitive, whereas males are most often stereotyped as un-emotional and interpersonally unresponsive. Some researchers suggest this gender difference is due to biological factors, such as differential right cerebral hemisphere activation (Rueckert & Naybar, 2008). Other researchers focus more on the contribution that socialization and societal pressure plays in the difference in expression and acceptance of empathy of and by both genders. For example, the fact that women are more often the primary caregivers of their children in comparison to men highlights a gender role in which men and women experience differences in practice and therefore skillfulness. Still, other researchers have suggested that sex differences in empathic responding, in general, are more often a function of the methods used to obtain the empathy data (e.g. self-reports, observation, and/or physiological measures) (Eisenberg & Lennon, 1983). Whatever the reason or combination of reasons may be for gender differences in empathy, we know that the construct of empathy does have an effect on an array of social outcomes such as popularity among peers (Decovic & Gerris, 1994), increased prosocial behavior (e.g. Eisenberg, Fabes, & Spinrad, 2006), and increased acceptance of peers for girls (Oberle et al., 2010). In the next section, the construct of peer acceptance will be discussed in regards to measurement as well as its ties with empathy for preadolescents.

**Peer Acceptance in Preadolescence**

An extensive body of research exists on the positive outcomes children experience when they are accepted by peers, such as increased social functioning and academic achievement (e.g. Nangle & Erdley, 2001; Wentzel, Barry, & Caldwell, 2004; Wentzel, 2009), increased occurrence of prosocial behaviors, and decreased exhibition of antisocial behaviors (Claes & Simard, 1993). Being socially accepted most often relates to children who are more cooperative, sociable, and more apt to sustain social interactions with others compared to their less accepted peers (Coie, Dodge, & Kuperschmidt, 1990; Decovic & Gerris, 1994; Denham & Holt, 1993; Hartup, 1992; Mostow, Izard, Fine, & Trentacosta, 2002; Parke et al., 1997).

Although research consistently shows positive associations for children who are accepted by their peers, research has also revealed numerous negative associations when acceptance is lacking. For example, research suggests that peer rejection in childhood predicts adjustment problems such as physical aggression and disruptiveness (Newcomb, Bukowski, & Pattee, 1993), anxiety, loneliness, and depression (Kuperschmidt & Coie, 1990), academic problems such as low school satisfaction leading to high likelihood of dropout, delinquency, and decreased mental health (Asher & Parker, 1989), and a higher probability of criminality in later life (Parker & Asher, 1987). Given that these relationships have the ability to affect, either negatively or positively, youth throughout their childhood and into their adult lives, children's relationships with their peers are important to examine. Furthermore, given that children's time spent with their peers increases throughout childhood and adolescence (Steinberg, 2005; Wigfield, Byrnes, &

Eccles, 2006), it is important to be able to assess the effects that children can and do have on their peers.

A number of factors have been found to be predictive of peer acceptance in childhood, such as social skills, or "emotion knowledge" (Denham, McKinley, Couchard, & Holt, 1990; Izard, 1971; Mostow et al., 2002), and gender typicality (Young & Sweeting, 2004). Emotion knowledge, seen by some as a component of emotional intelligence (Salovey & Mayer, 1990), has been regarded as a foundational component for the formation and maintenance of social relationships (Bandura, 1986; Hobson, 1993; Izard, 1971). For example, emotion knowledge such as children's ability to accurately perceive social cues within their environment allows them to be adaptive in social situations, and increases the likelihood of them engaging in positive transactions with peers (Izard, 1991). This emotion knowledge that children possess corresponds to other social-emotional skills such as empathy. Empathy requires emotion knowledge in that an empathic child must be able to correctly decipher and label another person's emotion in order to respond empathically (Eisenberg & Fabes, 1995; Saarni, 1997). Because empathy and emotion knowledge permit children to respond to others' feelings and perspectives in an appropriate way, these concepts have a direct influence on children's social behaviors and therefore also influence their acceptance by peers (Mostow et al., 2002). Of course, a one-way relationship between these two constructs, with empathy as the predictor and peer acceptance as the outcome, is unlikely, and evidence of a bidirectional relationship between these concepts has been suggested; for instance, peer experiences in childhood and adolescence provide children with opportunities for developing skills and behaviors such as empathy and altruism (Sullivan, 1953).

Measures assessing peer acceptance evaluate the communal attraction of a group towards a single other by addressing the question, "Is a particular child liked by others?" Children's general acceptance by peers is important to consider when evaluating their place among their peer group. Additionally, there exist other constructs related to peer acceptance, which include sociometric measures examining children's dyadic or reciprocal friendships with specific peers. In the next section, measures related to the peer group will be examined, and an argument will be made for why the construct of peer acceptance was chosen for the current study.

*Measurement of Peer Acceptance*

Measuring children's peer relations encompasses a wide range of constructs (e.g. peer acceptance, reciprocated friendships, level of closeness) and methods (e.g. self- and peer-report, teacher-report, parent-report, observation) (for extensive reviews, see Cillessen, 2009; Hymel, Vaillancourt, McDougall, & Renshaw, 2002; Pepler & Craig, 1998). Examining friendships and examining general acceptance by a child's peer group, while both being dimensions of children's sociability, offer different perspectives on peer relations. Although friendship ratings are helpful in assessing the specific qualities between individual children, peer acceptance ratings are seen as a "group referent construct" that describes children's overall tendencies and relations within the peer group (Parker & Asher, 1993). Therefore, peer acceptance as an outcome measure of communal attraction will be used. With peer acceptance as the chosen construct of peer relations in this study, the following paragraphs will describe some strengths and weaknesses of each method of obtaining data on children's peer acceptance; ultimately, discussion points on the benefits of using peer-reported data will be argued.

Self-reports of peer relation measures are used more often to assess constructs such as quality of peer relations (Pepler, Craig, & Roberts, 1995) and level of intimacy (Furman & Buhrmester, 1985) rather than acceptance by peers. The reason for this is due to the biggest downfall of this method: social desirability. While self-report measures are easy to implement, inexpensive, and reportable across multiple contexts, children's reluctance to tell the truth when it comes to reporting on measures that have to do with their social status is a notable issue. Alternatively, parent-reports on their children's acceptance by peers are somewhat less vulnerable to social desirability, but may include inaccurate expectations or perceptions of their child's social status, as parents aren't often extremely familiar with the peer context at their child's school. However, there are benefits to using parent measures of children's peer acceptance; mainly, of possible adult reporters, parents are most often the most familiar with the child being reported on, having spent the most time with them through many developmental stages and across many contexts (Pepler & Craig, 1998). Additionally, these tests, like child self-reports, are also relatively inexpensive to conduct.

Another adult reporter of children's peer acceptance is that of their teachers. Teacher-reports are beneficial because teachers have close relationships with the children for prolonged periods of time, more than any other adult in the specific school context (Pepler & Craig, 1998). Additionally, since teachers see the child within the school peer context, they are able to judge children in relation to others their own age.. An advantage to utilizing teacher-reports to assess children's peer acceptance is, again, ease of use and low cost. Additionally, teachers are less vulnerable, compared to parent- and self-report, to being affected by social desirability. However, like parents, teachers' expectations may

influence their perceptions of students' acceptance, and they may be reluctant to rate students due to concerns about labeling and stigmatization (Pepler & Craig, 1998). Lastly, a fourth way to examine children's peer acceptance is with naturalistic observations. This can be done in a variety of ways, either in a natural or laboratory setting. Research studies in the past have conducted studies that conduct event sampling (i.e. recording a certain behavior every time it occurs), time sampling (i.e. recording a certain behavior when it occurs within a short time period), recording and coding peer interactions in real time, and videotaping observations of interactions for coding at a later time (Pepler & Craig, 1998). Although naturalistic observations overcome virtually all of the biases and desirability factors of other methods, this method is incredibly labor-intensive, expensive, and intrusive. Furthermore, limited observation periods equal a limited range of peer acceptance, and other behaviors, to observe (Pepler & Craig, 1998).

Although these methods of assessing children's peer acceptance have their benefits, peer-reported acceptance data also has significant advantages. First, peer-reported acceptance data are assessed from multiple, rather than just one, rater (i.e. teacher, parent, or self) (Oberle et al., 2010). Second, because multiple raters are reporting on one child, and these raters have likely had an abundant amount of experience with these individuals, peer nominations provide information on a wider range of observations of a child's peer acceptance in more than one setting (Oberle et al., 2010). Having peers act as 'participant observers' puts them in a particularly advantageous position to report on the acceptance of each of their classmates (Younger, Schneider, Guirguis, & Bergeron, 2000). For these aforementioned reasons, the current study utilized the peer-reported measure of children's acceptance by peers. Importantly,

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however, the peer acceptance outcome variable is calculated separately for peer acceptance by same- and other-sex peers. In the past decade, there has been a calling for more research related to children's gender-specific peer acceptance (Erdley, Nangle, Newman, & Carpenter, 2001; Oberle et al., 2010; Rose & Smith, 2009; Rubin, Bukowski, & Parker, 2006). Consequently, helping to fill this gap in the field by examining peer acceptance by same- and other-sex peers is one aim of the current study.

*Empathy as a Gender-Specific Predictor of Peer Acceptance in Early Adolescence*

Although little has been done to assess the differential effects of empathy on boys' and girls' acceptance of peers, one study has attempted to examine these specific effects. Oberle and colleagues (2010) explored predictors of peer acceptance, one of which being empathy, for preadolescent boys and girls between the ages of 9 and 11. Oberle et al. found that although girls' acceptance by peers was predicted by higher levels of empathy, boys' acceptance by peers was predicted by lower levels of empathy.

Participants in the Oberle et al. study (2010) were part of a larger study examining the effects of a school-based social competence program. Although data were collected at two time-points (i.e. pre- and post-test), only pre-test data was used for this particular study. To assess students' empathy, Oberle and colleagues (2010) utilized the 7-item Empathic Concern subscale of Davis' Interpersonal Reactivity Index (IRI; Davis, 1983). Items on this subscale assess affective empathy (e.g., "I often feel sorry for people who don't have the things I have"), and the researchers found adequate reliability of these items ($\alpha = .80$). To assess peer acceptance, they used a sociometric nomination measure that asked students to nominate all classmates with whom they "would like to be in school activities". Thus, the students that were circled by individual children were seen as

"accepted" by either the boy or girl filling out the survey. Using the number of nominations received divided by the number of participating students in the class, a percentage of nominations was calculated; subsequently, an overall peer acceptance score, a score for acceptance by boys, and a score for acceptance by girls was computed. The gender specific scores were then used to analyze girls' and boys' acceptance in terms of which peers they were accepting of (i.e. empathic or non-empathic peers).

The gender differentiated patterns found in the Oberle et al. study are interesting but there are important limitations to this study that suggest a need for extending this research. First, within the Oberle study, as well as other studies on peer acceptance, researchers should use caution when describing the variables in their study; mainly, acceptance "of" and acceptance "by" peers are often used synonymously, though the two constructs are different. For example, a variable assessing how accepting children are "of" peers who are empathic (i.e. the degree to which empathic children are accepted) would be very different from a variable assessing how accepted children are "by" peers who are empathic (i.e. the degree to which empathic children accepted others). Although Oberle and colleagues (2010) generally interpret their findings in regard to girls' and boys' acceptance "of" peers, they frequently interchange "by" and "of". The current study will be consistent with regard to terminology: "peer acceptance by same-sex peers" and "peer acceptance by other-sex peers".

Additionally, issues regarding the measurement of both empathy and peer acceptance exist in the Oberle et al. (2010) study. Regarding the measure of empathy, the use of the subscale of Davis' Interpersonal Reactivity Index might be problematic in that the scale was originally developed with adult populations (Davis, 1983). Although

modified versions of the IRI have found validity with children in second to sixth grade (Litvack-Miller, McDougall, & Romney, 1997), Oberle and colleagues (2010) did not revise the subscale of the IRI used for their study to be age-appropriate; therefore, there is potential for students to not fully understand some of the more complicatedly worded questions or questions that involved higher intellectual concepts (e.g. "When I see someone being taken advantage of, I feel kind of protective towards them"; "Other people's misfortunes do not usually disturb me a great deal").

Oberle and colleagues' measure of peer acceptance is also somewhat flawed. One limitation of their measure of peer acceptance, as mentioned before, is that their use of a nomination measure as opposed to a rating-scale measure is not in line with research that suggests rating-scale measures are more reliable with children of this age (Asher, Singleton, Tinsley, & Hymel, 1979). Additionally, because of the nature of the measure (i.e. "Circle all of the names of your classmates in which you would like to be in school activities with"), peer acceptance data were only collected on a binary-level (either circled or not circled). This means that the researchers are not able to assess how accepted each circled child is on a nominal level or how not accepted a child is.

Another limitation of the study is that although Oberle and colleagues (2010) found some gender-specific distinctions, they failed to examine whether girls' and boys' acceptance of highly empathic peers was true for both same- and other-sex peers. The authors conducted two independent sample t-tests to examine whether girls were nominated by a higher proportion of girls than boys, and boys by a higher proportion of boys than girls on the peer acceptance item. However, contrary to previous literature (e.g. Fabes, Martin, & Hanish, 2004) that found that children prefer and play with one's own

sex peers more than members of the other sex, Oberle et al. did not find any significant differences between the acceptance scores that girls and boys received by same- and other-gender classmates at the mean level. As a result, they decided not to examine differences in boys' and girls' peer acceptance towards same-sex peer vs. other-sex peers; rather, Oberle and colleagues simply assessed differences between boys' and girls' acceptance towards peers in general in their regression analyses. In the current study however, peer acceptance will be specified to include "acceptance by same-sex peers" and "acceptance by other-sex peers", as has been done by some in the past (e.g. Eisenberg et al., 1996). Moreover, the current study will examine these questions in relation to gender typicality as a potential moderator. The possible role of gender typicality will be discussed in the following section.

**Gender Typicality and its Effects in Childhood, Preadolescence, and Adolescence**

Gender typicality is a multidimensional component of an individual's gender identity, meaning that one can feel gender typical in some respects (e.g. appearance) and gender atypical in others (e.g. activity preference) (Egan & Perry, 2001). Viewing gender typicality as a unidimensional construct was first challenged in the 1970s by Constantinople (1973) who suggested a two-dimensional concept where an individual can and should be viewed on multiple continuums (e.g. masculinity continuum; femininity continuum). When considering how gender typicality relates to positive and negative peer relations in preadolescence, current research uses either this two-dimensional approach or a unidimensional approach (Jewell & Brown, 2014).

Children who are low in gender typicality are more likely to have less of a sense of self-worth, more likely to be perceived as anxious or depressed, and are at greater risk

for suicide compared to children who are high in gender typicality (Carver, Yunger, &
Perry, 2003; Russell, Kosciw, Horn, & Saewyc, 2010; Yunger, Carver, & Perry, 2004).
These findings highlight an obvious relationship between gender typicality and children's
peer relationships, as typicality both affects and is affected by relationships with others
(Jewell & Brown, 2014). Children by the age of 6 years know and endorse gender
stereotypes regarding personality (e.g. boys are loud and active; girls are quiet and
docile), which influences them to view gender atypical behavior negatively and avoid
peers who break gender rules (Sandberg, Meyer-Bahlburg, Ehrhardt, & Yager, 1993;
Stoddart & Turiel, 1985). Although research on this topic has found high gender
typicality to be associated with having more positive peer relationships (Jewell & Brown,
2014) and with children being more liked (Egan & Perry, 2001; Lobel, Bempechat,
Gewirtz, Shoken-Topaz, & Bashe, 1993), studies have alternatively shown negative
outcomes for low typical children such as more gender-based teasing and harassment
from peers compared to high typical children (Jewell & Brown, 2014; Young &
Sweeting, 2004). Moreover, research has shown that children's gender typicality
differentially influences boys' and girls' positive peer relations (Rose, Glick, & Smith,
2011).

*Gender Differences in Relations of Gender Typicality*

As noted, past research has found differential outcomes for typical and atypical
boys in comparison to girls. One possible reason could be that boys often feel more
pressure from peers and parents to conform to gender stereotypes than girls do (Brown,
Alabi, Huynh, & Masten, 2011; Egan & Perry, 2001; Leaper, 2002; Smith & Leaper,
2006). Furthermore, previous research has found that the consequences of breaking

traditional gender roles are more consistent and harsher for boys (Leaper, 1994), and boys tend to be bound by stricter rules of gender conformity as well (Levy, Taylor, & Gelman, 1995; Martin, 1990; Powlishta, 2000; Reay, 2002). Consequently, low gender typicality has predicted more negative mental health outcomes such as greater depressive symptoms, greater anxiety, more negative self-esteem, and more negative body image for boys in comparison to girls (Jewell & Brown, 2014). Gender typicality seems to be related to outcomes, either positive or negative, for boys more so than for girls; for example, high gender typicality has been more closely linked to popularity for boys than girls (Jewell & Brown, 2014), whereas low gender typicality has been associated with negative peer relations for boys but not girls (Lee & Troop-Gordon, 2011). High typicality for boys is overwhelmingly positive whereas low typicality is overwhelmingly negative; for girls, the association between typicality and positive social outcomes is less significant (Jewell & Brown, 2014). This asymmetry and disproportion of negative effects for atypical boys in comparison to atypical girls in preadolescence has been suggested as a result of a presumed association between gender atypical behavior and sexual orientation, in which preadolescent boys reinforce their masculinity and shun less masculine peers for fear of being stigmatized and rejected (Redman, 2000).

*Measurement of Gender Typicality*

Gender is of central importance to identity development throughout the life span and across cultures (Leaper & Bigler, 2011; Ruble, Martin, & Berenbaum, 2006). A key component of gender identity is an individual's feelings of gender typicality, or the extent to which a person perceives themselves as being similar to others within their same gender group (Egan & Perry, 2001). Although studies of gender typicality have

historically focused mostly on clinically referred populations, the use of non-clinical

populations is increasing (e.g. Carver, Yunger, & Perry, 2003; Leaper & Brown, 2008;

Smith & Leaper, 2006; Yu & Xie, 2010). One of the most prominent line of research on

gender typicality has been conducted by Perry and colleagues (e.g. Carver et al., 2003;

Egan & Perry, 2001), whose research suggests that self-perceived gender typicality is

based off of a variety of personal characteristics such as appearance, traits, and interests.

Although Egan and Perry's (2001) self-report measure of perceived gender typicality is

widely used, another measure of gender typicality is gaining recognition in the field.

Patterson's (2008) self-report measure of gender typicality has proved to be useful as

well in assessing elementary-school-aged children's perceived typicality to their same-

sex peers. The following sections describe Egan and Perry's (2001) measure of gender

typicality, as well as Patterson's (2008) measure.

Egan and Perry (2001) proposed a four part, multidimensional construct of gender

identity that includes gender-group membership knowledge, self-perceived typicality

with one's gender group, felt pressure for gender conformity, and attitudes towards own

and other gender groups. Although they developed measures for the last three of these

aspects of gender identity, Egan and Perry (2001) believed that all four relate to

children's adjustment. With respect to their measure of typicality, Egan and Perry (2001)

used a 6-item self-report measure that assessed self-perceived gender typicality, both

feelings of typicalness with one's gender category and feelings of one's skills and/or

interests being similar to their gender category. Items were double-ended, requiring

students to pick the statement that was most true for them, and then to record whether

that particular statement was *Very* or *Sort of* true for them (e.g. "'Some girls/boys don't

feel they're just like all the other girls/boys their age' BUT 'Other girls/boys do feel they're just like all the other girls/boys their age'"). Although this measure proved to be reliable for children from grades 4-8 in Egan and Perry's original study, it has been suggested that use of a double-ended stem question format may be hard for children, especially younger elementary-school-aged children, to respond to (e.g. Bos & Sandefort, 2010; Van Den Bergh & Marcoen, 1999).

Patterson (2008) developed a measure of self-reported gender typicality for use with children, younger to mid elementary-school-aged children specifically. The gender typicality scale, part of a larger measure of gender identity, included 10-items in which students responded to their perceived similarity to same-gender children in appearance, activity, and interest domains (Patterson, 2012). Example items include "I look like most girls/boys", "I'm good at the same things as most girls/boys", and reverse-scored items such as "Some things I like to do are things that boys/girls usually like more than girls/boys" (Patterson, 2012). Rather than having to first choose from a double-stem statement, and then mark how true that statement was for them, students rated these 10-items on a 4pt scale, where 1 = *Really not true* and 4 = *Really true*. More than just being an easier measure to use to assess self-perceived gender typicality in children, Patterson (2008) included items that, although intended to serve as reverse-scored items, could potentially be seen as items that might assess typicality to other-sex peers as opposed to typicality to solely same-sex peers like Egan and Perry's (2001) measure. For these two reasons, the current study utilized Patterson's (2008) measure of gender typicality.

**The Present Study**

The goals of the present study are twofold. First, to contribute to the existing body of knowledge, the current study aims to examine the relationship between empathy and peer acceptance in preadolescence, and how this relationship might differ for boys and girls at this time. It is hypothesized that there will be a positive relationship between empathy and peer acceptance by all peers and same- and other-sex peer acceptance for girls (*Hypothesis 1*), though boys will yield a negative relationship between the constructs (*Hypothesis 2*). Additionally, the current study will further examine the relationship between empathy and peer acceptance in preadolescence by investigating the moderating effects of gender typicality. Although certain emotional capacities, such as empathy, yield positive outcomes for some children at some ages, the increasing importance of gender typicality in preadolescence suggests that empathy could, for boys, yield negative outcomes. I predict that for both typical and atypical girls, the relationship between empathy and peer acceptance by all peers and same- and other-sex peers will be positive (*Hypothesis 3*). Following research that suggests that gender atypicality for boys often yields negative repercussions, a negative relationship between empathy and all peer acceptance variables is predicted for atypical boys (*Hypothesis 4*). However, for gender typical boys, a positive relationship between constructs is predicted (*Hypothesis 5*).

The second goal of the current study is to utilize extreme group analyses in order to evaluate where on an empathy spectrum (i.e. very low/moderate/very high empathy designated by +1/-1 SD) boys and girls accepted by their peers in general, accepted by their same-sex peers, and accepted by their other-sex peers are. Also, a fourth extreme groups analysis will be conducted to examine how gender typical (self-reported) very

low/moderate/very high empathy boys and girls are. Given that the exploratory nature of this approach, no hypotheses will be made for these analyses.

## Method

### Participants

This study utilized data from a short-term longitudinal study that was designed to evaluate the effectiveness of an intervention program intended to increase positive peer relationships among boys and girls. Out of 395 children at control schools (i.e. receiving no intervention program), 259 fifth graders from three elementary schools (11 classrooms) received parental/guardian consent to participate in the current study. Approximately 20% of students in these schools qualified for free or reduced lunch (National Center for Education Statistics). Descriptive analyses showed that the three schools were demographically alike to each other, with all schools being Title 1, and average student/teacher ratios being either 16:1 or 17:1. Similarly, the ethnic composition was comparable, with approximately 53-57% White/Caucasian, 20-23% Hispanic, 8-14% Asian, and 6-9% Black/African American students enrolled.

The sample was 54% female, and students ranged from 9-11 years old, with a mean age of 10.03 years ($SD = .39$). Six percent of the sample self-reported as Asian, 5% Black/African American, 15% Latino/Hispanic, 48% White/Caucasian, 21% other (e.g. Native American, Pacific Islander, multiracial), and 5% missing/unknown. Approximately 11% of the caregivers reported having a high school education or less, 37% reported having some college education, 32% reported having a college degree, and 16% reported having a graduate level degree. In regards to annual income, 11% of students' parents/guardians self-reported as making less than $30,000 per year, 27% self-

reported as making $30,000 - $59,999 per year, 28% reported making $60,000 - $99,999 per year, and 27% of parents/guardians reported making over $100,000 per year.

**Procedures**

Recruitment of schools took place in the Spring and Summer and data collection began the following Fall and Spring semesters. Letters addressing the aims of the study were sent home with the students, and a parent or guardian signed approval was necessary for study participation, as well as child assent. Caregivers, mostly mothers, who allowed their child to participate completed a demographic form at home, and the child returned the form to school prior to data collection.

Data collection occurred over a two-day period in the early Fall (T1) and again in mid-late Spring (T2) semesters. The questionnaires took approximately one hour to complete, and a make-up day at each school was scheduled for those students who missed the data collection. Students reported on various measures assessing constructs such as peer interaction and friendships, relationship efficacy, gender typicality, school liking, and intergroup attitudes. For the purposes of this study, measures of students' self-reported empathy towards others, their peer-reported acceptance by others in their classrooms, as well as their self-beliefs about how typical they were of their gender as well as how typical they viewed themselves of the other gender were assessed at T1 and T2.

**Measures**

**Demographic characteristics.** Demographic surveys were sent home and parents/guardians reported the preadolescent child's gender, race/ethnicity, and age in years and months. Caregivers also reported on how many adults and siblings were living

within the same household as the child, in addition to their own and their spouse's highest level of education, yearly income, and profession.

**Empathy towards others.** To measure students' empathic abilities, we used Bryant's Index of Empathy for Children and Adolescents (IEC) (Bryant, 1982). This measure of empathy is commonly used with children and adolescents, and contains 22-items (10 items reverse-scored) that include measurement of empathy towards general others (e.g. *"Even when I don't know why someone is laughing, I laugh too"*), gender-specific items (e.g. *"It makes me sad to see a boy/girl who can't find anyone to play with"*), and items directed towards inanimate objects (e.g. "Some songs make me so sad I feel like crying") and animals (e.g. "I get upset when I see an animal being hurt"). Higher scores indicated higher empathic responding towards others.

The Cronbach's alphas for the complete 22-item empathy scale were found to be inadequate: $\alpha = .63$ for the total sample (boys and girls combined), $\alpha = .58$ for boys only, and $\alpha = .66$ for girls only. Further analyses showed that deletion of the reverse-scored items would increase reliability of the scale. Therefore, an empathy variable was created that included the 12 items that were not reverse-scored. This resulted in an empathy variable with sufficient alphas that was used for all analyses: $\alpha = .82$ for the total sample (boys and girls combined), $\alpha = .83$ for boys only, and $\alpha = .79$ for girls only.

**Peer acceptance by same-sex and other-sex peers.** To measure students' acceptance by others in their classroom, the Peer Acceptance Rating scale was used (Asher, Singleton, Tinsley, & Hymel, 1979). Students reported "*In the past 2 weeks, how much did you like hanging out with _____?*" for each of their classmates, with responses ranging from 0 = *Not at all* to 4 = *A lot*. In the interest of examining differences

in children's acceptance by same-sex and other-sex peers, classmates were coded as either same- or other-sex in relation to the sex of the target child. For the purpose of this study, these data were analyzed in terms of how accepted by same- and other-sex peers the respondent was.

**Gender typicality.** To measure students' perceptions of their gender typicality, a 10-item measure of Gender Typicality was adapted from Patterson's (2008) scale. Within the 10-item scale, 7 items had students report on how typical they viewed themselves as compared to their own gender (e.g. *"I like to do the same kinds of things as most boys/girls"*) and 3 items asked about their felt typicalness to the other gender (e.g. *"Sometimes people say that I am acting more like a boy/girl than a girl/boy"*). Responses ranged from 0 = *Not at all* to 3 = *A lot*. To calculate each child's self-perceived gender typicality score for the moderation analyses, only the items that asked about their typicality compared to their own-gendered peers were averaged ($\alpha$ = .87 for the total sample (boys and girls combined), $\alpha$ = .88 for boys only, and $\alpha$ = .83 for girls only).

To assess students' perceptions of their typicality to both same-sex and other-sex peers for the quadrant analyses, the same measure of Gender Typicality was used. The 7 items that assessed how typical the child felt towards their own gender were averaged to create the Typicality towards Same-Sex score (see above for alpha values). The other three items, which asked the students to rate how typical they felt of their other-gendered peers, were averaged to represent the Typicality towards Other-Sex scores ($\alpha$ = .84 for the total sample (boys and girls combined), $\alpha$ = .81 for boys only, and $\alpha$ = .80 for girls only). Then, median splits were conducted for both variables for both boys and girls to create "high typical" and "low typical" girls and boys.

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# Results

## Preliminary Analyses

Initial analyses were conducted to explore the psychometric properties of the items and scales. First, analyses assessing the distribution of the items were conducted. Although most of the variables were normally distributed, with skewness values ranging from -.39 to .44, the Peer Acceptance by Same-sex peers variable at both T1 and T2 was moderately negatively skewed at -.69 and -.57, respectively, which meant that values for these variables tended to be higher. Additionally, although most variables proved to be mesokurtic, or normally high, with values ranging from -.47 to .03, the Typicality and Peer Acceptance by Other-sex peers at T2 variables were slightly platykurtic, or flatter in distribution, with values of -.80 and -.70, respectively. Lastly, the Peer Acceptance by Same-sex Peers at T1 variable was slightly leptokurtic, or steeper in distribution, with a value of .63. To normalize these variables in the analyses, all reported analyses utilized variables that were transformed by the square root function in addition to adding a constant value of 1.

Means, standard deviations, and correlations among all variables of interest were examined next (see Table 1 for means and correlations on total sample, and Table 2 for means and correlations on boys and girls separately). Next, a one-way ANOVA was conducted to examine whether there were gender differences on any variables of interest (see Table 3). The results of this ANOVA revealed significant differences between boys and girls on all variables of interest except Peer Acceptance by Same-sex peers at T2, and Peer Acceptance by Other-sex peers at T1 and T2. Although boys had a significantly higher mean on self-perceived gender typicality at T1 compared to girls ($t(242) = -6.47$, $p$

< . 001), girls had significantly higher means in empathy at T1 ($t(241) = 4.52, p < . 001$),

peer acceptance by all peers at both T1 ($t(242) = 2.85, p < . 01$) and T2 ($t(249) = 2.44, p$

$< . 05$), and peer acceptance by same-sex peers at T1 ($t(255) = 3.61, p < . 001$).

In regards to correlations, neither of the independent variables (i.e., empathy and

gender typicality) were significantly correlated with any of the dependent variables for

girls or boys. Although a significant positive correlation was found between empathy and

peer acceptance by other-sex peers at T1 for girls, which suggested that girls who were

empathic at T1 tended to be more accepted by other-sex peers at the same time point, a

significant correlation was not found for the same T2 variable.

**Regressing Peer Acceptance Variables on Empathy**

To answer the research questions pertaining to the effect of empathy and gender

typicality on children's peer acceptance by all, same-sex, and other-sex peers, and to

examine any differences in these effects across sex, a series of hierarchical regressions

were conducted. The hierarchical regressions all examined the degree to which the three

constructs (i.e., gender, empathy, and gender typicality) predicted peer acceptance by all,

same-, and other-sex peers as dependent variables in three separate analyses. All

regressions included the following steps: (1) influence of the respective peer acceptance

variable at T1 as a control variable, (2) the three main effect variables of gender,

empathy, and gender typicality, (3) all two-way interactions between these three

variables, and (4) the three-way interaction between gender, empathy, and gender

typicality. All analyses were conducted with gender coded as 0 for girls and 1 for boys;

additionally, all analyses used centered and standardized (i.e., z-scored) variables when

appropriate. Not surprisingly, across all three regressions, the respective peer acceptance

at T1 control variable explained much of the variance in the dependent variables. In order to further examine all significant 2-way and 3-way interactions, the Aiken and West approach (1991) was used in order to evaluate the simple slopes when necessary. In this approach, one creates a new variable, $Z_s$ for example, in which you subtract from Z the value of Z for which we want the simple slope of Y on X. Then, we create a new 2-way and/or 3-way variable/s with this new $Z_s$ variable. Lastly, we regress the newly created variables and interactions on the dependent variable.

*Peer Acceptance by All Peers as a Dependent Variable*

The first hierarchical multiple regression (see Table 4) did not produce a significant three-way interaction, so all results are reported from the third step of the model. Results revealed that the main effect of gender significantly predicted children's acceptance by peers in general over time, suggesting that boys experienced lower acceptance by all peers compared to girls: $\beta = -.10$, $t(211) = -2.08$, $p = .04$. Additionally, a significant 2-way interaction between empathy and typicality was found ($\beta = -.11$, $t(211) = -2.09$, $p = .04$). Contrary to the hypothesis that empathy would be positively associated with peer acceptance for high-gender typical children (*Hypothesis 3* for girls and *Hypothesis 5* for boys), empathy was a significant negative predictor , $\beta = -.13$, $t(211) = -2.21$, $p = .03$, suggesting that high-gender typical individuals with higher scores on empathy were less accepted by all peers over time, whereas results for children who self-reported as low in typicality did not vary across empathy: $\beta = .02$, $t(211) = .29$, $p = .77$ (see Figure 1).

*Peer Acceptance by Same-sex Peers as a Dependent Variable*

The second hierarchical regression again did not reveal a significant three-way interaction, so all results are reported from step 3 of the model. The regression yielded a significant finding for the two-way interaction of empathy and typicality, $\beta = -.17$, $t(223) = -2.90$, $p < .01$. Contrary to the hypothesis that empathy would be positively associated with peer acceptance for high-gender typical children (*Hypothesis 3* for girls and *Hypothesis 5* for boys), empathy was a significant negative predictor, $\beta = -.16$, $t(223) = -2.47$, $p = .01$, suggesting that gender typical individuals with higher scores on empathy were less accepted by same-sex peers over time (see Figure 2). Results for children who self-reported as low in typicality were significantly positive, $\beta = .14$, $t(223) = 2.09$, $p = .04$, suggesting that children low in gender typicality showed a positive relation between being empathic and being accepted by same-sex peers at T2.

*Peer Acceptance by Other-sex Peers as a Dependent Variable*

The third and final hierarchical regression yielded a significant three-way interaction between gender, empathy, and typicality: $\beta = .26$, $t(223) = 2.60$, $p = .01$. To examine this three-way interaction, the effect of gender typicality as a moderator in the relation between empathy and peer acceptance by other-sex peers was examined for boys and girls separately. Analyses showed that, while the empathy by typicality cross-product was significant for boys ($\beta = .21$, $t(101) = 2.27$, $p = .03$), it was only marginally significant for girls ($\beta = -.17$, $t(121) = -1.90$, $p = .06$). Follow-up simple slope analyses showed that for highly typical boys (+1 *SD*), empathy positively predicted acceptance by other-sex peers over time, although this finding was only marginally significant: $\beta = .21$, $t(101) = 1.93$, $p = .06$. This was in line with the hypothesis that empathy, although it is a stereotypically feminine trait, could potentially associate positively with boys' acceptance

by peers if they viewed themselves as typical to their gender in other ways (*Hypothesis 5*). Also in line with hypotheses (*Hypothesis 4*), results showed a marginally significant negative relationship between empathy and peer acceptance by other-sex peers for boys who viewed themselves as not very gender typical (-1 *SD*): $\beta = -.26$, $t(101) = -1.71$, $p = .09$ (see Figure 3 for graph of boys' simple slopes).

For girls, results were less in line with hypotheses. For example, simple effects slopes showed that highly typical girls showed a negative relation between empathy and peer acceptance by other-sex peers over time, a finding that also was marginally significant: $\beta = -.20$, $t(121) = -1.67$, $p = .10$. Results for girls lower in typicality were not significant: $\beta = .08$, $t(121) = .75$, $p = .45$ (see Figure 4 for graph of girls' simple slopes).

**Extreme Group Analyses**

To explore if there were different patterns when children were classed into extreme groups based on empathy (i.e., very high (+1 *SD*) ($n = 38$), very low (-1 *SD*) ($n = 32$), and moderate ($n = 173$)), analyses of covariance (ANCOVAs) were used. These 3 (empathy group) by 2 (gender) between-groups analyses included peer acceptance by all peers at T2, peer acceptance by same-sex peers at T2, peer acceptance by other-sex peers at T2, and gender typicality at T2 as separate dependent variables, resulting in four ANCOVAs. For all analyses, respective T1 variables (e.g., Peer Acceptance by All Peers at T1) were included as covariates.

*Analysis of Covariance Assessing Peer Acceptance by All Peers as the Outcome*

The first ANCOVA, with peer acceptance by all peers at T2 as the dependent variable, did not produce significant results for the gender or empathy variables (*F* (1,

214) = 2.50, $p = .12$ for gender and $F$ (2, 214) = 1.09, $p = .34$ for empathy) or for the interaction ($F$ (2, 214) = 1.61, $p = .20$) (see Figure 5).

*Analysis of Covariance Assessing Peer Acceptance by Same-sex Peers as the Outcome*

The second ANCOVA, with peer acceptance by same-sex peers at T2 as the dependent variable, did not produce significant main effects for the gender or empathy variables ($F$ (1, 227) = .80, $p = .37$ for gender and $F$ (2, 227) = .69, $p = .50$ for empathy) but did produce marginally significant results for the interaction ($F$ (2, 227) = 2.76, $p = .07$). Tests of pairwise comparisons using the Sidak procedure showed a marginally significant difference between moderate and high empathy boys ($p = .06$) (see Figure 6), suggesting that boys who reported high empathy were marginally significantly less liked by same-sex peers compared to boys who reported themselves as being moderately empathic. Results comparing low empathy to high empathy boys approached marginal significance ($p = .14$), again suggesting that boys who reported high empathy were marginally significantly less liked by same-sex peers compared to boys who reported themselves as being low on empathy.

*Analysis of Covariance Assessing Peer Acceptance by Other-sex Peers as the Outcome*

The third ANCOVA, with peer acceptance by other-sex peers at T2 as the dependent variable, did not reveal significant main effects for the empathy variable ($F$ (2, 227) = .65, $p = .52$) or for the interaction of empathy and gender ($F$ (2, 227) = .87, $p = .42$) but did produce marginally significant results for gender ($F$ (1, 227) = 3.61, $p = .06$), suggesting that girls in comparison to boys were more accepted by other-sex peers across all levels of empathy (see Figure 7).

*Analysis of Covariance Assessing Gender Typicality as the Outcome*

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The fourth and final ANCOVA (see Figure 8), with self-reported gender typicality at T2 as the dependent variable, did not produce significant results for the gender or empathy variables ($F$ (1, 212) = 1.20, $p$ = .27 for gender and $F$ (2, 212) = 1.24, $p$ = .29 for empathy) or for the interaction ($F$ (2, 212) = .34, $p$ = .71).

## Discussion

This is one of the first studies, if not the first, to explore the relation between preadolescents' empathy and peer acceptance as moderated by gender typicality. The general purpose of this study was to investigate how a child's tendency to understand and react to another's emotional state (e.g., empathy) relates to that child's acceptance by peers and how this relation varies for boys and girls. Although empathy allows an individual to experience a type of emotional insight and understanding with another, it was thought that, given its gendered nature (e.g., more stereotypically associated with feminine qualities), it might elicit more negative outcomes for boys in terms of their acceptance by peers and positive outcomes for girls in terms of their peer acceptance. Although some findings were in line with my hypotheses (e.g., for low typical boys, empathy was found to be marginally negatively associated with peer acceptance by other-sex peers), other findings were contradictory to the proposed hypotheses (e.g., empathy was found to be negatively associated with peer acceptance by same-sex peers for highly typical children). Such findings highlight the complexity of the relations among these constructs and call for further conceptual and empirical examination.

In the following sections, I discuss my findings in light of existing theory and research. As you will read, not all my findings are are easily supported by current theory and research and I tried to put this in perspective for future research and for what the

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'take away' message from my study is. I also discuss limitations of the current study as well as directions for future research in this area.

Recall that when thinking about the relation between the constructs of gender, empathy, gender typicality, and acceptance by peers, I identified two main possible approaches to take when forming hypotheses. First, one might take the approach that children favor peers who are gender typical, and thus would be more accepting of girls who are empathic and less accepting of boys who are empathic. This line of thinking follows Social Role Theory (Eagly, 1987), which argues that individuals possess expectations about what traits and characteristics individuals of each gender should possess, and suggests positive consequences for those who follow these expectations and negative consequences for those that do not. A second approach to predicting these relations is to suggest that children prefer peers who are more similar to themselves, or their "in-group" (e.g., Brewer, 1999); thus, when it comes to empathy, boys would be more accepting of less empathic peers and girls would be more accepting of more empathic peers. The approach that I chose to form my hypotheses from is that of Social Role Theory (Eagly, 1987): children prefer peers who are typical and who conform to the gender roles and norms that society places upon them. I did this because I felt that boys and girls would be more interested in and accepting of peers that were conforming to gender roles as opposed to boys and girls who were similar to themselves but perhaps atypical as a result of this similarity (i.e., gender atypical).

With respect to the preliminary analyses, surprisingly, no significant correlations were found between predictor and outcome variables. Results did show that boys had significantly higher means than girls on self-perceived gender typicality at the beginning

of the study (T1). This finding may be due to actual differences or may be due to the fact that boys wanted to present themselves as more typical of their gender in comparison to girls because of social desirability (Brown et al., 2011; Egan & Perry, 2001; Leaper, 2002; Smith & Leaper, 2006). Also, girls were found to have higher means on empathy at T1, peer acceptance by all peers at both T1 and T2, and peer acceptance by same-sex peers at T1, all of which are consistent with previous research as well again could be due to true differences or to girls' tendencies to report themselves as more empathic and more accepted by peers compared to boys (Eisenberg & Fabes, 1990). Such findings highlight the importance of findings ways to measure these constructs that minimize demand characteristics that contribute to socially desirable responses and/or measure these in ways that are relatively less controllable (e.g., physiological assessments).

*Regression Analyses Discussion*

In regards to the first regression analysis, with peer acceptance by all peers as the dependent variable, results were not consistent with my hypotheses; for example, the simple effects of the significant two-way interaction between empathy and typicality suggested that for highly typical children, empathy negatively predicted acceptance by all peers. My hypothesis was that for both highly typical girls and boys, empathy would have a positive relationship with peer acceptance by all peers. Though there were no significant gender differences found, understanding why this result was obtained might benefit from two separate explanations: one for boys and one for girls. For boys, it could be that being empathic, regardless of how typical you are in other ways, is just not a desirable trait in terms of being accepted by peers. For example, boys who become emotional seeing others become emotional might be seen as feminine or weak, and thus

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might be viewed as less desirable as a friend or interaction partners. Similar results were found by Oberle and collegues (2010), and the description of their findings might lend some insight into what could potentially be happening here: "being emotionally expressive in the form of empathy… could be considered undesirable or 'uncool'" (p. 1339).

For girls, a meaningful and theoretically supported explanation is harder to develop since empathy and emotional expressivity are traits that individuals expect and stereotypically prefer for females. Perhaps this finding can be partially explained by the idea of an optimal level of empathy. For example, it has been suggested in other literature that circumstances exist in specific populations and situations (i.e., nurse/patient relationships) in which an excess of empathy is not beneficial, and can actually interfere with tasks or interactions that individuals have with others (Mathews & Stotland, 1973). In the case of these highly typical and empathic girls yielding less acceptance by all peers, it could be that their level of empathy, and the subsequent behaviors that likely follow their empathic responses, is too intense and thus yields negative, not positive, outcomes. It might be that high levels of empathy lead to disregulated emotional and behavioral reactions and this is relatively unappealing when considering acceptance by one's peers.

Regression results with peer acceptance by same-sex peers as the dependent variable revealed that, for highly typical children, empathy was again a significant negative predictor of acceptance by same-sex peers. This finding, again, was not consistent with my predications but could potentially be explained by thinking of empathy as having an optimum level of expressiveness. Children, both boys and girls in

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this case, that either exceed or fail to meet this optimum level, might yield be perceived as less appealing as a friend or interaction partner. Also, although no significant gender differences were found, it might help to think of possible explanations for the results separately for boys and girls. For boys, although it was predicted that empathy might be a positive trait in terms of yielding peer acceptance by other boys when they rated themselves as highly gender typical. However, it appears that empathy, despite the heightened felt typicality, still is not a desirable trait for a boy. Though this finding was contrary to hypotheses, it is consistent with other research that shows that boys are more accepting of others who are less empathic (Oberle et al., 2010), and therefore, empathy and peer acceptance yielded a negative relationship. For highly typical girls, the explanation as to why a trait that is stereotypically regarded as a female attribute is again less easy to understand. Additionally, results from this regression showed that for children who self-reported as low on gender typicality, empathy was a significant positive predictor of acceptance by same-sex peers. This finding was contrary to the original hypothesis for boys but was in line for the hypothesis for girls.

Consistent with my hypotheses, I found that empathy positively predicted acceptance by other-sex peers for boys who reported themselves as highly typical, although this finding was only marginally significant. Although empathy is a communal trait that boys are stereotypically not supposed to possess or express, I predicted that boys who thought of themselves as highly gender typical in other ways, and are perhaps seemed by others to be so as well, would not yield negative outcomes from being empathic. Instead, they might reap benefits similar to those in previous studies, such as the found association between an individual's ability to decode and understand another's

emotions and their subsequent positive social adaptation (Eisenberg, Fabes, Guthrie, & Reiser, 2000) or their ability to interact positively with others (Dodge, McClaskey, and Feldman, 1985), both of which could include or lead to increased peer acceptance. Furthermore, I found that for boys who viewed themselves as not very gender typical, they had a marginally significant negative relationship between empathy and peer acceptance by other-sex peers, which was consistent with my hypotheses. Unfortunately, boys who are not very typical of their gender do often experience negative consequences, such as mistreatment, stigmatization, and ostracism (Brooks, 2000), and it appears that this is no different for the sample of boys in my study.

Lastly, a marginally significant negative relation between empathy and peer acceptance by other-sex peers was found for highly typical girls, a finding that is contradictory to my original hypotheses. Girls who were empathic, then, and also reported themselves as gender typical, were less accepted by boys. Empathy, being a communal trait and one stereotypically associated with females, has been found to positively predict peer acceptance for girls in previous studies (Oberle et al., 2010). However, one could imagine that boys might prefer to befriend girls who portray themselves as more similar to them; that is, girls who are more tomboyish and less emotional. For example, Sebanc and colleagues (2003) found in their study of assertiveness and acceptance among children, that boys actually liked girls that were rated as behaving in a more cross-gendered manner (i.e., more assertive). Similarly, Fagot (1977) found results from their study that suggested girls who behave in a cross-gendered manner did not receive negative feedback from not only their peers but also their teachers.

*Extreme Group Analyses Discussion*

To understand in more detail how empathy might relate to peer acceptance, I also conducted some extreme group exploratory analyses (children +/- 1 SD). No significant findings resulted from the first ANCOVA analysis with peer acceptance by all peers as the dependent variable. However, findings from the ANCOVA analysis with peer acceptance by same-sex peers as the dependent variable were consistent with hypotheses. Though results were only marginally significant, it was found that higher empathy in boys resulted in less acceptance by other boys; confirming the results of the regression analysis. Mainly, highly empathic boys were marginally significantly less accepted by other boys compared to both moderate and low empathic boys. This finding is consistent with Gender Schema theory (Eagly, 1987) and provides insight as to why previous studies have seen boys suppress communal behaviors and traits such as empathy (Pollack, 2006).

Results from the ANCOVA analysis with peer acceptance by other-sex peers as the dependent variable showed a marginally significant result for gender, suggesting that girls in comparison to boys were more accepted by their other-sex peers across all levels of empathy. For the moderate to high empathic girls, this finding can best be explained by Gender Role Theory in that because these girls are exhibiting traits consistent with their gender role, they are tending to yield positive outcomes; in this case, the positive outcome is peer acceptance by other-sex peers. For the low empathic girls, higher acceptance by other-sex peers compared to boys can again be explained by girls not reaping as many negative benefits, and sometimes reaping positive benefits, even when they exhibit cross-gender traits or behaviors (i.e., low empathy). Lastly, results from the

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exploratory ANCOVA analysis with gender typicality as the dependent variable yielded no significant findings.

**Limitations and Directions for Future Research**

Although the current study contributes to the existing body of knowledge in a variety of ways, it is not without limitations. First, there exist certain aspects of the way each construct was measured that were less than desirable. For example, both the empathy and gender typicality data were self-reported by the participants. Though self-report measures are often the preferred method of data collection for school children and adolescents because of their ease in administration and ability to collect and reflect on large groups of data, as noted previously, there is always the possibility of self-presentational issues due to social desirability and demand characteristics. More specifically, this issue has been raised previously when studying the construct of empathy. Lennon and Eisenberg (1987), in fact, have noted that females tend to score higher on tests of empathy only when responses are self-reported and not when empathy is measured physiologically or observationally. Additionally, one could assume that measuring a child's feeling of their gender typicalness could also inflate their responses. For example, the greater societal pressure for boys to be gender typical could inflate their responses on a self-reported measure of gender typicality. It might also be a good idea to have other children report on the perceived level of empathy and typicality to confirm that they perceive peers the way children view themselves. Although utilization of self-reported measures is not a fatal flaw, it is one worth mentioning.

Furthermore, although the measure of children's acceptance by peers was a peer-reported measure and thus was less susceptible to problems of social desirability, the

measure itself did pose a slight problem. Recall that children were to report on how much they liked hanging out with each classmate in the past two weeks, and the scale responses ranged from 0 or "Not at all" to 4 or "A lot". This response scale did not offer the students the option of selecting a response in the case that they did not hang out or spend time with a particular student or students in the past two weeks. As a result, if the student was reporting on a child in which they did not spend time with, their likely response would be a 0, not because they did not enjoy their time with said student, but because they did not spend time with them at all. This measurement error could have likely led to an inflated rate of children reporting lower peer acceptance towards peers in which they simply did not have the opportunity to spend time with over the previous two weeks. To alleviate this problem, future researchers using the Parker and Asher (1987) scale should add a fifth scale point to include a "Did not hang out with" response.

One avenue in which researchers would do well to explore is that of observational or physiological measures of empathy (e.g., heart rate, skin conductance, EEG, etc.), which are less biased than self-reports. Adding these physiological, less-biased measures in with self-report data on the same construct would allow researchers to compare both measures for accuracy, as well as utilize both sets of measures in analyses. Additionally, adding use of an alternative method of assessing one's gender typicality, rather than solely self-report, would also prove to be of benefit, as gender typicality is another construct which carries a great deal of bias and social desirability. Peer-reported gender typicality, for example, is an avenue in the typicality research which has not been as explored.

A suggestion for researchers looking to study the effect that empathy has on children's acceptance by peers and the influence of gender typicality would be to study this relation across childhood. As previously mentioned, gender typicality is a construct that varies in importance across childhood; though it always seems to be an important contributing factor to some degree when considering its influence on peer acceptance, there are some ages (i.e., preadolescence and adolescence) in which it might prove to be more influential.

Examining the link between empathy and children's acceptance by peers is important to continue researching because, although empathy should be fostered and considered as a positive trait for all children to have, this is not always the case. Children are sometimes labeled as 'atypical' or 'weird' or 'sissy' for being able to emotionally understand others and empathize with them. This in turn affects their acceptance by peers. Perhaps fostering an 'optimal' level of empathy is the answer to this problem as more empathy is not always better. Instead of considering empathy and emotional reactivity as linear, or more is always better, perhaps these constructs should be considered as having different optimal or ideal levels depending upon factors such as characteristics of the empathizers, characteristics of the receivers of empathy, and the setting in which the emotional exchanges are taking place. Really high levels of empathy, for example, could reflect under-regulated responses whereas really low levels of empathy could reflect over-regulated responses. Moderate levels of emotional reactivity might, in fact, be optimal.

*Concluding Considerations*

To end, I will highlight some specific areas in which I gained valuable knowledge because of this thesis process, starting with a specific research area and broadening it to more general knowledge. First, although most people would say they have an understanding of what a tumultuous time period preadolescence and adolescence is, I feel that I now have an even deeper intellectual understanding of the extent of this discord. I believe that my findings suggesting negative consequences for empathic responding in these preadolescents were not only the result of gender norms, but also the result of the time period of this sample. The ability of a period of development to change the outcomes of a construct that should be, in my opinion, so positive and desirable is somewhat disheartening. Possessing emotional understanding for others and expressing subsequent emotions and behaviors towards these others sound like necessary characteristics in order to be labeled as a "good person". However, in this time period of preadolescence, it does not seem to matter most how caring or understanding you are of others, but rather, how well you are able to react in an appropriate way according to what others in the setting feel is appropriate. Oberle and colleagues (2010) really did say it best when they suggested that empathy might just leave other preadolescent kids thinking that you are 'uncool'. My hope for children in this stage of development, and across childhood in general, is that they can be taught to be kind, caring individuals regardless of whether or not it is the 'cool' thing to do. One very feasible way to foster these ideas would be to include this kind of education in with their existing anti-bullying and/or social-emotional learning (SEL) programs at school.

A more general, big-picture take away from this thesis process, and from graduate school in general, would simply be the value of quantitative research in asking and

answering questions. I truly feel so fortunate to be aware of the difference between anecdotal or opinion-based "knowledge" and research-based knowledge. I feel that most of the population does not understand the difference between news articles and research-based journal articles, and would value both equally and maybe even value the news more because of the ease of understanding the material. I also have come to understand that science is not always perfect – that it takes perseverance and persistence, and openness to change, to make advances and understand the complex nature of human behavior, development, and relationships. Knowing this will assist me in so many ways in my future: in being a parent, in providing help or advice to friends and family regarding various family and human development related issues, helping myself in stressful situations, etc. Though I do not want to pursue a research-related career, I still very much appreciate the value of research in addition to the multitude of other ideas and knowledge that I have received in this program.

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Table 1
Means, SDs, and Correlations of Variables of Interest for Total Sample (N = 259)

| | M(SD) | N | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Empathy towards others (T1) | 1.40 (.62) | 243 | * | | | | | | | |
| 2. Self-perceived gender typicality (T1) | 1.95 (.78) | 244 | -.01 | * | | | | | | |
| 3. Peer acceptance by all peers (T1) | 1.72 (.52) | 244 | .11 | -.04 | * | | | | | |
| 4. Peer acceptance by same-sex peers (T1) | 2.28 (.70) | 257 | .08 | -.03 | .84** | * | | | | |
| 5. Peer acceptance by other-sex peers (T1) | 1.20 (.56) | 257 | .12 | -.02 | .79** | .38** | * | | | |
| 6. Peer acceptance by all peers (T2) | 1.62 (.58) | 251 | .04 | -.06 | .76** | .64** | .57** | * | | |
| 7. Peer acceptance by same-sex peers (T2) | 2.18 (.75) | 251 | .01 | .002 | .63** | .69** | .34** | .86** | * | |
| 8. Peer acceptance by other-sex peers (T2) | 1.07 (.62) | 251 | .04 | -.10 | .61** | .40** | .61** | .79** | .43** | * |

Note. Means and standard deviations were calculated with raw variables. Correlations were calculated with transformed variables.
*$p < .05$
**$p < .001$.

Table 2

Means, SDs, and Correlations of Variables of Interest for Boys (n = 119) and Girls (n = 140)

| | Boys M(SD) | Girls M(SD) | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Empathy towards others (T1) | 1.21 (.61)** | 1.55 (.59)** | * | .09 | .16 | .16 | .19* | .08 | .13 | -.01 |
| 2. Self-perceived gender typicality (T1) | 2.28 (.72)** | 1.67 (.73)** | .12 | * | -.06 | .01 | -.15 | -.05 | -.03 | -.05 |
| 3. Peer acceptance by all peers (T1) | 1.62 (.56)** | 1.81 (.47)** | -.03 | .14 | * | .85*** | .74*** | .72*** | .60*** | .57*** |
| 4. Peer acceptance by same-sex peers (T1) | 2.11 (.72)** | 2.42 (.65)** | -.13 | .11 | .82*** | * | .36*** | .69*** | .72*** | .49*** |
| 5. Peer acceptance by other-sex peers (T1) | 1.22 (.60) | 1.18 (.52) | .08 | .11 | .87*** | .44*** | * | .45*** | .27*** | .46*** |
| 6. Peer acceptance by all peers (T2) | 1.52 (.59)* | 1.70 (.56)* | -.10 | .07 | .79*** | .58*** | .70*** | * | .89*** | .80*** |
| 7. Peer acceptance by same-sex peers (T2) | 2.10 (.79) | 2.24 (.72) | -.19 | .13 | .64*** | .66*** | .41*** | .82*** | * | .51*** |
| 8. Peer acceptance by other-sex peers (T2) | 1.02 (.63) | 1.11 (.61) | .02 | -.10 | .65*** | .30*** | .76*** | .79*** | .35*** | * |

*Note.* Means and standard deviations were calculated with raw variables. Correlations for girls are above the diagonal, and were calculated with transformed variables. Asterisks associated with means indicated significant mean differences between boys and girls.

*p < .05

**p < .001.

Table 3

One-Way Analyses of Variance for Gender on All Variables of Interest

| Variable and Source | df | SS | MS | F |
| --- | --- | --- | --- | --- |
| Empathy at Time 1 | | | | |
|   Between Groups | 1 | 7.27 | 7.27 | 20.47*** |
|   Within Groups | 241 | 85.58 | .36 | |
| Gender Typicality at T1 | | | | |
|   Between Groups | 1 | 22.00 | 22.00 | 41.84*** |
|   Within Groups | 242 | 127.25 | .53 | |
| Acceptance by All Peers at T1 | | | | |
|   Between Groups | 1 | 2.13 | 2.13 | 8.14** |
|   Within Groups | 242 | 63.34 | .26 | |
| Acceptance by Same-sex Peers at T1 | | | | |
|   Between Groups | 1 | 6.06 | 6.06 | 13.04*** |
|   Within Groups | 255 | 118.50 | .47 | |
| Acceptance by Other-sex Peers at T1 | | | | |
|   Between Groups | 1 | .10 | .10 | .31 |
|   Within Groups | 255 | 79.98 | .31 | |
| Acceptance by All Peers at T2 | | | | |
|   Between Groups | 1 | 1.98 | 1.98 | 5.97* |
|   Within Groups | 249 | 82.51 | .33 | |
| Acceptance by Same-sex Peers at T2 | | | | |
|   Between Groups | 1 | 1.23 | 1.23 | 2.19 |
|   Within Groups | 249 | 139.44 | .56 | |
| Acceptance by Other-sex Peers at T2 | | | | |
|   Between Groups | 1 | .48 | .48 | 1.25 |
|   Within Groups | 249 | 94.83 | .38 | |

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

Table 4
Prediction by Predictor Variables of Children's Acceptance by All Peers

| Hierarchical step | Predictor Variable | β | Total R² | Incremental R² |
|---|---|---|---|---|
| 1 | Control | | .61** | .61** |
| | Time 1 Peer Acceptance | .76** | | |
| 2 | Main effects | | .62 | .01 |
| | Gender | -.10* | | |
| | Empathy | -.09 | | |
| | Typicality | .07 | | |
| 3 | 2-way Interactions | | .63 | .01 |
| | Gender x Empathy | .05 | | |
| | Gender x Typicality | -.07 | | |
| | Empathy x Typicality | -.11* | | |

*Note.* Girls coded as 0. For the current analysis, the three-way interaction of gender, empathy, and typicality was not significant, so results are reported from the third step of the model.
*$p < .05$
**$p < .001$.

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Table 5
Prediction by Predictor Variables of Children's Acceptance by Same-sex Peers

| Hierarchical step | Predictor Variable | β | Total R² | Incremental R² |
|---|---|---|---|---|
| 1 | Control | | .49** | .49** |
| | Time 1 Peer Acceptance | .69** | | |
| 2 | Main effects | | .49 | .00 |
| | Gender | .02 | | |
| | Empathy | -.03 | | |
| | Typicality | -.03 | | |
| 3 | 2-way Interactions | | .52* | .03* |
| | Gender x Empathy | .04 | | |
| | Gender x Typicality | .06 | | |
| | Empathy x Typicality | -.17* | | |

*Note.* Girls coded as 0. For the current analysis, the three-way interaction of gender, empathy, and typicality was not significant, so results are reported from the third step of the model.

*$p < .05$
**$p < .001$.

Table 6

Prediction by Predictor Variables of Children's Acceptance by Other-sex Peers

| Hierarchical step | Predictor Variable | β | Total R² | Incremental R² |
|---|---|---|---|---|
| 1 | Control | | .23** | .23** |
| | Time 1 Peer Acceptance | .49** | | |
| 2 | Main effects | | .24 | .01 |
| | Gender | -.13 | | |
| | Empathy | -.12 | | |
| | Typicality | .13 | | |
| 3 | 2-way Interactions | | .25 | .01 |
| | Gender x Empathy | -.003 | | |
| | Gender x Typicality | -.07 | | |
| | Empathy x Typicality | -.15 | | |
| 4 | 3-way Interaction | | .27* | .02* |
| | Gender x Empathy x Typicality | .26* | | |

*Note.* Girls coded as 0. Results reported from the fourth step of the model.

⁻p < .10
*p < .05
**p < .001.
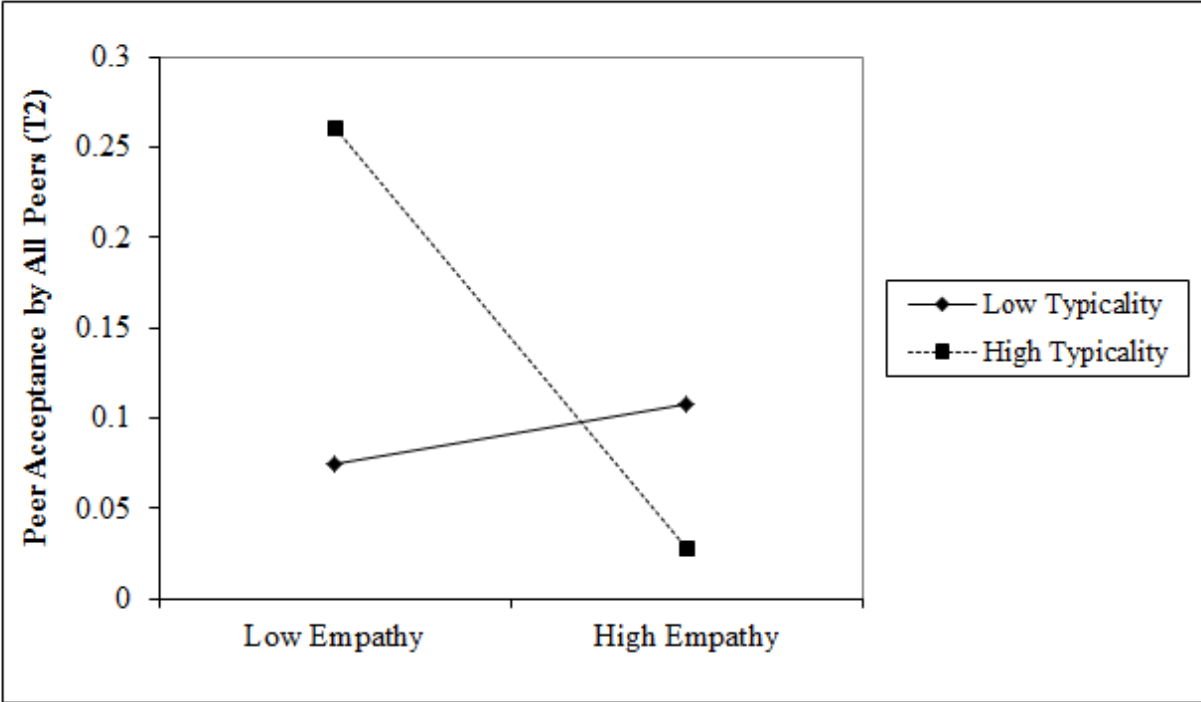
*Figure 1.* Empathy and its effects on children's acceptance by all peers (T2) at high and low levels of self-perceived gender typicality.
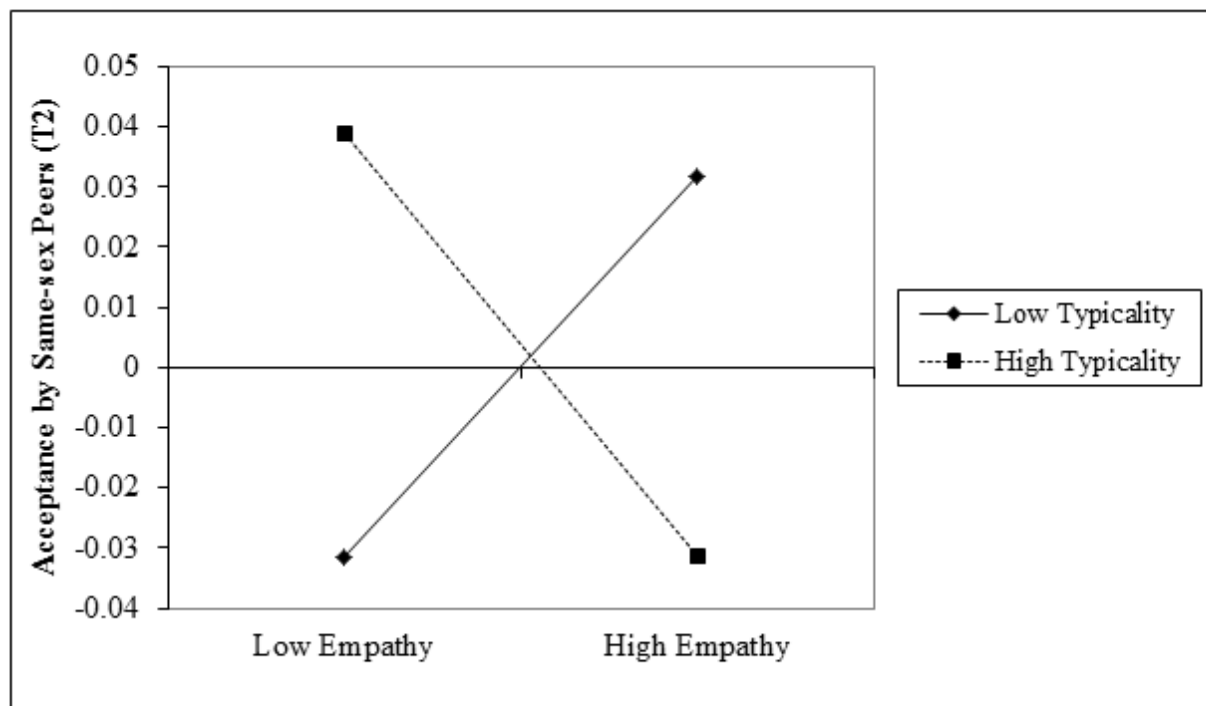
*Figure 2.* Empathy and its effects on children's acceptance by same-sex peers (T2) at high and low levels of self-perceived gender typicality.
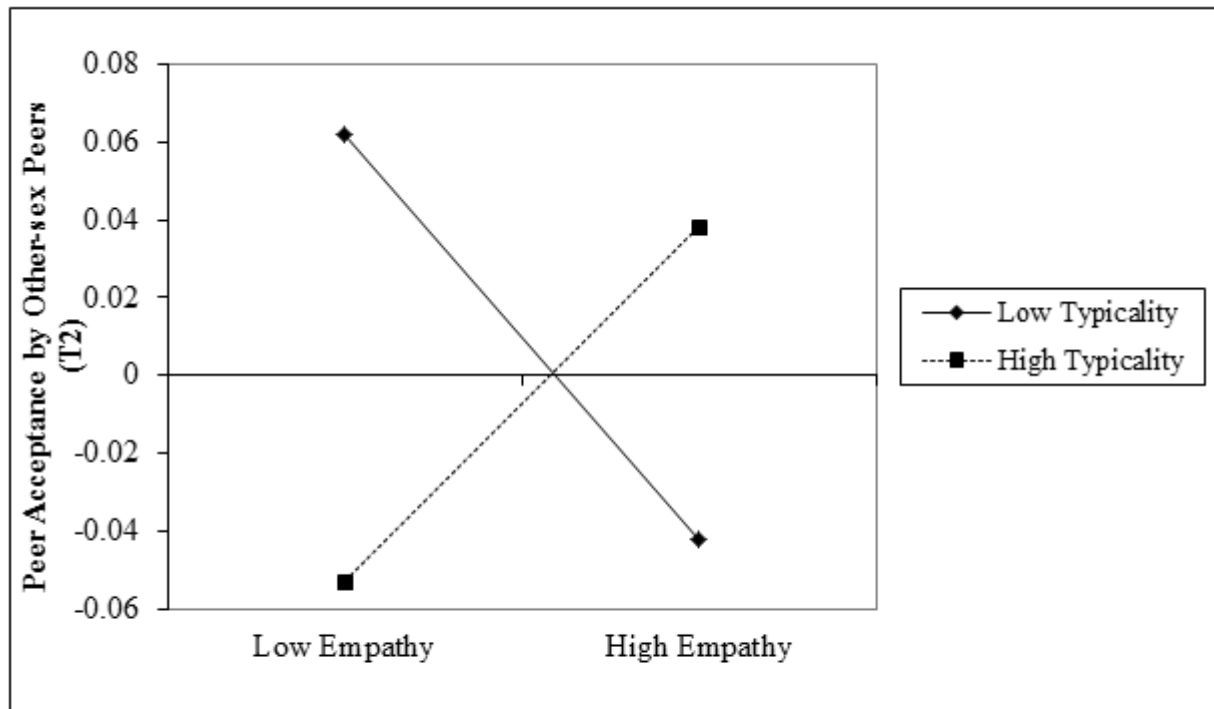
*Figure 3.* Empathy and its effects on boys' acceptance by other-sex peers (T2) at high and low levels of self-perceived gender typicality.
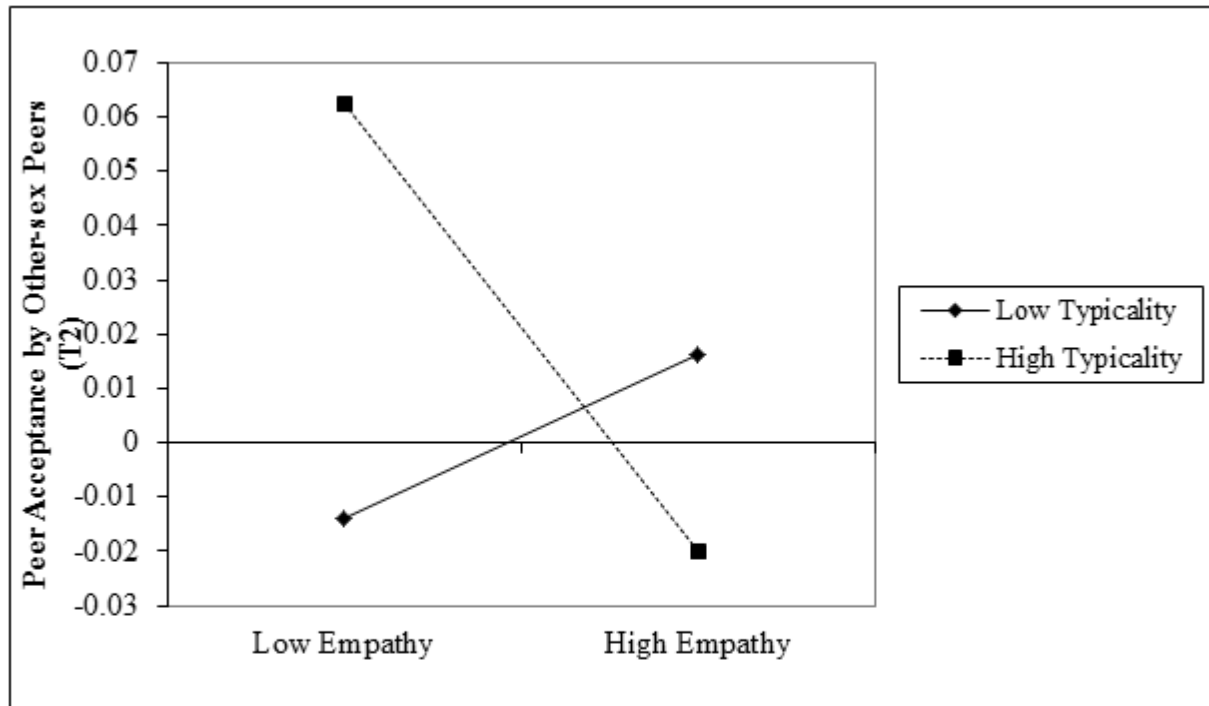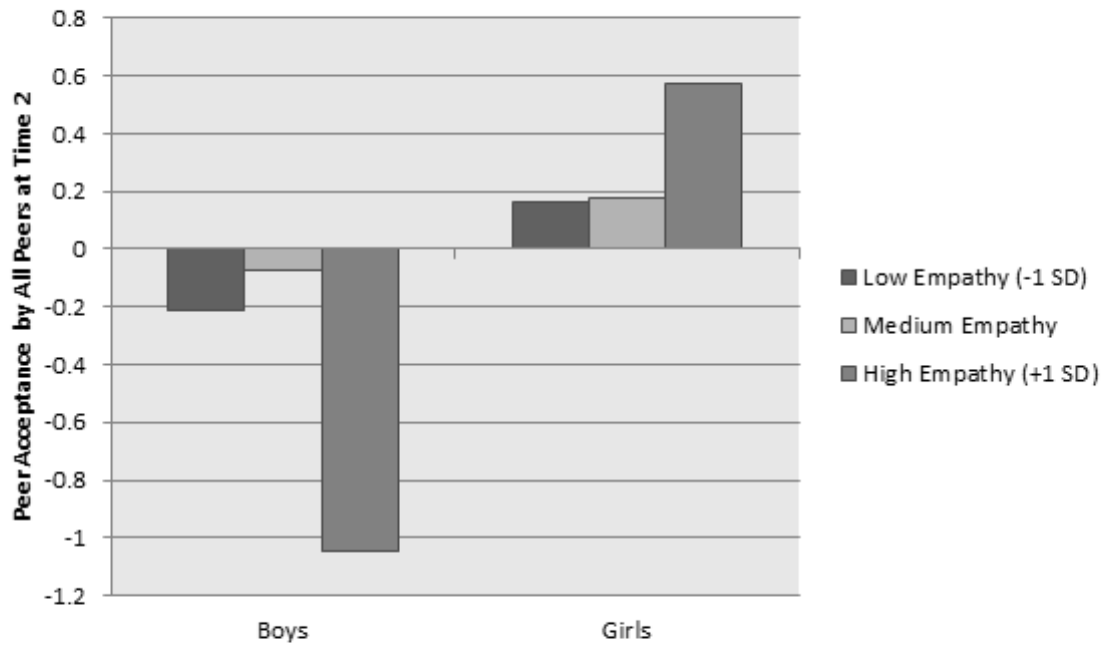
*Figure 4.* Empathy and its effects on girls' acceptance by other-sex peers (T2) at high and low levels of self-perceived gender typicality.

*Figure 5.* Boys' (*n* = 103) & girls' (*n* = 118) means on acceptance by all peers across levels of empathy.
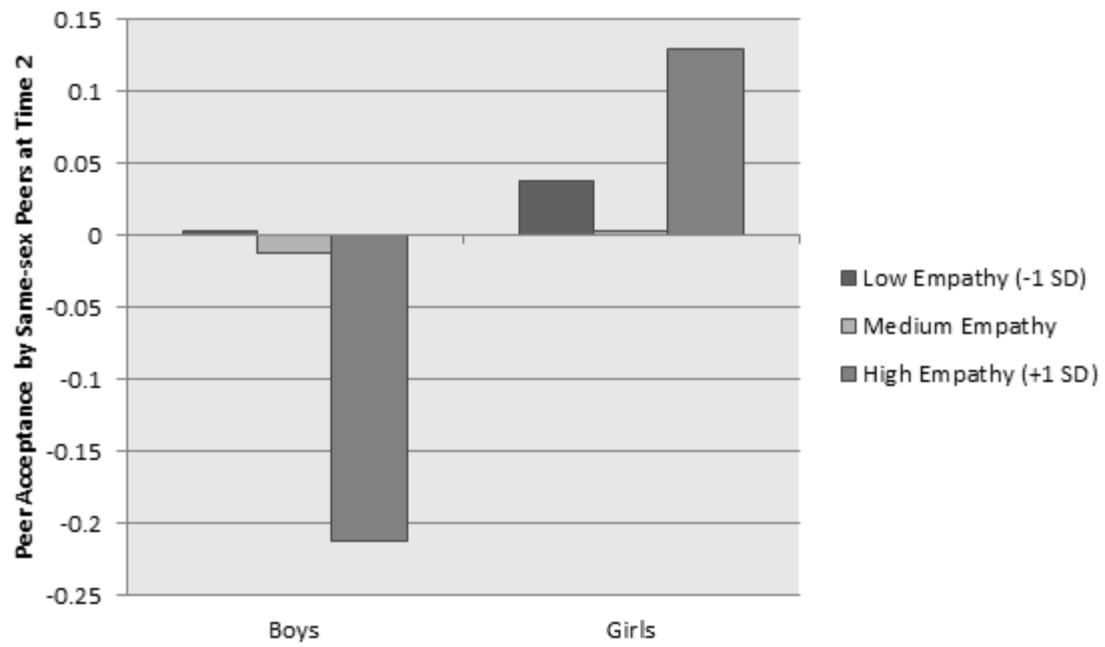
*Figure 6.* Boys' ($n = 107$) & girls' ($n = 127$) means on acceptance by same-sex peers across levels of empathy.
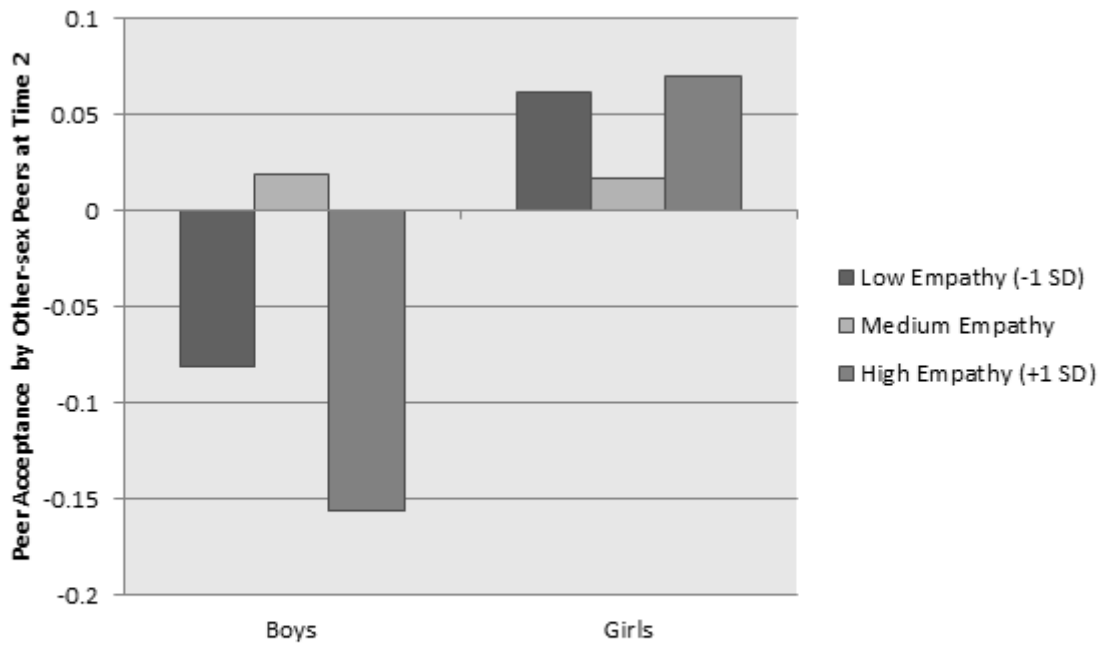
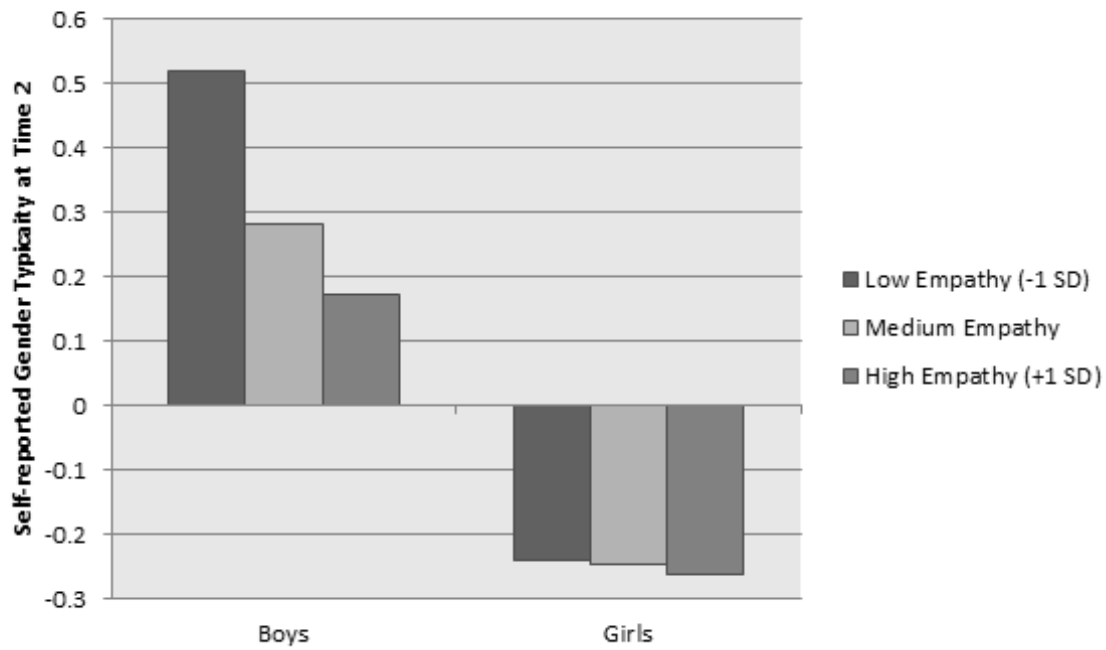*Figure 7.* Boys' (*n* = 107) & girls' (*n* = 127) means on acceptance by other-sex peers across levels of empathy.

*Figure 8.* Boys' (*n* = 100) & girls' (*n* = 119) means on gender typicality across levels of empathy.