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A Review of Sex Differences in Peer Relationship Processes: Potential Trade-offs for the Emotional and Behavioral Development of Girls and Boys

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Abstract

Theory and research on sex differences in adjustment focus largely on parental, societal, and biological influences. However, it also is important to consider how peers contribute to girls' and boys' development. This paper provides a critical review of sex differences in: several peer-relationship processes, including behavioral and social-cognitive styles, stress and coping, and relationship provisions. Based on this review, a speculative peer-socialization model is presented that considers the implications of these sex differences for girls' and boys' emotional and behavioral development. Central to this model is the idea that sex-linked relationship processes have costs and benefits for girls' and boys' adjustment. Finally, we present recent research testing certain model components and propose approaches for testing understudied aspects of the model.

Keywords

peer relationships; sex differences; emotional adjustment; behavioral adjustment

From a very early age, significant differences are found in the peer relationships of girls and boys. What are the potential implications of this consistent pattern of sex differences for youth? The purpose of the present paper is to review, synthesize, and critique existing research concerning the presence of sex differences in several key aspects of youths' relationships, particularly in the peer group context. Based on this critical review, we then introduce a speculative model concerning the influence of sex differences in these peer relationship processes on the emotional and behavioral development of girls and boys. Finally, this review and speculative model are used as a springboard for identifying critical future directions for research on sex differences in relationships processes and associated developmental outcomes.

We focus on sex differences in three major domains of relationship processes: relationship style—including both behavioral and social-cognitive components, stress and coping processes, and emotional provisions in relationships. Several factors determined our selection of these relationship processes for inclusion in our review. The overarching goal of this review is to generate ideas about the influence of sex differences in relationship processes on well-being in girls and boys. Thus, we focused in general on relationship

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processes that we hypothesized would have potential implications for understanding sex differences in emotional and behavioral development. With this goal in mind, we used three criteria to select specific dimensions for review. First, we focus on relationship processes that are emphasized in existing theoretical models of sex differences in relationships (e.g., Burhmester, 1996; Cross & Madson, 1997; Helgeson, 1994; Maccoby, 1990; Nolen-Hoeksema & Girgus, 1994). Second, we consider relationship processes for which a reasonable amount of empirical research exists examining the presence of sex differences. Third, we include relationship processes for which there is a commonly held belief, whether or not clearly supported by empirical data, that girls and boys differ.

Although a few integrative reviews (e.g., Buhrmester, 1996; Cross & Madson, 1997; Hankin & Abramson, 2001; Maccoby, 1990, 1998; Nolen-Hoeksema & Girgus, 1994) consider sex differences in selected domains of relationship processes, these reviews are limited in several ways. First, prior reviews focus on a narrower evaluation of constructs within particular domains rather than summarizing research across a variety of domains. Although these targeted reviews are useful for developing and evaluating specific theories, they do not have the advantage of providing a comprehensive picture of sex differences across potentially related domains. In contrast, the present review draws from relevant research on peer relationships, social cognition, and stress and coping. Second, prior reviews often do not include a critical analysis of the size and consistency of sex differences in relationship processes. Indeed, many of the sex differences have been presumed to be present without significant supportive empirical evidence. Third, prior reviews often do not include a systematic developmental analysis of the emergence and progression of sex differences in various domains of relationship processes. Thus, relatively little is known about whether the sex differences in relationship processes across all of these domains change across development. Fourth, many prior reviews that consider the origins of sex differences in relationship styles focus on adult socialization influences. Because peers become salient interaction partners as youth progress through middle childhood and adolescence, it is critical to consider the role of peer socialization in the development and progression of sex-linked relationship processes. Although some previous reviews consider peer socialization processes (e.g., Buhrmester, 1996; Maccoby, 1990, 1998), they do not systematically consider developmental issues related to peer socialization or critically evaluate the magnitude of effect sizes associated with these processes. Finally, and perhaps most importantly, because prior reviews focus on isolated relationship processes, the potential links among sex differences in our hypothesized network of processes have not been fully considered. In fact, theory and research in some areas (e.g., sex differences in interpersonal factors associated with the development of psychopathology) often have overlooked potentially relevant theory and research in other areas (e.g., sex differences in friendship provisions). At times, these areas of theory and research provide different or even opposing perspectives on the nature and implications of sex differences. As an unfortunate consequence, research on sex differences in relationships over the past few decades often has reflected a polarization of views, whereby particular sex-linked characteristics are viewed as purely adaptive or maladaptive. In contrast, based on a consideration of sex differences across these various domains and the pathways that link these domains, we speculate that an intriguing and complex paradox arises concerning the costs and benefits of particular sex-linked relationship processes. This paradox has significant implications for understanding the emotional and behavioral development of girls and boys.

Domains of Relationship Processes

Here we delineate the three major domains of relationship processes that are the central focus of our review and speculative model, and we elaborate on the definitions of the

constructs included within each domain. We view each of these domains as distinct but we anticipate significant influences among the various domains.

Peer Relationship Style

Behavioral Style—First, we consider behavioral aspects of youths' relationship style within peer interactions. We examine several particular dimensions of youths' behavioral styles, including both the structure and the content of their interactions. In terms of structure, we focus on two major types of social interactions: large group interactions versus dyadic interactions. The structure of youths' peer interactions also may be reflected in the density of their social networks, or the extent to which members of a youths' social network are themselves playmates or friends. In terms of content, we focus on several types of behaviors that are believed to typify the peer interactions of girls and boys: prosocial behavior and cooperation, social conversation and self-disclosure, rough-and-tumble play, competitive activity, and organized play.

Social-Cognitive Style—Second, we consider relational orientation, or social-cognitive aspects of youths' relationship style, such as self-construals, attitudes, beliefs, and goals. Several theoretical perspectives have been brought to bear in an effort to conceptualize differences in relational orientation style. For example, drawing from research on differences between Eastern and Western cultures, Cross and Madson (1997) focus on the distinction between interdependence, or defining oneself based on one's ability to maintain close relationships, versus independence, or defining oneself based on one's uniqueness and ability to distinguish oneself from others. In a related approach, Helgeson (1994), Maccoby (1990), and Buhrmester (1996) distinguish between communion, or a connection-oriented goal orientation focused on relationship-enhancement and cooperation, versus agency, or a status-oriented goal orientation focused on dominance and instrumental reward. These perspectives both view a central defining feature of relational orientation style to be a reliance on close relationships as a source of self-definition and self-evaluation.

Notably, several theories also consider the extent to which an investment in relationships contributes to worries about social approval and abandonment. For example, Beck and colleagues (Clark, Steer, Beck, & Ross, 1995) distinguish between an emphasis on sociotropy, or investment in relationships and social approval, versus autonomy, or investment in individual accomplishment. According to this perspective, sociotropy may lead to an overconcern about the judgments of others, whereas autonomy may lead to a diminished concern about the judgments of others. A similar conceptualization by Blatt and colleagues (Blatt, Hart, Quinlan, Leadbeater, & Auerbach, 1993) considers the extent to which individuals demonstrate interpersonal vulnerability and concerns, including a desire for closeness, dependency on others, and fears of abandonment.

A third aspect of individuals' social-cognitive style in relationships involves their sensitivity to others' distress, referred to as empathy (Eisenberg & Lennon, 1983; Zahn-Waxler, 2000). Although empathy has been defined and operationalized along a variety of dimensions, including behavior (e.g., Miller, 1990), facial expressions (e.g., Roberts & Strayer, 1996), and physiological responses (e.g., Eisenberg & Lennon, 1983), we focus here on social-cognitive aspects of empathy, as reflected in youths' tendency to understand and feel vicarious distress in response to others' distress.

Drawing from these theoretical perspectives, we focus on potential sex differences in several aspects of social-cognitive style: the centrality of relationships to one's sense of self, goal orientation, interpersonal concerns (e.g., dependency, social-evaluative concerns), and empathy. These constructs all share the general feature of incorporating an awareness of, concern about, and/or investment in relationships.

Stress and Coping Processes

Exposure to Peer Stress—In terms of stress and coping processes, we first consider youths' exposure to stressful events and circumstances in their peer relationships. Historically, conceptualizations of life stress have taken two forms (for a review, see Grant et al., 2003). The first approach focuses on objective aspects of stress, as reflected in measurable changes in, or chronic characteristics of, the environment (Holmes & Rahe, 1967). The second approach focuses on subjective appraisals of the degree of challenge, threat, or harm posed by the environment (Lazarus & Folkman, 1984). In line with contemporary conceptualizations (Grant et al., 2003), we use the former definition of stress. That is, we consider the extent to which girls and boys differ in their *exposure* to particular acute or ongoing stressors, rather than their *perceptions* of stress in their peer relationships (e.g., their subjective reports of distress during interactions with peers). This approach allows us to differentiate between youths' actual experiences and their appraisals of these experiences, which may, for example, be influenced by their social-cognitive styles (e.g., girls may perceive similar events or circumstances as more distressing than boys because they are more concerned about maintaining positive relationships or receiving approval from others).

In particular, we focus on several aspects of peer stress that emerge as important in understanding sex differences in peer relationships and their potential implications for emotional and behavioral development. Life stress research examines a wide range of ongoing stressors (e.g., chronic teasing by peers) and acute life events (e.g., the end of a friendship) in the peer group (e.g., Rudolph & Hammen, 1999). Peer victimization research (for reviews, see Crick et al., 1999; Underwood, 2003) examines exposure to two specific types of stressful peer experiences, namely physical or overt aggression (i.e., efforts to harm through direct physical and verbal threats or assaults) and relational or social aggression (i.e., efforts to damage relationships, such as rumor-spreading, ignoring, and exclusion). Friendship research examines stressful experiences (e.g., conflict) specifically in the context of close, dyadic friendships. Finally, researchers have suggested that peer-related stress may emerge from entanglement in the stressful life circumstances of others (Gore, Aseltine, & Colton, 1993; Kessler & McLeod, 1984).

Coping and Other Responses to Stress—We also consider youths' responses to stress. Consistent with contemporary perspectives (Compas, Connor, Saltzman, Thomsen, & Wadsworth, 1999; Rudolph, Dennig, & Weisz, 1995), we distinguish between: (a) "voluntary" or "coping" responses, which involve intentional, goal-directed efforts to deal with stress, such as seeking support or purposely distracting oneself from a stressor, and (b) "involuntary" or "stress" responses, which involve spontaneous emotional or behavioral reactions to stress, such as ruminating about a stressor. According to this conceptualization, "responses to stress" are specific, circumscribed reactions to stressful events or circumstances, as distinguished from more global adjustment outcomes that may result from exposure to stress (e.g., emotional and behavioral problems).

Relationship Provisions

Last, we consider relationship provisions (Ladd & Kochenderfer, 1996). In particular, we focus on the emotional benefits that youth derive from their friendships and peer relationships, such as feelings of closeness, security, enjoyment, acceptance, validation, and satisfaction. It is important to note the distinction between relationship provisions and youths' behavioral style with peers, which was described previously. Behavioral style refers to structural aspects of peer group interaction (e.g. interacting in small versus large groups) and actual behavior enacted in the peer group (e.g., self-disclosure). Although it is possible for aspects of behavioral style (e.g., self-disclosure in the context of a dyadic interaction) to

lead to emotional benefits in the form of relationship provisions (e.g., feelings of closeness), the structure and behaviors encountered in the peer group are not synonymous with the emotional provisions received from peer relationships.

A Developmental Perspective

Throughout the review, we consider possible developmental trends in the type or magnitude of sex differences. We expect, in general, that sex differences in relationship processes will intensify across development. These age-related increases are multiply determined and likely driven by both biological and social forces. Evolutionary psychologists have shown that sex differences in many traits related to reproduction increase as individuals approach maturity, which is potentially adaptive in attracting mates (Geary, 1998). Moreover, pubertal timing and associated changes in hormone levels during adolescence are related to sex-typed attributes, including aggression and social dominance (Schaal, Tremblay, Soussignan, & Susman, 1996; Susman et al., 1987; for a review, see Geary, 1998), as well as emotional distress (Brooks-Gunn, Graber, & Paikoff, 1994; Susman, Dorn, & Chrousos, 1991). Social influences may have unique effects on sex-typed processes or may augment sex differences elicited by biological factors. According to the gender intensification theory (Hill & Lynch, 1983), the physical changes of puberty prompt socialization agents to increase pressure for sex-typed behavior.

To highlight this developmental perspective, in our review of research we carefully examine the extent to which sex differences in key relationship processes change with age. In our speculative model we consider how these developmental changes may affect sex differences in emotional and behavioral development. We also discuss the possibility that some of the links among peer relationship processes and developmental outcomes may change over time.

Review of Sex Differences

In the following sections, we review research regarding sex differences in behavioral and social-cognitive aspects of peer relationship style, exposure and responses to stress, and relationship provisions. Because of the large number of constructs considered, it was not feasible to do a completely comprehensive review of the literature. For example, we did not include unpublished studies with the assumption that published research generally would be of higher quality. However, we did conduct a very thorough and systematic review of the literature. We identified studies through extensive database searches of key terms related to the constructs of interest and through bootstrapping from the references in articles that we identified. Importantly, we did not only include studies in which the main goal was to examine sex differences in order to increase the likelihood that we would uncover studies for which sex differences were not found. In fact, we included all identified studies that provided data on one or more of the constructs of interest. Consequently, the review includes a large number of studies that varied in terms of research purpose, sample size, methodology, and publication outlet.

Tables 1 through 5 summarize the results of these studies. In these tables, we first include the reference, methodology, age group, and sample size. Including information about methodology and, especially, the age group studied was important because in our review we address whether the presence of sex differences varies as a function of how the construct was operationalized and/or the developmental stage. We included the sample sizes to provide information about whether the conclusions were based on small or larger samples. In some cases, we had to estimate the sample size for girls and boys because the breakdown for sex was not given or because the degrees of freedom from the significance test indicated

that some participants were missing for that particular analysis. We note in the table when the sample size was estimated.

We also include the results of significance tests and effect sizes for the sex differences. Although our review focuses strongly on the size of the effects, we report significance tests and take them into account in our review given the central role of these tests in interpreting results in empirical papers and other reviews. We also take into account cases in which the significance tests suggest somewhat different conclusions than do the effect sizes (e.g., a medium or large effect is not significant due to a small sample). The results of the significance tests are generally the results reported in the original article. For some comparisons, however, we needed to compute our own significance tests because the necessary information was not included in the article. In terms of effect sizes, we computed mean standardized difference effect sizes from information in the original papers if it was available. When the information was not available, we contacted the authors to request the information. We were able to compute effect sizes for over 85% of the effects (over 300 effects in total) listed in the tables. We note in the tables whether the effect sizes were computed based on means and standard deviations or *t* values comparing means, proportion scores, or point-biserial correlations. In our review, we interpret effects of about .2 as small, about .5 as medium, and about .8 as large (Cohen, 1988). We refer to effects approximately midway between .2 and .5 as small-to-medium and effects approximately midway between .5 and .8 as medium-to-large.

Sex Differences in Peer Relationship Styles

Behavioral Styles—Girls and boys interact with same-sex peers more frequently than opposite-sex peers (Bukowski, Gauze, Hoza, & Newcomb, 1993; Kovacs, Parker, & Hoffman, 1996; Maccoby, 1998; Maccoby & Jacklin, 1987; Martin & Fabes, 2001), and different relationship styles are formed within same-sex male versus female peer groups (Leaper, 1994; Maccoby, 1998). Table 1 summarizes the results of relevant studies regarding girls' and boys' behavioral styles with peers.

First, girls and boys differ in the structure of their peer interaction. Several observational studies have examined the *frequency* of group interactions among young children. This research has produced mixed results, with some studies finding that boys engage in more group interaction (Fabes, Martin, & Hanish, 2003) and some finding no sex difference (Benenson, 1993; Martin & Fabes, 2001). These mixed findings may have emerged because age effects were not taken into account. That is, Benenson and colleagues found no sex difference in the frequency of group interaction for four year olds but a large effect favoring boys for six year olds (Benenson, Apostoleris, & Parness, 1997). Consistent with these findings, studies examining the number of children in playgroups generally reveal larger playgroup sizes for boys than girls in middle childhood (Ladd, 1983, Lever, 1976, 1978). Interestingly, a study in which popularity also was examined found a very large effect for popular youth favoring boys but no significant difference for unpopular youth (Ladd, 1983). The effects for youth who were average in popularity and for youth in the other studies that did not account for popularity (Lever, 1976, 1978) were small to medium.

One might assume that because boys interact with same-sex peers in groups more frequently than do girls (at least by six years of age), girls interact in dyads more frequently than do boys. However, the findings regarding dyadic interaction are not that simple. Studies assessing the *frequency* of dyadic interaction among young children typically find that boys interact in dyads as frequently, or more frequently, than do girls (Benenson, 1993; Benenson et al., 1997; Fabes et al., 2003; Martin & Fabes, 2001). Importantly, though, Benenson and colleagues also studied the *duration* of dyadic interactions with the same partner, and found a large effect indicating that girls' dyadic interactions were longer than those of boys among

four and six year olds (Benenson et al., 1997). Although it is possible that girls begin to interact more frequently in dyads than boys at later developmental stages, studies have not examined the frequency and duration of dyadic interactions among older children or adolescents.

Another structural difference involves social network density. Studies with preschool children yield large effects indicating that boys have more integrated social networks than girls in that their friends or playmates are more likely to be friends or playmates with one another (Benenson, 1990, 1993). Interestingly, in one study of friendship patterns of youth in middle childhood and early adolescence at summer camp, Parker and Seal (1996) found a large effect for social network density favoring boys toward the end of youths' stay at camp but no differences at the beginning of camp. Such findings suggest that, over time, friends of boys, but not girls, are increasingly likely to become friends with one another.

Sex differences also exist in the *content* of peer interaction (Fagot, 1994; Leaper, 1994; Maccoby, 1998; Rubin, Bukowski, & Parker, 1998). Some evidence suggests that girls are more prosocial than are boys. Studies consistently yield medium effects indicating that girls respond in a more prosocial manner to hypothetical conflict situations than do boys in middle childhood (Chung & Asher, 1996; Hopmeyer & Asher, 1997; Rose & Asher, 1999). Peers also report that girls are more prosocial than are boys during middle childhood and early adolescence, with effect sizes that range from small-to-medium to large (Coie, Dodge, & Coppotelli, 1982; Crick & Grotpeter, 1995; Rys & Bear, 1997). Findings regarding teacher reports of youths' prosocial behavior during the kindergarten and elementary school years also consistently yield small-to-medium or medium effects favoring girls, although this effect sometimes reaches significance (Ladd & Profilet, 1996) and sometimes does not (Rys & Bear, 1997). In addition, studies examining the degree to which youth report being the recipient of prosocial acts typically yield medium-to-large or large significant effects favoring girls in adolescence (Paquette & Underwood, 1999; Storch, Brassard, & Masia-Warner, 2003) and smaller significant effects favoring girls in middle childhood (Phelps, 2001; Sandstrom & Cillessen, 2003; Storch, Nock, Masia-Warner, & Barlas, 2003).

Other studies related to prosocial behavior have produced more mixed results. With regard to observational studies assessing collaborative work and play, the results are particularly mixed for studies with young children (DiPietro, 1981; Leaper, 1991, 3–6 year old sample; Leaper, Tenenbaum, & Shaffer, 1999). With middle childhood and adolescent youth, however, results favor girls, with effects that are close to medium in size or larger (Hops, Alpert, & Davis, 1997; Leaper, 1991, 5–9 year old sample; Strough & Berg, 2000). Such findings suggest that these sex differences become more consistent with age. Mixed findings also emerge for youths' reports of helping behavior in their friendships in middle childhood and adolescence. However, closer inspection reveals that the studies finding no sex differences include either the youngest middle childhood youth in this group of studies (Patterson, Kupersmidt, & Griesler, 1990) or the smallest samples (Furman & Buhmester, 1985; Sharabany, Gershoni, & Hoffman, 1981). Effects in the studies in which differences do emerge involve large samples and produce effects ranging from small to medium-to-large (Bukowski, Hoza, & Boivin, 1994; Lempers & Clark-Lempers, 1993; Parker & Asher, 1993; Rose & Asher, 2004).

Consistent evidence also emerges for a sex difference in social conversation and self-disclosure. Observational studies of middle childhood youth find that girls spend more time in social conversation than boys (Ladd, 1983; Moller, Hymel, & Rubin, 1992). In one of these studies (Ladd, 1983), the difference did not reach significance for unpopular children due to a small sample size; however, the effect was large and did favor girls. Self-report studies with youth in the sixth grade and older also consistently find medium and large

significant effects indicating that girls report more self-disclosure in friendships than do boys (Burhmester & Furman, 1987; Camerena, Sarigiani, & Peterson, 1990; Crockett, Losoff, & Peterson, 1984; Furman & Buhmester, 1985; Lempers & Clark-Lempers, 1993; Rose, 2002; Zarbatany, McDougal, & Hymel, 2000). Self-report studies of middle childhood youth are less consistent, with some studies yielding significant effects favoring girls (Parker & Asher, 1993; Rose, 2002) and others yielding no sex difference (Buhrmester & Furman, 1987; Patterson et al., 1990; Zarbatany et al., 2000). When observational methods are employed, girls are also generally found to self disclose more than boys (Lansford & Parker, 1999; McNelles & Connolly, 1999).

In terms of boys' peer groups, studies examining rough-and-tumble play with youth ranging from preschool to middle childhood generally produce large effect sizes and favor boys (DiPietro, 1981; Humphreys & Smith, 1987; Ladd, 1983; Martin & Fabes, 2001; Moller et al., 1992). In the few cases in which significant effects did not emerge the samples were very small (15 or less, Humphreys & Smith, 1987, 9 year old sample; Ladd, 1983, popular and average samples), and available effect sizes for one of these studies were nevertheless large and favored boys. Studies of youth in fourth to sixth grade also consistently reveal small-to-medium to large effect sizes indicating that boys are more likely than girls to engage in organized play, such as sports and games with rules (Lever, 1978; Moller et al., 1992, 4th grade sample; Zarbatany, et al., 2000). Findings are less consistent for younger youth (Moller et al., 1992, 2nd grade sample; Pellegrini, Blatchford, Kato, & Baines, 2004) suggesting that this sex difference emerges more consistently with age. This difference also may depend on the type of game considered. For example, research suggests that boys play ball games more than do girls but do not play chasing games more than girls (although these differences varied as a function of country, time of year, and age; Pellegrini et al., 2004). Perhaps because boys have greater opportunities to compare strength and skill during rough-and-tumble play and competitive games, boys also develop better-defined dominance hierarchies than girls (Omark, Omark, & Edelman, 1975; Savin-Williams, 1979), meaning there is greater shared understanding about which group members hold the most social power.

To summarize, there is sufficient evidence to conclude that there are sex differences in the structure and content of youths' behavior with peers. Moreover, evidence suggests that a number of these sex differences strengthen with age. By six years of age, a sex difference favoring boys emerges in the tendency to play in large groups. Boys ranging from preschool to adolescence also are more likely to have dense social networks and well-defined dominance hierarchies. In addition, boys are more likely than girls to engage in rough-and-tumble play in preschool and middle childhood and, by the middle childhood years, to engage in certain types of sports and games more than girls. Although girls are commonly thought to spend more time in dyadic interactions than boys, evidence with young children suggests that they are not necessarily engaging more *frequently* than boys in dyadic interactions but that they are having more *extended* dyadic interactions than boys. These extended interactions may provide an opportunity for certain types of interaction, perhaps helping to account for the consistent finding that, at least by adolescence, girls report greater self-disclosure in their friendships than do boys. Girls' relationships also may be characterized by prosocial behavior to a greater degree than boys, and, for some indexes of prosocial behavior, the sex difference appears to increase with age. Overall, it seems that some aspects of sex-linked behavioral styles are in place during early childhood, whereas others emerge or become more consistent during middle childhood or adolescence.

Social-Cognitive Styles—Table 2 summarizes the results of research on sex differences in social-cognitive aspects of relationship style, or relational orientation. Although it is widely assumed that relationships are more central to females' than males' sense of self,

little research specifically tests this assumption in youth. In fact, we know relatively little about when young children's self construals become sophisticated enough to include elaborate information about the role of others (see Martin & Ruble, 1997). However, one study of middle childhood and adolescent youth, did find that girls were more likely than boys to mention significant others in their self-descriptions (McGuire & McGuire, 1982). These significant others could include, but were not limited to, same-sex friends. The effect in this study was small, but the study did not separately examine the sex difference for children and adolescents. In another study focusing specifically on peer relations, a large effect was found indicating that early adolescent girls reported caring more than boys about having dyadic friendships (Benenson & Benarroch, 1998). Interestingly, though, girls were not more likely than boys to report caring about being popular with peers. In fact, a small-to-medium effect favored boys, but did not reach significance due to a small sample size.

Other research in the peer domain indicates a predominance of connection-oriented goals among girls. Compared to adolescent boys, adolescent girls scored higher on a composite goal score that represented the degree to which they valued social goals (e.g., having friends, helping others) more than nonsocial goals (e.g., getting good grades, making money; Ford, 1982). In middle childhood, studies indicate that girls also are more likely than boys to endorse goals that involve mutual participation (Strough & Berg, 2000), friendliness (Murphy & Eisenberg, 2002), and supportiveness (Rose & Asher, 2004). One study of early adolescents indicated that girls were more likely than boys to endorse intimacy and nurturance goals (Jarvinen & Nicholls, 1996). These studies yielded medium to large effects. Although the effects were smaller and not always statistically significant, there also is some evidence suggesting that girls in middle childhood are more likely than boys to adopt relationship maintaining goals (Chung & Asher, 1996; Rose & Asher, 1999) and goals of resolving peer problems (Rose & Asher, 2004). Because the research on specific social goals focuses primarily on youth in middle childhood, there is little information regarding the developmental progression of these goals for girls and boys.

Notably, girls' focus on relationships may contribute to worries about social approval, abandonment, and the status of their friendships. For example, studies of adolescents reveal medium to large effects indicating that girls are more likely than boys to desire closeness and dependency, and to worry about abandonment, loneliness, hurting others, and loss of relationships as a result of expressing anger (Blatt et al., 1993; Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001; Kuperminc, Blatt, & Leadbeater, 1997). In addition, compared to boys, studies yield small to medium significant effects indicating that girls in middle childhood and adolescence exhibit greater concerns about peer evaluation (LaGreca, Dandes, Wick, Shaw, & Stone, 1988; LaGreca & Lopez, 1998; LaGreca & Stone, 1993; Liu & Kaplan, 1999; Rudolph & Conley, 2005; Storch et al., 2003; Storch, Zelman, Sweeney, Danner, & Dove, 2002). No clear developmental pattern is apparent in the strength of these effects. Recent research with late childhood and early adolescent youth also examines whether girls feel more jealousy than boys over their friends' relationships with others. The findings are not completely consistent, with sex differences emerging in some cases but not others (Parker, Low, Walker, & Gamm, 2005; Roth & Parker, 2001). However, the effect sizes tend to favor girls, and may be especially large when classmates' reports are used as compared to when self report or friend reports are used (Parker et al., 2005).

Also reflecting girls' tendency toward interpersonal sensitivity, girls may show more empathy, or sensitivity to distress in others, than do boys. However, whether a sex difference emerges depends on how empathy is operationalized. Studies using self-report questionnaires that assess the degree to which children and adolescents understand and vicariously experience others' emotions consistently yield medium to large effects indicating greater empathy among girls than boys (Bryant, 1982; Ford, 1982; Hanson &

Mullis, 1985; Olweus & Endresen, 1998; Roberts & Strayer, 1996; Tucker, Updegraff, McHale, & Crouter, 1999; Van Tilburg, Unterberg, & Vingerhoets, 2002). Notably, the sex difference is stronger for older youth. Other studies including youth ranging from early elementary school age to adolescence yield small to medium significant effects indicating that girls are more likely than boys to report sadness, hurt, or sympathy in response to the distress of a story protagonist (Holmgren, Eisenberg, & Fabes, 1998), an actual peer (Menesini et al., 1997), or others in general (Gore et al., 1993). No clear developmental differences emerge in the strength of these effects. In contrast, an examination of significance tests and effect sizes does not produce consistent evidence suggesting that girls are more likely than boys to report experiencing the *same* emotion portrayed by hypothetical protagonists (e.g., feeling angry when the protagonist is angry; Dekovic & Gerris, 1994; Feshbach & Feshbach, 1969; Feshbach & Roe, 1968; Hughes, Tingle, & Sawin, 1981; Isannotti, 1986; Roberts & Strayer, 1996). Also, a sex difference in empathy among children and early adolescents was not found in one study employing teacher and friend reports (Roberts & Strayer, 1996). Importantly, though, the accuracy of other-reported empathy is not clear given that empathy is experienced internally.

In contrast to girls' connection-oriented goals, boys tend to endorse more agentic and status-oriented goal orientations. Most of this research focuses on middle childhood. Studies tend to yield small to medium significant effects indicating that, compared to girls, boys in middle childhood are more likely to adopt goals of promoting their self-interest (Rose & Asher, 1999), presenting themselves in a positive light (Rose & Asher, 2004), maintaining their privacy (Rose & Asher, 2004), controlling social situations (Chung & Asher, 1996), and even seeking revenge (Rose & Asher, 1999). One study of middle childhood youth did not find a significant sex difference for control goals but did find a small effect favoring boys (Strough & Berg, 2000). Two other studies of adolescents indicate that boys also are more likely than girls to adopt hostile goals (Slaby & Guerra, 1988) and dominance goals (Jarvinen & Nicholls, 1996). Developmental trends are difficult to evaluate given that most of this research focuses on middle childhood; however, it is worth noting that the largest effect (a medium-to-large effect) found across these studies emerged in one of the studies of adolescents (Jarvinen & Nicholls, 1996).

Taken together, these studies indicate that girls' relational orientation style is characterized by stronger interpersonal engagement than that of boys. Specifically, girls tend to care more about dyadic friendships, to more strongly adopt connection-oriented goals in peer contexts, and to feel more empathy for others, whereas boys focus more on agentic goals, including their own dominance in the peer group. Perhaps as a consequence of their interpersonal engagement, girls demonstrate heightened concerns about the status of relationships and about peer evaluations. Unfortunately, the developmental progression of sex differences in these constructs is challenging to evaluate because studies focus either primarily on middle childhood youth (i.e., studies of goal orientation) or adolescents (i.e., studies of interpersonal vulnerabilities such as dependency and worries about abandonment) or because there are few studies on a particular construct (i.e., studies of friendship jealousy). Nevertheless, developmental differences were found for the one construct for which they could be evaluated. Specifically, self-reports of empathy did indicate stronger differences among older than younger youth. Additional research is needed to test whether there is a similar divergence between the sexes with age for the other aspects of social-cognitive style.

Moreover, additional research is needed to more fully understand the interpersonal nature of boys' social-cognitive styles. Research conducted with adults raises the possibility that males may value being a part of a larger group, within which status-oriented or competitive goals may be pursued (Gabriel & Gardner, 1999). The same idea may apply to younger boys and adolescent males. For example, boys may be especially likely to adopt goals of

cooperating with group members (e.g., members of a sports team) in order to accomplish feats (e.g., win games) that would enhance the group's dominance (see also Geary & Flinn, 2002).

Sex Differences in Stress and Coping Processes

Exposure to Peer Stress—Table 3 summarizes the results of research on sex differences in exposure to peer-related stress. One line of research examines sex differences in exposure to stressful interpersonal life events and circumstances, with a specific focus on stress in the peer group. These studies generally indicate that girls report more stress with peers than do boys (Gore et al., 1993; Greene, 1988; Larson & Ham, 1993; Siddique & D'Arcy, 1984). However, a closer examination of the pattern of sex differences in stressful events and circumstances suggests several clarifications that are needed in this area of research. First, this set of studies includes assessments of varying types and ranges of events. For example, some studies focus more specifically on stressful events related to friendships or romantic relationships (e.g., Gore et al., 1993; Larson & Ham, 1993), whereas others include a wide variety of stressors (e.g., Rudolph & Hammen, 1999; Wagner & Compas, 1990). Thus, it is unclear whether the sex differences are driven by greater exposure to certain types of peer stressors in girls than in boys. Second, sex differences in exposure to peer stress may differ across development and as a function of whether the stressor is self-generated or dependent (i.e., an event to which the youth contributed, such as an argument with a friend) versus independent (i.e., an event outside of one's control, such as a friend moving away). In one study (Rudolph & Hammen, 1999), girls were not found to experience greater stress than boys during childhood. However, during adolescence, a medium effect favoring girls was found for dependent peer stress (this effect was not significant due to small sample sizes). An intensification of the sex difference in peer stress was not found for another study examining both late childhood/early adolescent youth and youth in later adolescence (Wagner & Compas, 1990). However, this may be because the youngest youth in this study were older than those in the previously described study and/or because the distinction between independent and dependent stress was not made.

Other research focuses on more specific aspects of stressful peer experiences. Research on peer victimization examines exposure to direct physical and verbal assaults and exposure to indirect forms of social aggression. Studies with youth ranging from preschool to adolescence generally find significant effects ranging from small to medium-to-large indicating that boys are more likely than girls to be victims of overt or direct physical and/or verbal aggression or harassment by peers (e.g., Crick & Bigbee, 1998, Crick, Casas, & Ku, 1999; Crick & Grotpeter, 1996; Grills & Ollendick, 2002; Paquette & Underwood, 1999; Phelps, 2001; Rudolph, 2002; Storch et al., 2003; Storch & Esposito, 2003). Although this sex difference does not always emerge (Baldry & Winkel, 2003; Galen & Underwood, 1997; Perry, Kusel, & Perry, 1988; Sandstrom & Cillessen, 2003; Storch et al., 2002), the majority of the effects do favor boys. There are no obvious developmental patterns or other aspects of the studies (e.g., methodology) that easily explain the size of the effects.

Studies of youth ranging from preschool through adolescence reveal less consistent findings regarding sex differences in relational or social victimization (see Underwood, 2003). Although some studies suggest that relational/social victimization is more common among girls than boys (e.g., Crick & Bigbee, 1998; Crick et al., 1999; Schafer, Werner, & Crick, 2002), many studies indicate no sex difference (e.g., Baldry & Winkel, 2003; Crick & Grotpeter, 1996; Prinstein, Boergers, & Vernberg, 2001). Sex differences in relational/social victimization may vary depending on age (e.g., Galen & Underwood, 1997), methodology or informant (e.g., Paquette & Underwood, 1999; Schafer et al., 2002), or social characteristics

(e.g., sociometric status; Sandstrom & Cillessen, 2003). However, to date, no clear patterns have emerged.

Another set of studies examines stress specifically in the context of dyadic friendships. Studies of middle childhood and adolescent youth generally are consistent in indicating that girls and boys report similar levels of conflict in their friendships (Bukowski et al., 1994; Furman & Buhrmester, 1985; Lempers & Clark-Lempers, 1993; Parker & Asher, 1993; Rose & Asher, 1999, 2004) although at least one study favored boys (Patterson et al., 1990) and one favored girls (Forteza, Snyder, Palos, & Tapia, 1996). Research with early to middle adolescents generally finds small or small-to-medium effects indicating that girls report higher levels of other types of friendship stress, such as having someone stop being their friend or having a friend stop talking to them, having problems with a friend, having a friend tell their secrets, and not having as many friends as they want (Forteza et al., 1996; Rudolph, 2002). Such findings are consistent with other research indicating that girls' friendships are more fragile in that they are shorter in duration compared to boys' friendships (Benenson & Christakos, 2003). Although serious victimization is less common in dyadic friendships, one study with middle childhood youth found a small-to-medium effect indicating that physical victimization in friendships is most often experienced by boys, and a small effect indicating that relational victimization in friendships is most often experienced by girls (Crick & Nelson, 2002).

Another type of peer stress may emerge from entanglement in the stressful life circumstances of social network members (Kessler & McLeod, 1984). Research indicates that girls report more stressful events in the lives of their network members than do boys (Wagner & Compas, 1990). This effect intensifies with age, with a medium-to-large effect emerging for youth in late childhood/early adolescence and a large effect emerging for youth in later adolescence. More specifically, research reveals a small-to-medium effect indicating that adolescent girls report more stressful events in the lives of peers, in particular (Gore et al., 1993).

In sum, research suggests that boys encounter more peer stress than girls in the form of overt verbal or physical victimization. In contrast, girls encounter more peer stress than boys in the form of friendship stress (with the exception of self-reported conflict with their best friend) and social network stress (i.e., vicarious experience of peers' stress). In addition, the sex difference in the vicarious experience of others' stress may increase with age. It is less clear whether there is a sex difference in relational/social victimization. When different types of stressful events are combined, some research suggests that girls may be exposed to more stress overall in the peer group than are boys, and this sex difference may become intensified in adolescence (particularly for dependent stress), although more research is needed that includes comprehensive assessments of multiple types of peer stress within single studies.

Coping and Other Responses to Stress—Table 4 summarizes the results of research on sex differences in how youth cope with, or respond to, stress. We emphasize studies that focus on responses to peer stress. However, because of the scarcity of such studies, we include evidence from research regarding responses to stress more generally. As a reminder, we distinguish between voluntary coping responses versus involuntary responses to stress.

Studies support several sex differences in voluntary coping responses. Most consistently, findings suggest that girls seek support in response to stress more than do boys. In addition, there is some evidence that this sex difference intensifies with age. For youth in the second grade and younger, results are mixed (Bernzweig, Eisenberg, & Fabes, 1993; Eisenberg, Shepard, Fabes, Murphy, & Guthrie, 1998, K-2nd grade sample; Wertlieb, Weigel, &

Feldman, 1987, 7–8 year old sample). However, for older children and adolescents, the vast majority of studies indicate that girls are more likely than boys to talk about problems and to enlist emotional and instrumental support in response to stress in general (Bird & Harris, 1990; Brodzinsky et al., 1992; Chapman & Mullis, 1999; Ebata & Moos, 1994; Gomez, Holmberg, Bounds, Fullarton, & Gomez, 1999; Halstead, Johnson, & Cunningham, 1993; Hastings, Anderson, & Kelley, 1996; Hunter & Boyle, 2004; Kliewer, Fearnow, & Miller, 1996; Kurdek, 1987; Patterson & McCubbin, 1987; Phelps & Jarvis, 1994; Plancherel & Bolognini, 1995; Wertlieb et al., 1987) and in response to peer stress in particular (Bowker, Bukowski, Hymel, & Sippola, 2000; Casey & Dubow, 1992; Hunter & Boyle, 2004; Phelps, 2001; Rose & Asher, 2004). The effects for these studies generally range from small-to-medium to large. Although the developmental trends were not completely consistent, when large effects emerged, they emerged in studies involving adolescents as opposed to children (Bird & Harris, 1990; Chapman & Mullis, 1999; Hasting et al., 1996; Patterson & McCubbin, 1987).

Another voluntary coping response involves distracting oneself or engaging in diversions. Boys are generally thought to employ such coping strategies more than girls, and studies that find this difference are heavily cited (e.g., Copeland & Hess, 1995; Kurdek, 1987). Nevertheless, a more extensive review indicates that most studies of middle childhood and adolescent youth find no sex difference for engaging in distractions and diversions (e.g., Bernzweig et al., 1993; Bird & Harris, 1990; Kliewer et al., 1996; Patterson & McCubbin, 1987; Schwartz & Koenig, 1996). Moreover, some studies find that girls use distraction and diversion more than boys (e.g., Chapman & Mullis, 1999; Rose & Asher, 2004). However, studies of adolescents generally do indicate small to medium effects favoring boys for using humor to cope with stress, although not all of these studies produced significant results (Chapman & Mullis, 1999; Kurdek, 1987; Patterson & McCubbin, 1987; Phelps & Jarvis, 1994; Plancherel & Bolognini, 1995; c.f., Copeland & Hess, 1995).

With regard to involuntary stress responses, one of the most widely studied constructs is rumination. Originally, rumination was defined as dwelling on one's own negative affect (Nolen-Hoeksema, Morrrow, & Fredrickson, 1993), and most research in youth uses this definition. However, because of our interest in responses to stress, we focus here on rumination about external stressors (i.e., dwelling on problems) rather than about internal states. Interestingly, research examining rumination about problems, including peer problems, in middle childhood (Broderick, 1998) and family problems in adolescence (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000) finds small-to-medium to medium effects favoring girls that are generally significant. In contrast, a small nonsignificant effect emerged for adolescents' rumination about economic problems (Connor-Smith et al., 2000).

Additional sex differences have been examined in other responses to stress, but some ambiguity arises regarding whether these responses are voluntary or involuntary. For instance, studies examining emotional expression in adolescence are quite consistent in favoring girls, as reflected in medium to large effects (Connor-Smith et al., 2000; Copeland & Hess, 1995; Ebata & Moos, 1994; Phelps & Jarvis, 1994; Zeman & Shipman, 1997). In addition, boys are often assumed to be more likely than girls to engage in behavioral avoidance and withdrawal (i.e., to avoid problems by physically removing themselves from the situation) and in cognitive avoidance and denial (i.e., to not think about the problem). These sex differences are sometimes found in middle childhood and adolescent samples in response to stress in general (Chapman & Mullis, 1999; Copeland & Hess, 1995; Halstead et al., 1993; Herman & McHale, 1993) and peer stress in particular (Causey & Dubow, 1992; Rose & Asher, 2004). However, these effects tend to be small, and it is more common to find no sex difference for both general stress (Bernzweig et al., 1993; Brodzinsky et al.,

1992; Ebata & Moos, 1994; Halstead et al., 1993; Hastings et al., 1996; Herman & McHale, 1993; Kavsek & Seiffge-Krenke, 1996; Kliewer et al., 1996; Lopez & Little, 1996; Patterson & McCubbin, 1987; Phelps & Jarvis, 1994; Seiffge-Krenke & Stemmler, 2002) and for peer stress (Bowker et al., 2002; Hunter & Boyle, 2004; Whitesell & Harter, 1996). In some cases, the sex difference even favors girls (Connor-Smith et al., 2000; Griffith, Dubow, & Ippolito, 2000).

To summarize, evidence suggests sex differences in some types of responses to stress but not others. The strongest evidence supports the greater likelihood of support seeking, emotional expression, and rumination among girls than boys. Although boys are often thought to use distraction and diversion more than girls to deal with stressors, evidence in support of this sex difference is weak at best. Nevertheless, there is some support for the idea that boys are more likely than girls to use humor in response to stress. In addition, some evidence suggests that the sex differences for support seeking are stronger for adolescents than children. Because studies examining emotional expression and the use of humor focused primarily on adolescents, less is known about developmental differences.

Sex Differences in Peer Relationship Provisions

Table 5 summarizes research on sex differences in the provisions that youth receive in their relationships, specifically friendships. Studies of middle childhood and adolescent youth typically reveal significant effects ranging from small to medium-to-large indicating that girls are more likely than boys to receive several types of provisions in their friendships. These provisions include higher levels of closeness (Bukowski et al., 1994; Camerena et al., 1990), affection (Furman & Buhrmester, 1985; Lempers & Clark-Lempers, 1993; Patterson et al., 1990), nurturance (Lempers & Clark-Lempers, 1993), trust (Sharabany et al., 1981), security (Bukowski et al., 1994), validation (Parker & Asher, 1993), acceptance (Crockett et al., 1984), and enhancement of worth (Furman & Buhrmester, 1985). The smallest effects tend to emerge in studies involving middle childhood youth (Bukowski et al., 1994; Parker & Asher, 1993) and the largest effects emerge in studies that included adolescents (Camerena et al., 1990; Lempers & Clark-Lempers, 1993).

Interestingly, though, sex differences generally do not emerge for friendship satisfaction (Crockett et al., 1984; Furman & Buhrmester, 1985; Parker & Asher, 1993; Patterson et al., 1990; c.f., Lempers & Clark-Lempers, 1993). One possibility is that the relationship provisions that contribute to boys' satisfaction are understudied. For example, studies of young children indicate greater enjoyment (Benenson, Morganstein, & Roy, 1998) and more positive affect (Martin & Fabes, 2001) in boys' groups than in girls' groups. It may be that, even among older youth, boys are especially successful at generating fun and excitement within their friendships, which contributes to overall satisfaction. Also, these studies focused on relationship provisions received in the context of dyadic friendships, and it is possible that boys fare especially well in terms of relationship provisions received in the context of larger peer group interaction.

Implications of Sex Differences in Relationship Processes: A Speculative Model

This review reveals strong and consistent sex differences in a variety of peer relationship processes. What are the implications of these sex differences for the long-term development of girls and boys? To answer this question, we propose a speculative, integrative peer-socialization model (see Figure 1). We propose that exposure to same-sex peers contributes to the development of sex-typed peer relationship processes, including peer relationships styles, stress and coping processes, and relationship provisions. Sex differences in these peer

relationship processes, in turn, are hypothesized to influence girls' and boys' emotional and behavioral development. In essence, the model proposes that sex differences in emotional and behavioral adjustment can be partially accounted for by sex differences in peer relationship processes, which are fostered at least in part by exposure to same-sex peers.

This model can serve as an organizational framework for integrating the diverse array of findings regarding sex differences in different domains of relationship processes. We emphasize that many aspects of this model are speculative, and have not yet received substantial empirical support. Yet, we believe that it is time to progress beyond summaries of sex differences in separate areas of relationship processes to consider the implications of sex differences across multiple domains for the development of girls and boys. We hope that this model will serve to stimulate future efforts to examine links among sex differences in these various domains. As an example, following the model description, we present preliminary research from our own laboratories that substantiate components of the model. Finally, we suggest future research directions that would address important understudied aspects of the model.

This conceptualization extends previous work that summarizes and evaluates specific components of the model. Previous important commentaries on how sex differences in relationship processes influence psychological and physical health (Cross & Madson, 1997; Helgeson, 1994; Nolen-Hoeksema & Girgus, 1994) focus more on the consequences of sex differences in social-cognitive or stress-related processes, and less on the *development* of these sex differences. In a complementary approach, developmental research provides comprehensive descriptions of sex differences in relationship styles with peers (see Maccoby, 1990, 1998; Rubin et al., 1998), but focuses less on the implications of these differences for emotional and behavioral development. Integrating these diverse areas of theory and research provides a unique perspective on how the peer group may influence the developmental progression of sex-linked adjustment. Moreover, this peer-socialization model expands on prior conceptualizations of gender socialization (Ruble & Martin, 1998) that focus largely on adult socialization agents and broader cultural influences, such as the media.

As discussed earlier, integrating across different theoretical perspectives also extends previous work by highlighting the potential trade-offs of certain sex-linked attributes that often have been overlooked. A major premise of the model is that sex-linked relationship processes lead to important trade-offs in the development of girls and boys. In particular, we propose that relationship processes characteristic of girls place them at risk for developing emotional problems, such as low self-esteem, anxiety, and depression, but also inhibit antisocial behavior. In contrast, relationship processes characteristic of boys enhance their likelihood of developing behavioral problems, such as aggression and other antisocial conduct, but also protect them against developing emotional problems.

The Role of Peer Socialization within the Broader Context of Other Socializing and Biological Influences

Our peer-socialization model proposes that exposure to same-sex peers elicits and strengthens sex-linked relationship processes, which, in turn, contribute to the development of sex-linked adjustment outcomes. In considering peer-socialization models, the question has been raised regarding whether all youth are equally effected by peer socialization or whether some youth are exposed to, and/or effected by, peer socialization more than others (Harris, 1995, Maccoby, 1988, 1998). Although early evidence did not indicate stable individual differences in the degree to which particular youth were immersed in same-sex peer groups, more recent research indicates that there are stable individual differences in the tendency for youth to interact with same-sex peers, at least in early childhood (Martin &

Fabes, 2001). As a result, some children are exposed to same-sex peers more than others, and presumably are socialized most strongly to adopt sex-linked characteristics.

Despite the theoretical importance of peer socialization (Harris, 1995), research in this area is surprisingly limited. However, important recent research by Martin and Fabes (2001) does suggest that the degree to which youth are exposed to same-sex peers contributes to how much sex-typed behavior they exhibit. Specifically, for preschool and kindergarten children, spending time with same-sex peers was found to predict increased sex-typed behavior (e.g., playing with dolls for girls and trucks for boys) over a six-month period. Other research with young children (Fagot, 1977; Fagot & Hagan, 1985; Lamb & Roopnarine, 1979) and adolescents (Hibbard & Buhrmester, 1998) indicates that youth respond most positively to peers who display sex-typed behavior. Although these latter studies do not speak directly to whether more exposure to same-sex peers predicts increasingly sex-typed behavior, the data do provide additional evidence for the role of peers as socializing agents.

In regard to our model, the implication of the Martin and Fabes (2001) study is that youth who are exposed the most to same-sex peers should be most likely to exhibit sex-linked relationship processes, and, therefore, most at risk for developing sex-linked adjustment problems. Accordingly, knowing the degree to which individual girls or boys are exposed to same-sex peers and exhibit sex-linked relationship processes should be helpful for understanding individual differences in adjustment outcomes within girls or within boys. In addition, it is also likely that individual differences among children, such as differences in temperament or personality variables, such as gender role orientation, play a role. These differences could influence the degree to which children are exposed to same-sex peers (see Scarr & McCartney, 1983, for a discussion of “niche-picking”) and/or the impact that same-sex peers have on children’s behavior and adjustment (for an example, see Fabes, Shepard, Guthrie, & Martin, 1997).

Of particular interest for our purposes, however, is the utility of the model for explaining the development of average or mean-level sex differences in adjustment outcomes. Because sex segregation is so strong, the vast majority of children are exposed to same-sex peers far more than opposite-sex peers during early to middle childhood. As a result, over time, socialization by same-sex peers should contribute to mean-level sex differences in relationship processes, which, in turn, are proposed to contribute to mean-level sex differences in adjustment outcomes.

Even though the primary purpose of our speculative model is to better understand mean-level sex differences in relationship processes and adjustment outcomes, it also is important to consider youth who show sex-atypical characteristics. For example, what about the boy who displays a peer relationship style more typical of girls? We propose that the adjustment outcomes for this boy may not be identical to those of a girl who displays the same relationship style. In other words, we propose that the links between particular relationship processes and later adjustment outcomes may differ for boys and girls.

Although we argue for the importance of considering peers as socializing agents, we acknowledge that there are likely to be multiple developmental pathways to sex differences in adjustment. Comprehensive reviews discuss the roles of evolutionary forces (Buss, 1996; Geary, 1998), social roles (Eagly & Wood, 1999), parent socialization (Higgins, 1991; Keenan & Shaw, 1997; Zahn-Waxler, Cole, & Barrett, 1991), school contexts (Eccles et al., 1993), personality style (Nolen-Hoeksema & Girgus, 1994), hormonal and body image changes (Brooks-Gunn et al., 1994; Susman et al., 1991), and sexual and social challenges (Nolen-Hoeksema & Girgus, 1994). We focus on the role of peers, but a number of other perspectives can be viewed as consistent with our framework.

Consider the role of other socialization figures. The shifting significance of different relationship partners should influence the relative impact of peer socialization processes at different developmental stages. In early childhood, the parent-child relationship is of primary importance. Thus, parenting practices, as well as practices engaged in by other adult caregivers (e.g., day-care providers, teachers), may play a critical role in the emergence of sex-typed characteristics during this stage.

As the salience of peer relationships increases in middle childhood (Rubin et al., 1998), the processes described in our peer-socialization model should flourish. Importantly, peers are likely to socialize relationship styles in ways that are not redundant with the socialization influences of adults (Harris, 1995; Maccoby, 1990). Some socializing behaviors that elicit sex-typed relationship styles are more appropriate in the context of peer relationships than asymmetrical adult-child relationships. For example, although mutual encouragement of self-disclosure is appropriate in peer relationships, parents are likely to limit personal disclosure to their children. Likewise, competition, such as that common among boys, is more appropriate among peers than between youth and adults. Peers also may socialize sex-typed behavior in ways parents do not. Even children of parents who strive to treat them in gender-neutral ways are likely to be immersed in a sex-segregated, sex-typed peer culture (Harris, 1995). Perhaps the increased significance of same-sex peers in middle childhood strongly activates links in the model, which helps to explain, in part, increases in sex differences in adjustment at adolescence.

Despite the likely distinct contributions of adult and same-sex peer socialization influences, sex-typed peer socialization also may be influenced by adult socialization. In fact, sex-typed peer relationship styles may have their origins in adult gender socialization. Although not all studies indicate that parents rear boys and girls differently (see Lytton & Romney, 1991), when differences emerge, parents tend to encourage empathy, self-disclosure, and physical proximity among girls, and independence and physical competence among boys (see Block, 1983; Ruble & Martin, 1998; Zahn-Waxler, 2000; Zahn-Waxler et al., 1991). These styles, developed in the context of parent socialization, may be further socialized and reinforced by peers due to the socialization cues that children detect from adults. That is, same-sex peers may continue to socialize their peers in ways that are consistent with how they themselves are socialized by adults, thereby strengthening any pre-existing tendencies.

Notably, the processes described in the model, which are tied to same-sex peer groups, may weaken in later adolescence and early adulthood, when opposite-sex platonic and romantic relationships assume increasing importance for many individuals. As individuals spend more time with opposite-sex peers, they may adopt some aspects of relationship style more typical of the other sex (e.g., adolescent boys and men having intimate discussions with their female partners). However, sex differences in many relationship processes and adjustment outcomes are still expected among older adolescents and adults for several reasons. Some relationship processes may be so strongly consolidated by late adolescence that they are no longer effected by changes in peer reinforcement. In addition, some adjustment problems that originally stemmed from peer relationship processes may progress along on a self-perpetuating course. For example, behavioral problems among boys that were originally sparked by peer socialization may follow a developmental trajectory toward more severe problems that are no longer tied only to the peer context.

Last, although we have been focusing on the role of same-sex peers and other relationship partners as socialization agents, our model also can be viewed as consistent with biological models of sex differences. Consider, for example, the idea that sex-linked behavioral responses to stress stem from sex differences in hormonal reactions to stress (Taylor et al., 2000; see also Geary & Flinn, 2002). Researchers suggest that stress may induce an

affiliative ("tend and befriend") response in females due to the release of oxytocin, but an aggressive ("fight or flight") response in males due to the release of testosterone. We view this perspective as compatible with our peer-socialization model. Biological and psychosocial forces likely act in concert to guide sex-typed stress responses. Moreover, there is growing evidence that social experiences may, in fact, influence the development of biological systems underlying behavior and emotion (Bruer & Greenough, 2001; Gold, Goodwin, & Chrousos, 1988).

The Role of Sex Differences in Peer Relationship Processes in Girls' and Boys' Emotional and Behavioral Development: A Detailed Description of the Model

Based on our summary of sex differences in behavioral and social-cognitive styles in relationships, stress and coping processes, and relationship provisions, we consider how these relationship processes might be linked with sex differences in youths' emotional and behavioral development. In formulating predictions about emotional and behavioral development, we adopt the conventional distinction between emotional distress/internalizing symptoms versus behavioral problems/externalizing symptoms. Although considerable co-occurrence is present between these types of difficulties, empirical research consistently supports the validity of this broad distinction when characterizing adjustment in youth (e.g., Achenbach & Rescorla, 2001).

Further validating the distinction, a considerable amount of past research, as summarized in several integrative reviews, consistently suggests different patterns of sex differences for emotional versus behavioral problems. In particular, girls experience more emotional distress than boys, including low self-esteem, anxiety, and depression (for reviews, see Albano & Krain, 2005; Cyranowski, Frank, Young, & Shear, 2000; Hankin & Abramson, 2001; Kuehner, 2003; Mackinaw-Koons & Vasey, 2000; Nolen-Hoeksema & Girgus, 1994; Ruble, Greulich, Pomerantz, & Gochberg, 1993; Twenge & Nolen-Hoeksema, 2002; Yonkers & Gurguis, 1995). Sex differences in some aspects of emotional distress, such as anxiety, are present in childhood. However, the strength of sex differences in emotional distress tends to increase at adolescence, particularly for depressive symptoms (Hankin & Abramson, 2001; Nolen-Hoeksema & Girgus, 1994; Twenge & Nolen-Hoeksema, 2002). In contrast, boys exhibit more behavioral problems than girls, including aggression and antisocial conduct, but these differences also depend on the developmental period considered (for reviews, see Coie & Dodge, 1998; Foster, 2005; Hinshaw & Anderson, 1996; Moffit, Caspi, Rutter, & Silva, 2001; Zahn-Waxler, 1993). Sex differences in aggression are strong throughout childhood and adolescence. However, the magnitude of sex differences in other forms of antisocial conduct, including rule violations such as truancy, substance use, and leaving home, decreases during adolescence because girls' involvement in these behaviors increases.

In considering how relationships processes are linked with emotional and behavioral adjustment in the following description of the model, developmental stage will be taken into account. For example, we will highlight cases in which relationship processes may help explain sex differences becoming stronger or weaker with age (i.e., for depression or behavioral problems such as rule violations). For those cases in which sex-linked relationship processes are proposed to predict sex-linked adjustment throughout childhood and adolescence, developmental stage will not be referenced for parsimony.

The proposed model is considered to be speculative because there is very little research that provides direct tests of the model. At this point, the primary evidence in support of the model is circumstantial. However, the pattern of sex differences considered in the review fits with the predictions of the model. In addition, there is considerable research examining links in the model (e.g., associations between particular relationship processes and particular

indexes of adjustment). In fact, the examples of these associations presented are only illustrative as these literatures are vast and beyond the scope of the present paper. We consider this research a reasonable basis for forming preliminary hypotheses about how sex-linked relationship processes may help to account for sex differences in emotional and behavioral development, but emphasize the need for research that directly tests the predictions of the model.

Peer Relationship Styles and Emotional and Behavioral Adjustment

Behavioral styles: The reviewed research indicates some consistent sex differences in behavioral styles with peers. These differences include girls' greater tendency to engage in extended dyadic interactions, to engage in cooperative, prosocial behavior, and to self-disclose to friends. Moreover, studies indicate that the sex difference in self-disclosure strengthens at the transition to adolescence. The summary also points to boys' greater tendency to interact in groups of peers characterized by high network density and a well-defined dominance hierarchy and to engage in rough-and-tumble play and competitive/organized play. In this section, we consider the implications of these sex differences for emotional and behavioral adjustment.

First, these sex differences in behavioral styles are proposed to affect the development of emotional adjustment problems. In some ways, girls' behavioral styles may protect against the development of emotional adjustment problems. For example, being immersed in a peer group in which interactions often are characterized by cooperation and prosocial behavior should contribute to emotional well-being. The greater disclosure among girls also may have positive effects. However, these seemingly positive aspects of girls' behavioral style may negatively impact emotional adjustment through their influence on other peer processes. For example, self-disclosure is thought to be a means by which friends can validate one another's unique characteristics and emerging identities, which should have a positive impact on self-esteem (see Sullivan, 1953). However, girls' tendency to self-disclose, especially in adolescence, also may provide a context for some responses to stress (e.g., talking excessively about problems) that contribute to the development of internalizing problems. In addition, the cooperative, prosocial styles of girls' groups may promote empathy and an awareness of the stressful experiences of peers and friends, which could negatively impact emotional well-being. Accordingly, it is not entirely clear whether the net effect of behavioral style on girls' emotional adjustment is positive or negative. Moreover, the majority of other peer relationship processes to be discussed are thought to increase girls' risk for emotional problems. For boys, behavioral styles are proposed to work along with the other relationship processes to buffer them against emotional problems. In particular, boys' activity-focused styles should provide them with interesting and enjoyable experiences that should promote a positive mood (see Gottman, 1986).

Typical sex-linked behavioral styles may have opposite influences on the behavioral adjustment of girls and boys. Because norms in girls' peer groups call for higher levels of cooperative and prosocial behavior than those in boys' peer groups, disruptive and aggressive behaviors among girls are more likely to be censured by peers. Further, boys are more likely than girls to acquire within their peer group the behaviors required for serious aggressive acts, such as fighting skills. These skills may be learned even in mainstream male peer groups through rough-and-tumble play among younger boys and through other organized and competitive games and sports among older boys and adolescents. Moreover, the male peer group may foster a tendency among boys to engage in aggressive, self-promoting behavior if such behavior elevates their position in the dominance hierarchy (see Geary, Byrd-Craven, Hoard, Vigil, & Numtee, 2003).

Importantly, research is needed that directly tests whether the degree to which girls and boys differ in their behavioral styles with peers helps to account for sex differences in emotional and behavioral adjustment. Moreover, research needs to consider whether the contribution of behavioral styles to the development of adjustment outcomes varies by sex. For instance, self-disclosure may promote positive emotional adjustment in girls if friends validate each others' perspectives. In contrast, if boys are less skilled at self-disclosing or providing validation, their conversations may not have equally positive effects.

Social-cognitive styles: Several important aspects of social-cognitive styles regarding peers were found to vary by sex. Specifically, girls are more likely than boys to define themselves in terms of relationships and to care about dyadic friendships. Girls also are more likely than boys to adopt connection-oriented goals and to be empathetic, as well as to have interpersonal concerns (e.g., about evaluation) and to experience jealousy within friendships. Boys are more likely than girls to have status-oriented or agentic goals. We suggest that these sex differences in social-cognitive styles have important implications for the emotional and behavioral development of girls and boys.

Sex-linked social-cognitive styles are proposed to increase risk for the development of emotional problems in girls and to decrease risk in boys (see Gilligan, 1982; Helgeson, 1994). Girls' greater concerns about evaluation and approval and investment in connection-oriented goals, are proposed to contribute to emotional problems, such as anxiety and depression. That is, girls may be more likely than boys to devote time to worrying about the status of their relationships, which may negatively influence their emotional well-being. In addition, given that girls may be particularly susceptible to feelings of jealousy within their friendships, it is plausible that they would be more likely than boys to become distressed over potential areas of discord or abandonment that never actually occur. These predicted pathways are consistent with evidence linking some of these aspects of social-cognitive styles, including fears of negative evaluation and friendship jealousy, with internalizing symptoms such as low self-worth and feelings of anxiety (LaGreca et al., 1988; La Greca & Lopez, 1998; Parker et al., 2005). In contrast, boys' decreased likelihood of adopting these social-cognitive styles should diminish their susceptibility to the development of emotional difficulties.

The links between social-cognitive styles and emotional adjustment may strengthen with age, thus contributing to the increasing sex difference in emotional difficulties over the course of adolescence. At adolescence, there are important changes in the nature of peer relationships (see Brown, 1990; Rubin et al., 1998), including that close dyadic friendships become especially important to youth (Sullivan, 1953). At this time, fears of abandonment and jealousy over friends' other relationships may become more closely tied with global feelings of distress due to the increased salience of these relationships. This distress may be reflected in increasing internalizing symptoms among girls during this stage of development.

Despite these emotional costs, female-linked social-cognitive styles should generally protect girls from developing behavioral problems. Such behaviors are inconsistent with girls' greater inclination to define themselves in terms of close relationships and with their concerns about social judgment, which presumably would motivate them to minimize behaviors that elicit interpersonal rejection (Rudolph & Conley, 2005). Girls' higher levels of empathy, specifically their greater tendency to experience vicarious distress, also should suppress behaviors that cause distress to others. Nevertheless, it is possible that during adolescence, social-cognitive styles in some girls contribute to increased behavioral problems, such as rule-violating behaviors, as a result of their involvement in romantic relationships. That is, girls' connection-oriented goals may lead them to engage in behaviors such as substance use and truancy to strengthen ties with boyfriends who behave this way

(see Caspi, Lynam, Moffitt, & Silva, 1993). Alternatively, it is possible that the girls who demonstrate increases in behavioral problems during adolescence are those whose sex-typed social-cognitive styles are diminished by their immersion in opposite-sex peer groups. For boys, typical social-cognitive styles may create risk for aggression. The status and agentic goal orientations of boys may put them at risk for aggressive behaviors directed toward the pursuit of their own self interests (Cross & Madson, 1997; Helgeson, 1994). Although decreased concern about social approval or getting along with others may be adaptive to some extent in terms of moving up the dominance hierarchy, at more extreme levels this lack of concern increases the chance that boys will engage in antisocial behaviors without considering the impact on others.

Some previous conceptualizations also posit that sex differences in social-cognitive style more generally (i.e., not specifically in the peer context) may contribute to sex differences in emotional and behavioral health (Cross & Madson, 1997; Helgeson, 1994). Moreover, evidence supports relations between some aspects of social-cognitive style and indexes of adjustment (e.g., LaGreca et al., 1988; LaGreca & Lopez, 1998; Parker et al., 2005). However, little empirical data actually test whether sex-linked social-cognitive styles mediate sex differences in emotional and behavioral adjustment. Moreover, we do not know whether the proposed links operate in the same way for girls and boys. As an example, the links between feelings of jealousy or concerns about negative evaluation and emotional distress may be stronger for girls than boys. It is possible that boys are more likely to respond to such feelings by terminating friendships or interactions with particular peers rather than by internalizing the negative feelings or by generalizing the evaluation-related concerns to their global well-being.

Stress and Coping Processes and Emotional and Behavioral Adjustment

Exposure to peer stress: Our summary indicates sex differences in youths' exposure to certain types of peer stress. Specifically, girls have a greater tendency than boys to experience stress within the context of their dyadic friendships (except for being physically victimized by a friend or experiencing conflict with a best friend) and to vicariously experience stress of others in their social networks. There also is some indication that, when different types of stressful peer events are combined, girls experience higher levels of stress than boys, particularly during adolescence. The only type of peer stress that boys were found to experience more than girls was physical and direct verbal victimization. We consider here how this pattern of sex differences may contribute to vulnerability to particular adjustment difficulties in girls and boys.

Girls' greater exposure to a wider variety of personal and vicarious stressful peer events and circumstances may contribute to their heightened vulnerability to emotional difficulties. Exposure to peer stress may lead to diminished perceptions of competence, worry and concern about one's own or a friend's welfare, and a sense of hopelessness, potentially placing youth at risk for emotional difficulties such as anxiety and depression (see Rudolph, 2002). Indeed, research generally links exposure to interpersonal stress, including peer-related stress, with emotional problems, such as depression (Gore et al., 1993; Larson & Ham, 1993; Rudolph et al., 2000; Wagner & Compas, 1990). Moreover, there is some limited evidence suggesting that sex-linked exposure to peer stress mediates sex differences in emotional adjustment. Specifically, greater exposure to one's own friendship stress (Rudolph, 2002) and to the stressors that are experienced by a friend (Gore et al., 1993) among girls than boys help to account for sex differences in anxiety and depression. Importantly, some evidence suggests that the tendency for girls to be exposed to more peer stress than boys is most pronounced in adolescence (Rudolph & Hammen, 1999), which may help to explain the intensification of sex differences in internalizing problems at adolescence.

With regard to behavioral adjustment, boys' greater exposure to overt or physical victimization may contribute to their vulnerability to developing behavioral problems such as aggression and antisocial behavior. Physical aggression is more appropriate in response to overt victimization than subtle forms of victimization. In fact, if a victim responds in an aggressive manner, the attacker might be less likely to repeat the victimization, thereby reinforcing the aggression. Research does demonstrate that overt victimization predicts increases in externalizing problems over time (Hodges, Boivin, Vitaro, & Bukowski, 1999; c.f., Hodges & Perry, 1999).

As discussed, there is some limited evidence suggesting that particular peer stressors contribute to sex differences in particular indexes of adjustment (Gore et al., 1993; Rudolph, 2002). However, whether sex differences in a variety of peer stressors help to explain multiple indexes of emotional and behavioral adjustment is unknown. We also know relatively little about whether the effects of peer stressors on adjustment are similar for girls and boys, but some data suggest the effects may vary by sex. In particular, because girls' social-cognitive styles involve connected-oriented goals and interpersonal concerns, peer stress may represent an especially strong threat to their emotional well-being. Girls perceive interpersonal stress in general (Wagner & Compas, 1990) and relational or social victimization in particular (Crick, Bigbee, & Howes, 1996; Galen & Underwood, 1997) as more stressful or hurtful than do boys. They also report experiencing more negative emotions within peer contexts than do boys (Larson & Asmussen, 1991). Moreover, preliminary evidence suggests that interpersonal stress in general (Goodyer & Altham, 1991; Rudolph & Hammen, 1999; Rudolph et al., 2000) and peer stress in particular (Conley & Rudolph, 2005; Rudolph, 2002) is associated with emotional difficulties more strongly in girls than in boys. In fact, even though boys report greater overt victimization (e.g., teasing, fighting) than girls, these stressors are more strongly associated with anxiety and depression in girls (Rudolph, 2002).

Responses to peer stress: Our summary also indicates sex differences in responses to stress. Specifically, girls tend to seek support more than boys. This finding often emerged in middle childhood but was found more consistently among adolescents. Girls also ruminate and express emotions in response to stress more than boys. There was some support for the idea that boys use humor and make light of stress more frequently than do girls. How might these sex differences contribute to girls' and boys' development?

Sex-linked responses to peer stress may contribute to sex differences in emotional adjustment. Girls' tendency to express emotions and seek support from peers may in part buffer them from emotional distress. By seeking support, girls may be provided with reassurance that their problems can be resolved and that they are valued members of their social group, thereby decreasing the chances that stressors will lead to decreased self-esteem, excessive worrying, sadness, or other types of emotional distress. In fact, receiving social support from peers is linked with lower levels of depressive symptoms (Burton, Stice, & Seeley, 2004; Licitra-Kleckler & Waas, 1993). However, this support-seeking tendency also presents a risk that girls will become fixated on talking about problems, which may increase their emotional distress. In fact, rumination about problems, including peer problems, is associated with poorer self-esteem (Broderick, 1998). In contrast, boys' greater likelihood of making light of problems may keep them from dwelling on problems and, therefore, be protective against emotional problems. In fact, some evidence suggests that using humor to cope is related to lower levels of anxiety and depressive symptoms over time (Plancherel & Bologinini, 1995).

In terms of behavioral problems, we propose that responses typical of girls will be protective, whereas responses typical of boys may increase risk. Stress responses more

common among girls (e.g., seeking support, rumination) are inconsistent with antisocial behaviors. In contrast, responses more typical of boys, like making light of the problems, coupled with boys' decreased likelihood of seeking support or processing negative feelings, may foster behavioral problems. For instance, an unresolved conflict with a peer may lead to future misunderstandings and hard feelings, which may precipitate aggressive attempts to seek revenge. The latter idea is consistent with Pollack's (1998) proposal that, because boys do not have outlets for expressing emotions such as disappointment or hurt feelings, their emotions tend to get channeled into anger, which increases aggression. However, there is no evidence for this proposal.

Again, despite evidence of sex differences in responses to stress and some evidence for links between certain stress responses and adjustment outcomes, little research examines whether sex-linked responses to stress directly account for sex differences in adjustment. Likewise, additional evidence is needed to test whether the associations between particular responses to stress and indexes of adjustment differ for girls and boys. As an example, although support-seeking is proposed to be linked with positive emotional adjustment for girls, the effect of support-seeking may not be as positive for boys if their friends perceive their expression of emotion or requests for support as unusual or "babyish." In fact, the effect of support-seeking on boys' emotional adjustment may become increasingly negative with age as support-seeking becomes increasingly non-normative for boys compared to girls.

Relationship Provisions and Emotional and Behavioral Adjustment—Our summary suggests that, compared to boys, middle childhood and adolescent girls generally report receiving greater provisions in their dyadic friendships such as closeness, affection, trust, security, loyalty, validation, acceptance, enhancement of worth, and nurturance. Nevertheless, boys generally report as much satisfaction in their friendships as girls. Once again, we propose that these sex differences in relationship provisions contribute to emotional and behavioral outcomes in girls and boys.

We hypothesize that receiving relationship provisions predicts more positive emotional adjustment by contributing to feelings of self-worth as a relationship partner. In fact, Oldenburg and Kerns (1997) found that perceiving a best friendship as validating was related to lower levels of depression. Because most of these provisions typically are experienced to a greater extent by girls than by boys, girls should experience stronger provision-related protection from emotional distress than should boys. Importantly, though, these protective effects are not expected to overpower the other processes that increase risk for emotional problems in girls. Provisions are hypothesized to contribute to emotional well-being through one very specific pathway, namely, by bolstering feelings of self-worth as a close relationship partner. However, other aspects of female-linked peer relationship styles, such as concerns about general peer evaluation, exposure to peer stress, and rumination, are expected to attack girls' emotional adjustment through a wide variety of other pathways, such as promoting feelings of worry, hopelessness, and shame. These negative emotions have broad implications for individuals' evaluation of themselves and their life circumstances and, therefore, may be tied especially strongly to global feelings of self-worth, depression, and anxiety. Although boys may receive fewer of these provisions, those that they do receive should work along with the other relationship processes to decrease risk for emotional problems. Furthermore, boys may be receiving additional provisions in their dyadic friendships and in the peer group more generally that have not been the focus of empirical attention but do buffer them from emotional adjustment problems.

Receiving relationship provisions also is expected to decrease risk for behavioral problems. For example, provisions should contribute to feelings of relationship security and warmth toward others, which would inhibit aggression. For girls, receiving provisions such as

validation and acceptance should function in conjunction with the other processes to protect them from behavioral problems. Based on current evidence for lower levels of certain relationship provisions in boys than girls, we would expect that boys would receive less protection against behavior problems than would girls. Moreover, the few types of provisions received more by boys than girls, such as greater enjoyment and excitement, may be less effective than those received by girls at inhibiting aggression toward peers and other forms of conduct problems.

As with the other relationship processes, additional research is needed to determine whether sex differences in receiving provisions help to account for sex differences in emotional and behavioral adjustment, and to determine whether the links between receiving relationship provisions and adjustment differ for girls and boys. For example, it may be that boys are less comfortable than girls with feeling strong emotions of connection with one another such as feelings of closeness, affection, and nurturance. Such discomfort could weaken the positive impact of these provisions on emotional adjustment. This might be particularly true for older boys if they perceive these feelings toward male friends as inconsistent with their emerging heterosexual identities.

Relations Among Peer Relationship Styles, Stress and Coping Processes, and Relationship Provisions—Although we discuss each of the three major domains of relationship processes (relationship styles, stress and coping processes, relationship provisions) independently, it is important to note that there are likely associations among these domains. For example, boys' tendency toward more rough-and-tumble play may increase their likelihood of experiencing peer stress in the form of physical victimization if their interactions become heated or if a good-natured initiation of rough-and-tumble play is misinterpreted. As another example, girls' heightened empathy toward peers and their focus on communal goals may promote their engagement in prosocial behavior. Note, too, that associations among the relationship domains may be bi-directional. For instance, responses to stress common among girls, such as support seeking, may lead to the receipt of relationship provisions, such as feelings of closeness and affection, among girls. However, strong feelings of closeness and affection among girls could further strengthen their comfort with and tendency to seek support from friends.

Recent Findings in Support of the Speculative Model

In recent research, we have begun to evaluate our speculative model. Within two independent research labs, support has been obtained for many key aspects of the model across a range of studies using a variety of methodologies. First, this research demonstrates links among different domains of peer relationship processes and emotional and behavioral adjustment. More specifically, however, in contrast to most prior research, findings establish directly that sex differences in peer relationship processes at one stage of the model help to explain sex differences at other stages. Second, this research reveals that certain links among peer relationship processes and adjustment differ for girls and boys and for younger and older youth, suggesting that peer socialization effects may vary across sex and across stages of development. Third, this research supports the proposal that sex-linked relationship processes contribute to seemingly paradoxical effects on development. Although findings from prior research reveal possible positive and negative consequences of similar processes, such paradoxical effects typically are not addressed within single studies. Furthermore, single constructs have not been identified that simultaneously contribute to both positive and problematic adjustment. Recent research from our labs identifies several constructs that have such effects.

In particular, these new lines of research focus on one previously researched construct (social-evaluative concerns) and two newly developed constructs (need for approval and co-rumination). Social-evaluative concerns and need for approval are aspects of social-cognitive style that reflect a tendency to rely on close relationships as a source of self-evaluation and self-worth. Co-rumination is viewed as a response to stress. Thus, these constructs fit clearly within the major domains of relationship processes incorporated into the speculative model.

Social-Evaluative Concerns and Need for Approval—One line of research investigates the socioemotional costs and benefits of social-evaluative concerns and need for approval (Rudolph, Caldwell, & Conley, in 2005; Rudolph & Conley, 2005). According to our speculative model, high levels of social-evaluative concerns and need for approval, hypothesized to be more characteristic of girls than of boys, are expected to have both positive and negative consequences. These attributes may create an enhanced awareness of interpersonal cues and concern about relationships, which would confer benefits in terms of behavioral styles in relationships (e.g., higher levels of prosocial behavior) and behavioral adjustment (e.g., lower levels of aggression). Yet, these attributes also may create increased vulnerability to stress or problems in peer relationships, which would have costs for emotional adjustment (e.g., higher levels of anxiety and depression).

Two studies were conducted to test these ideas. In the first study (Rudolph & Conley, 2005), 478 youth completed measures assessing social-evaluative concerns and symptoms of depression at two assessments, separated by approximately six months. Teachers provided reports of youths' prosocial behavior and aggression. Consistent with the prediction that sex-linked social-cognitive styles have trade-offs for development, heightened social-evaluative concerns were associated with heightened prosocial behavior and diminished aggression, as well as higher levels of emotional distress (depression), both concurrently and over time. Importantly, structural equation modeling confirmed that the sex difference in social-evaluative concerns partially accounted for the sex difference in prosocial behavior and aggression, and entirely accounted for the sex difference in depression.

In the second study (Rudolph et al., 2005), 153 fourth through eighth graders completed measures assessing need for approval, global self-worth, anxiety, and depression. Teachers provided reports of youths' behavioral style (i.e., prosocial and withdrawn behavior) and behavioral adjustment (i.e., aggression). Need for approval was conceptualized as the extent to which youth derive self-worth from approval by peers. Importantly, need for approval was viewed as a two-dimensional construct that incorporated positive approval-based self-appraisals (enhanced self-worth in the face of high social approval) and negative approval-based self-appraisals (diminished self-worth in the face of low social approval). We expected that need for approval would have trade-offs for development. In this case, the trade-offs were expected to depend both on the adjustment outcome of interest, as well as on the dimension of need for approval (i.e., positive versus negative). Moreover, we examined whether the links between need for approval and adjustment differed across sex and age.

In support of the trade-offs premise, we found that a need for approval had both costs and benefits for development. Specifically, positive approval-based self-appraisals were associated with more prosocial behavior, less withdrawal, and less aggression, as well as with more positive emotional adjustment (i.e., enhanced global self-worth, lower anxiety and depression). Findings for negative approval-based self-appraisals were more complex. Negative self-appraisals were associated with heightened emotional distress, especially in girls. These appraisals were differentially associated with behavioral styles and behavioral adjustment across sex and age. That is, negative self-appraisals were associated with more adaptive behavioral styles and behavioral adjustment in older youth and (nonsignificantly) in

girls, but with less adaptive behavioral styles and behavioral adjustment in younger youth and in boys. It may the case that youth with more self-regulatory resources (e.g., older youth and girls) are more able to mobilize their relationship concerns in the interests of improving their relationships and inhibiting antisocial behavior than those with fewer self-regulatory resources. Thus, these results point to the importance of considering whether the proposed links in the speculative model function differently across sex and developmental stage. That is, the findings suggest that when girls possess a strong need for approval (particularly negative self-appraisals), they are more at risk than boys for emotional difficulties. In contrast, when boys and younger youth possess a strong need for approval (particularly negative self-appraisals), they are more at risk than girls and older youth for maladaptive behavioral styles and aggression.

In sum, these two studies provide strong validation for several aspects of the proposed model. First, they confirm that sex-linked social-cognitive styles have critical trade-offs for development. Specifically, they demonstrate that the same relationship process (or different dimensions of the same relationship process) may serve as a protective factor for some problems and a risk factor for other problems. Second, they show that sex-linked social-cognitive styles account for some of the observed sex differences in emotional and behavioral adjustment Third, they reveal that the same relationship process may have more intense or different consequences for girls versus boys and for younger versus older youth.

Co-Rumination—A second line of research involves another recently developed construct, co-rumination, which refers to extensively discussing problems in the context of a dyadic relationship (Rose, 2002). This process is conceptualized as a response to stress and is characterized by frequently discussing problems, mutual encouragement of discussing problems, revisiting the same problem repeatedly, speculating about causes and consequences of problems, and focusing on negative feelings. Co-rumination is more common among girls than boys, especially in adolescence, and was hypothesized to have both positive and negative consequences. Based on friendship research indicating that self-disclosure is related to relationship provisions, such as feelings of closeness, greater co-rumination among girls was expected to help account for closer friendships among girls than boys. Based on rumination research indicating that a consistent negative focus is associated with emotional distress, it was predicted that greater co-rumination among girls would also help to account for more emotional difficulties among girls than boys.

These hypotheses were first tested with 608 third-, fifth, seventh-, and ninth-grade youth who responded to a new measure of co-rumination with friends (Rose, 2002). Other measures included a self- and friend report of friendship and self-report measures of depressive and anxiety symptoms. Results indicated that higher levels of co-rumination among girls than boys helped to account for closer friendships among girls than boys (assessed by both self and friend reports) but also for more depressive and anxiety symptoms among girls than boys.

Although the previous study was consistent with the idea that co-rumination may be a peer relationship process that has both positive and negative adjustment consequences, the study did not test the temporal ordering of the relations between co-rumination and adjustment. A second study (Rose, Carlson, & Waller, 2005) involving approximately 1,000 third-, fifth-, seventh-, and ninth-grade youth examined the effects of co-rumination on adjustment over a period of six months. The effects of co-rumination on adjustment varied depending on youths' sex and grade. Co-rumination predicted higher levels of depressive and anxiety symptoms over time for girls but not boys. This indicated a double risk for girls: They were both more likely than boys to co-ruminate, and the negative effects of co-rumination were most severe for them. In addition, co-rumination predicted higher levels of friendship

closeness over time for adolescents but not children. Perhaps extensive conversations about troubles with friends have an especially strong impact on youths' perceptions of their friendships with age, as peers become increasingly important relationship partners in their lives.

To summarize, this line of research also supports several aspects of the proposed model in terms of the trade-offs of sex-linked relationship processes. In the first study, the same relationship process (i.e., co-rumination) was related concurrently to friendship closeness but also problematic emotional adjustment. The second study was consistent with the idea that the same relationship process may have different consequences for girls versus boys and for younger versus older youth.

Summary of Recent Research—Collectively, this research demonstrates that sex-linked social-cognitive styles and responses to stress can indeed have both positive and negative consequences for development. Paradoxical effects such as these rarely have been documented within single studies and therefore represent pivotal steps toward model validation. Moreover, the prospective analyses provide support for the hypothesized direction of influence, whereby peer relationship styles and responses to stress foster particular socioemotional consequences. Direct tests of mediation validate the contribution of sex-linked relationship processes to sex differences in adjustment. The fact that certain social-cognitive styles and responses to stress differentially predict adjustment in girls versus boys suggests interesting sex differences in the proposed links in the model. Thus, girls or boys who demonstrate relationship processes characteristic of the opposite sex will not necessarily experience the same types of adjustment outcomes. Finally, differences between younger versus older youth in some of the links implicate the need for a developmentally sensitive model that accounts for changes over time in the impact of particular relationship processes on adjustment.

Future Directions

Directly Examining Peer Socialization—Research is needed that explicitly examines peer socialization of relationship processes. Research on peers as socialization agents is surprisingly limited compared to research on other socialization agents. More research is needed to address basic questions such as whether interactions with same-sex peers are related to more sex-typed relationship processes, and to examine the mechanisms through which same-sex interactions foster sex-typed relationship processes.

Employing Process-Oriented Mediational Models—Much of the evidence gathered thus far for the proposed model involves studies documenting sex differences in relationship processes and studies documenting significant associations between relationships processes and adjustment. However, more sophisticated designs are needed that assess the mechanisms linking sex differences in peer relationship processes with sex differences in emotional and behavioral adjustment and that allow for process-oriented interpretations of findings. When tests of mediation are not performed, the degree to which sex differences in relationships processes contribute to sex differences in adjustment is not known.

Considering Developmental Issues—Disentangling the temporal ordering among the components of the model will require prospective designs that examine directly whether relationship processes are antecedents versus consequences of sex-typed adjustment, or whether there are reciprocal associations between components of the model. Furthermore, research is needed to examine the differential role of peers as agents of socialization across different developmental stages. It also will be important to investigate more carefully whether mean-level sex differences or sex differences in the proposed links between

relationship processes and adjustment vary at different stages of development. Currently, for some peer relationship processes, there are limited data for certain age groups, which limits the conclusions we can draw regarding developmental differences.

Considering Trade-Offs—A pivotal, and much understudied, aspect of our model concerns the trade-offs inherent in particular sex-linked relationship processes. Contrary to many prior views of sex differences, which tend to implicate certain characteristics as either adaptive or maladaptive, we argue that some relationship processes have both costs and benefits. Progress in understanding the association between sex-linked peer relationship styles and sex-linked adjustment will require examining trade-offs within single studies. One approach would be to examine, within a single study, a number of *different* sex-linked relationship processes that may have trade-offs. A second approach would be to examine *single* constructs that are predicted to be related simultaneously to positive and negative outcomes. As described previously, we have adopted this approach in our own recent research. The constructs of social-evaluative concerns, need for approval, and co-rumination were shown to have such adjustment trade-offs. Future research may involve other new constructs or identification of adjustment trade-offs of established constructs.

Considering Nonlinear Associations—In our speculative model, we focus on linear associations between relationship processes and adjustment outcomes, and virtually all research on this topic is restricted to the investigation of linear associations. However, it is possible, and even likely, that some nonlinear associations exist. That is, moderate levels of certain relationship processes may be adaptive, whereas extreme levels may become maladaptive. For example, preliminary evidence suggests that social-evaluative concerns do not predict depression at low to moderate levels, but strongly predict depression at higher levels (Rudolph & Conley, 2005). Future research needs to investigate whether moderate levels of certain relationship processes may confer fewer costs and more benefits.

Employing Varied Methodologies—Much of the supportive evidence for our model is based on self-report questionnaire methods. Thus, replicating these results with other methodologies is important. For example, more observational research is needed to document sex differences in the behavioral component of peer relationship styles. The social-cognitive component of peer relationship styles is more challenging to assess using measures other than questionnaires; however, some information- processing studies with adults support sex differences in social-cognitive processes (see Cross & Madson, 1997). In terms of stress processes, interview methods have proven to be effective for obtaining more objective information about the nature and duration of stress exposure (Rudolph & Hammen, 1999). Experience sampling methods (e.g., beeper or palm pilot studies) also may be useful for capturing on-line social-cognitive processes and responses to peer stress. With regard to adjustment outcomes, clinical interviews could be employed to assess emotional and behavioral problems. Lastly, biological markers, such as cortisol, are related to stress responses and other social behaviors (e.g., Stansbury & Gunnar, 1994); studies testing links proposed in the model would benefit from considering the biological underpinnings of these behaviors.

Importantly, developmental issues need to be taken into account with regard to these methodologies. Some methods might be appropriate for some age groups but not others. As an example, younger youth would likely not be able to handle the logistics of participating in a study employing experience sampling methods, meaning that results found with this approach could not be compared across a broad range of ages. Moreover, the same method may be more or less reliable or valid at different ages. Before definitive conclusions can be reached regarding developmental trends in sex differences, it will be important to consider possible methodological factors that may account for observed developmental differences.

Learning From Mismatches—Another direction for future research will involve studying mismatches between sex and the relationship processes. Much can be learned about normative processes from deviations from the norm. In particular, studying girls who exhibit relationship processes more characteristic of boys, or boys who exhibit relationship processes more characteristic of girls, can provide further validation of the model. For example, research could examine whether girls adopt agentic and self-interest goals are particularly at risk for behavior problems, or whether depressed boys engage in stress and coping responses that are more common among girls.

Moreover, insight can be gained from studying the origins of mismatches. Based on our peer-socialization model, mismatches would be expected to result from decreased exposure to sex-typed peer groups. According to group socialization theory (Harris, 1995), children are expected to behave in sex-typed ways most consistently when sex segregation is strong, and when same-sex in-groups and opposite-sex out-groups are formed. Perhaps mismatches result from children having greater exposure to opposite-sex peers due to parental influence or to the structure of their environment. Studying mismatches also may elucidate the contribution of forces other than peers, such as the influence of genetics, family dynamics, or other environmental factors, to relationship processes and adjustment.

Explaining Co-Occurring Adjustment Problems—An additional issue to be addressed is how our model accounts for the prevalence of co-occurring adjustment problems. Although the model delineates nonoverlapping paths leading from peer relationship processes to distinct emotional versus behavioral adjustment outcomes, different types of adjustment problems often co-occur among both boys and girls (Caron & Rutter, 1991). A comprehensive model would need to accommodate such complexities as overlapping pathways and outcomes. One important caveat in this respect concerns the multi-determined nature of the processes and outcomes of interest. Relationship processes, as well as emotional and behavioral adjustment, are likely to be influenced by a wide variety of factors. These multiple factors may lead to the co-occurrence of problems that stem from different sources. For example, boys may be more likely to develop behavioral problems due to the proposed sequence of relationship processes. Yet, a subset of aggressive boys also may possess a vulnerability to emotional distress due to genetic or other environmental contributions.

Transactional influences also may help to explain the high co-occurrence of emotional and behavioral problems. For instance, peer relationship processes among boys may lead first to behavioral problems. Behavioral problems may then create difficulties in multiple domains, including school and family, and lead to negative feedback from adults. As more life domains become problematic for boys, they may begin to feel hopeless and depressed. Similarly, emotional distress in girls may interfere with school adjustment, leading to behavioral problems such as truancy or disruptive conduct. The proposal, then, is that sex-linked peer relationship processes do increase the likelihood of particular sex-linked adjustment problems, but other influences interact with these processes to create more complex developmental pathways.

Practical Implications

Given that our peer-socialization model focuses on how peer relationship processes contribute to emotional and behavioral adjustment, it seems logical that there would be applied implications of the model in terms of promoting positive adjustment. A complication of the model, however, is that by recognizing the trade-offs of different relationship processes, the model inherently implies that adopting a particular style will have some benefits but also some costs. Nevertheless, there are likely ways for girls and boys to strike a

balance between female-linked and male-linked styles that maximizes benefits while minimizing costs.

For instance, youth who adopt male-linked or female-linked styles in moderation probably will fare better than youth who adopt an extreme sex-linked style. Also, youth may be less at risk for negative outcomes if they can adapt their relationship styles to different contexts. For example, a boy who adopts dominance and status-related goals in the context of a group competition may contribute to his group's success (e.g., in team sports) and be a leader among his peers. However, this boy's chances of experiencing relationship provisions such as support and validation will be greater if he can reduce his focus on status-related goals when interacting with his best friend. As a related point, youth who can integrate aspects of both female-linked and male-linked styles into their own peer relationship style may be especially well-adjusted (see also Helgeson, 1994). Finally, the benefits of various relationship styles may be enhanced by the presence of other personality attributes that act in concert with these styles to influence development. For example, both girls and boys with a high sense of self-efficacy and adaptive social skills may be more likely to invoke interpersonal concerns in the interests of bettering their relationships, while not suffering from the emotional costs of these concerns (Rudolph & Conley, 2005). Efforts to encourage a balance among different styles and to nurture other adaptive attributes that complement these styles would hopefully allow both girls and boys to benefit from the adaptive aspects of different relationship styles, thereby tipping the scale in favor of psychological health.

Summary Remarks

A careful review of sex differences in relationship processes reveals some consistent differences in the styles and experiences of girls and boys within the peer context. Compared to boys, girls (a) engage in more prosocial interactions characterized by social conversation and self-disclosure, (b) are more likely emphasize the importance of connection-oriented goals, (c) are more sensitive to distress in others and to the status of their peer relationships and friendships, (d) are exposed to a wider variety of stressors both in the broader peer group and in their friendships, (e) are more likely to seek support, express their emotions, and ruminate in response to stress, and (f) receive higher levels of many emotional provisions in their friendships. In contrast, compared to girls, boys (a) interact in larger playgroups with well-defined dominance hierarchies, (b) engage in more rough-and-tumble and competitive play, (c) are more likely to emphasize the importance of self-interest and dominance goals, (d) are exposed to more direct physical and verbal victimization by peers, (e) are more likely to use humor in response to stress, and (f) receive fewer emotional provisions in their friendships. Several of these sex differences increase over the course of development. Female-linked relationship processes may contribute to the development of intimate relationships and inhibit antisocial behavior, yet may heighten vulnerability to emotional difficulties. Male-linked relationship processes may interfere with the development of intimate relationships and contribute to behavioral problems, yet may enhance the development of group-based relationships and protect against emotional difficulties.

To increase our understanding of how sex differences in emotional and behavioral adjustment develop, several important conceptual and methodological approaches are needed. Overall, a great deal more research is needed on peer socialization of sex-linked relationship processes. Employing process-oriented methodological approaches, including longitudinal designs, will increase our knowledge about the emergence and development of these processes over time and will elucidate reciprocal influences. Finally, seriously considering trade-offs of sex-linked relationship styles will enhance our understanding of the complex costs and benefits of female and male peer groups as developmental contexts.

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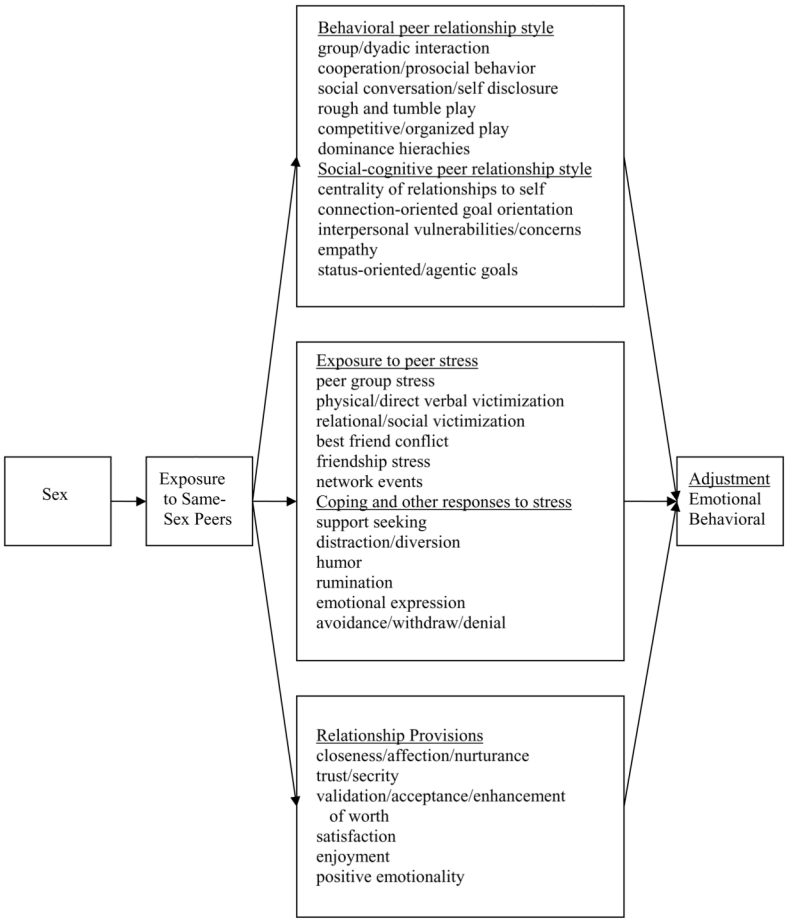

Figure 1.

Peer-socialization model representing how exposure to same-sex peers influences the development of sex-linked peer relationship processes, which influence the development of sex-linked adjustment outcomes.

Table 1

Summary of Studies Examining Sex Differences in Behavioral Relationship Styles with Peers

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Group/Dyadic Interaction							
Frequency of group interactions	Benenson, 1993	Observation	4–5 years	21	20	G = B	.32
	Benenson, Apostoleris, & Parnass, 1997	Observation	4 years	21	21[g]	G = B	−.20
			6 years	18	18[g]	G < B	−2.66
	Fabes, Martin, & Hanish, 2003	Observation	2–6 years	106	97	G < B	−.99
	Martin & Fabes, 2001	Observation	3–6 years	33	27	G = B	.47
Playgroup size	Ladd, 1983	Observation	Grades 3–4				
		-popular		8	8	G < B	−8.17
		-average		8	8	G < B	−.38
		-unpopular		8	8	G = B	-
	Lever, 1976	Self report	Grade 5	90	91[en]	G < B	−.42[esp]
	Lever, 1978	Self report	Grade 5	90	91[en, p]	G < B	−.20[esp]
Frequency of dyadic interactions	Benenson, 1993	Observation	4–5 years				
		-any dyadic		21	20	G = B	.15
		-extended dyadic		21	20	G = B	−.14
	Benenson, Apostoleris, & Parnass, 1997	Observation					
		-number of interactions	4,6 years	39	39[g]	G < B	−.96
		-percent of time	4,6 years	39	39	G = B	.00
	Fabes, Martin, & Hanish, 2003	Observation	2–6 years	106	97	G < B	−.99
	Martin & Fabes, 2001	Observation	3–6 years	33	27	G = B	−.42
Length of dyadic interaction	Benenson, Apostoleris, & Parnass, 1997	Observation	4,6 years	39	39[g]	G > B	.84
Network Density							
	Benenson, 1990	Sociometrics	Grades 4–5	73	81[c]	G < B	−1.38[eswt]
	Benenson, 1993	Sociometrics	4–5 years	21	20	G < B	−.87
	Parker & Seal, 1996	Sociometrics	8–15 years				
		-time 1		33	33[en]	G = B	-
		-time 2		33	33[en]	G = B	-

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-time 3		33	33[en]	G < B	−1.17
Cooperation/Prosocial Behavior							
Prosocial responses to hypothetical conflict situations	Chung & Asher, 1996	Self report	Grades 4–6	62	80	G > B	.64
	Hopmeyer & Asher, 1997	Self report	Grades 4–5				
		-polite requests		63	77	G > B	.39
		-share/take turns		63	77	G > B	.49
	Rose & Asher, 1999	Self report	Grades 4–5	324	342	G > B	.56
Prosocial ratings	Coie, Dodge, & Coppotelli, 1982	Peer report	Grades 3, 5, 8	233	253[en]	G > B	-
	Crick & Grotpeter, 1995	Peer report	Grades 3–6	235	256	G > B	.36
	Ladd & Profilet, 1996	Teacher report	Kindergarten				
		-cohort 1		98	108	G > B	.31
		-cohort 2		105	101	G > B	.51
	Rys & Bear, 1997	Peer report	Grade 3	61	70	G > B	.80
			Grade 6	71	64	G > B	.36
		Teacher report	Grade 3	61	70	G = B	.34
			Grade 6	71	64	G = B	.32
Received prosocial acts from peers	Paquette & Underwood, 1999	Self report	Grades 7–8	36	37[en]	G > B	.73
	Phelps, 2001	Self report	Grades 3–6	251	240	G > B	.44
	Sandstrom & Cillessen, 2003	Self report	Grade 5	59	59	G > B	.20
	Storch, Brassard, & Masia-Warner, 2003	Self report	Grades 9–10	238	145	G > B	.91
	Storch, Nock, Masia-Warner, & Barlas, 2003	Self report	Grades 5–6	100	86[en]	G > B	.50
Collaborative speech/work/play	DiPietro, 1981	Observation	4 years	22	30[en]	G > B	.90
	Hops, Alpert, & Davis, 1997	Observation	Grades 9–12				
		-days 1–2		45	44	G > B	.60
		-days 3–6		45	44	G = B	.40
	Leaper, 1991	Observation	3–6 years	28	30[d]	G = B	−.67
			5–9 years	16	16[d]	G > B	4.25
	Leaper, Tenenbaum, & Shaffer, 1999	Observation	7 years				
		-verbal		28	42[d]	G = B	.15

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-nonverbal		28	42[d]	G = B	.37
		-verbal plus nonverbal		28	42[d]	G = B	.25
	Strough & Berg, 2000	Observation	Grade 6	36	34[d]	G > B	.75
Helping in friendship	Bukowski, Hoza, & Boivin, 1994	Self report	Grades 5–7	216	168[en]	G > B	.20
	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	91[en]	G = B	-
	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G > B	.62
	Parker & Asher, 1993	Self report	Grades 3–5	232	238	G > B	.19
	Patterson, Kupersmidt, & Griesler, 1990	Self report	Grades 3–4	277	238	G = B	-
	Rose & Asher, 2004	Self report	Grade 5	239	263	G > B	.36
	Sharabany, Gershoni, & Hoffman, 1981	Self report	Grades 5, 7, 11	120	120	G = B	-
Social Conversations/Self-Disclosure							
Time spent in social conversation	Ladd, 1983	Observation	Grades 3–4				
		-popular		8	8	G > B	3.57
		-average		8	8	G > B	4.18
		-unpopular		8	8	G = B	1.94
	Moller, Hymel, & Rubin, 1992	Observation	Grades 2, 4	95	72	G > B	.35
Self-disclosure in friendship	Buhrmester & Furman, 1987	Self report	Grade 2	54	54[en]	G = B	−.11
			Grade 5	69	72[en]	G = B	.40
			Grade 8	59	66[en]	G > B	.64
	Camerena, Sarigiani, & Peterson, 1990	Self report	Grade 8	148	130	G > B	1.11
	Crockett, Losoff, & Peterson, 1984	Self report	Grades 6–8	59	58	G > B	.72
	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	91[en]	G > B	-
	Lansford & Parker, 1999	Observation	Grades 3–5	66	102-[t]		
		-intimacy				G > B	.92
		-information exchange				G > B	.73
	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G > B	.81
	McNelles & Connolly, 1999	Observation		67	61		
		-time 1	Grade 9			G > B	.54
		-time 2	Grade 10			G > B	.72
		-time 3	Grade 11			G > B	.54

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Parker & Asher, 1993	Self report	Grades 3–5	231	238	G > B	.47
	Patterson, Kupersmidt, & Griesler, 1990	Self report	Grades 3–4	277	238	G = B	-
	Rose, 2002	Self report	Grades 3, 5	150	131	G > B	.77
			Grades 7, 9	164	151	G > B	1.36
	Zarbatany, McDougal, & Hymel, 2000	Self report	Grade 5	37	31	G = B	.26
			Grade 6	69	51	G > B	.93
Rough and Tumble Play							
	DiPietro, 1981	Observation	4 years				
		-focal participants		22	30[en]	G < B	−.93
		-other participants		22	30[en]	G < B	−1.16
	Humphreys & Smith, 1987	Observation	7 years	13	16	G < B	-
			9 years	15	14	G = B	-
			11 years	18	18	G < B	-
	Ladd, 1983	Observation	Grades 3–4				
		-popular		8	8	G = B	−1.58
		-average		8	8	G = B	−1.87
		-unpopular		8	8	G < B	−2.01
	Martin & Fabes, 2001	Observation	3–6 years				
		-time 1		33	27	G < B	−1.40
		-time 2		33	27	G < B	−1.68
	Moller, Hymel, & Rubin, 1992	Observation	Grades 2, 4	95	72	G < B	−.81
Competitive/Organized Play							
Organized play (i.e., play/games with rules)	Lever, 1978	Self report	Grade 5	90	91[en, p]	G < B	−.57[esp]
	Moller, Hymel, & Rubin, 1992	Observation	Grade 2	49	37	G = B	.10
			Grade 4	46	35	G < B	−.87
Sports participation	Zarbatany, McDougal, & Hymel, 2000	Self report	Grades 5–6				
		-historically		106	82	G < B	−.38
		-currently		104	81	G < B	−.44
		-currently with friend		106	82	G < B	−.65
Ball games	Pellegrini, Blatchford, Kato, & Baines, 2004	Observation					

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-UK, time 1	7–8 years	57	50[en]	G < B	−.72
		-UK, time 2	7–9 years	58	47[en]	G < B	−.92
		-USA, time 1	6–7 years	39	21[en]	G = B	−.23
		-USA, time 2	6–8 years	40	22[en]	G < B	−.53
Chasing games	Pellegrini, Blatchford, Kato, & Baines, 2004	Observation					
		-UK, time 1	7–8 years	57	50[en]	G = B	.21
		-UK, time 2	7–9 years	58	47[en]	G > B	.39
		-USA, time 1	6–7 years	39	21[en]	G = B	−.27
		-USA, time 2	6–8 years	40	22[en]	G < B	−.68
Dominance Hierarchy							
Agreement among peers	Omark, Omark, & Edelman, 1975	Peer report	3 years-Grade3	225	225[en, pd]	G < B	−.21
	Savin-Williams, 1979	Peer report	11–14 years	20	20	G < B	-
Agreement among counselors	Savin-Williams, 1979	Counselor report	11–14 years	20	20	G < B	-
Correctly estimate own rank	Savin-Williams, 1979	Self report	11–14 years	20	20	G < B	−.22

Notes. Studies are listed more than once if they involved more then one relevant construct.

Standardized mean difference effect sizes were computed from means and standard deviations or *F*/*t* values from a one-way ANOVA or *t* test unless otherwise noted.

[esp]Effect size computed using proportion scores.

[eswt]Effect size computed using within-subjects *t* test.

[en]*n*s were estimated because exact *n*s were not available.

[g]Total *n*s are listed but playgroups of three are the units of analyses.

[c]Total *n*s are listed but classes at school are the units of analyses.

[d]Total *n*s are listed but dyads are the units of analyses.

[t]Total *n*s are listed but triads are the units of analyses.

[p]Total *n*s are listed but play episodes are the units of analyses.

[pd]Total *n*s are listed but all possible dyads in a group are the units of analyses.

Table 2

Summary of Studies Examining Sex Differences in Social-Cognitive Relationship Styles with Peers

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Centrality of Relationships to Self							
Self-descript-ions include relationships	McGuire & McGuire, 1982	Self report	7–17 years	280	280	G > B	.17[esp]
Cares about Peer Relationships							
Care about close friendships	Benenson & Benarroch, 1998	Self report	Grades 7–8	18	23	G > B	.88
Care about popularity	Benenson & Benarroch, 1998	Self report	Grades 7–8	18	23	G = B	−.39
Connection-Oriented Goal Orientation							
Importance of social goals	Ford, 1982	Self report	Grades 9, 12				
		-school 1		109	109[en]	G > B	-
		-school 2		181	180	G > B	-
Relationship maintenance goals	Chung & Asher, 1996	Self report	Grades 4–6	62	80	G = B	.26
	Rose & Asher, 1999	Self report	Grades 4–5	322	345	G > B	.18
Intimacy goals	Jarvinen & Nicholls, 1996	Self report	Grade 9	137	125[en]	G > B	.93
Nurturance goals	Jarvinen & Nicholls, 1996	Self report	Grade 9	137	125[en]	G > B	.63
Mutual participation goals	Strough & Berg, 2000	Self report	Grade 6	36	34[d]	G > B	.79
Friendly goals	Murphy & Eisenberg, 2002	Self report	7–11 years	60	58	G > B	.71
Prosocial support goals	Rose & Asher, 2004	Self report	Grade 5	237	262	G > B	.56
Resolving peer problems goals	Rose & Asher, 2004	Self report	Grade 5	236	263	G > B	.21
Interpersonal Vulnerability/Concerns							
Interpersonal dysphoria/concerns/dependency	Blatt, Hart, Quinlan, Leadbeater, & Auerbach, 1993	Self report	Grades 9–12	259	229	G > B	.93
	Kuperminc, Blatt, & Leadbeater, 1997	Self report	Grades 6–7	253	246	G > B	.64
Neediness and relatedness	Henrich, Blatt, Kuperminc, Zohar, & Leadbeater, 2001	Self report	Grades 6–7				
		-neediness		254	244[en]	G > B	.44
		-relatedness		254	243[en]	G > B	.59
Fear of negative evaluation/Social evaluative concerns	LaGreca, Dandes, Wick, Shaw, & Stone, 1988	Self report	Grades 2–6	129	158	G > B	.43
	LaGreca & Lopez, 1998	Self report	Grades 10–12	149	101	G > B	.28

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	LaGreca & Stone, 1993	Self report	Grades 4–6	233	226	G > B	.27
	Liu & Kaplan, 1999	Self report	Grade 8	1481	1112		
		-bothered by peers dislike				G > B	.28
		-care what peers think				G > B	.13
	Rudolph & Conley, 2005	Self report	Grade 5	220	212	G > B	.48
	Storch, Brassard, & Masia-Warner, 2003	Self report	Grades 9–10	236	144[en]	G > B	.29
	Storch, Zelman, Sweeney, Danner, & Dove, 2002	Self report	8–13 years	27	48[en]	G > B	.49[esc]
Friendship Jealousy							
	Parker, Low, Walker, & Gamm, 2005	Self report					
		-study 1	Grade 9	57	57[en]	G > B	.38
		-study 2	Grades 5–9	151	141	G > B	.25
		Friend report					
		-study 2	Grades 5–9	151	141	G = B	.12
		Peer report (not friends)					
		-study 2	Grades 5–9	151	141	G > B	.84
	Roth & Parker, 2001	Self report	Grade 9	38	37	G = B	-
Empathy							
Self-reported empathy questionnaires	Bryant, 1982	Self report	Grade 1	65	63	G > B	.56
			Grade 4	59	56	G > B	.71
			Grade 7	44	43	G > B	1.11
	Ford, 1982	Self report	Grades 9, 12				
		-school 1		109	109[en]	G > B	-
		-school 2		109	204[en]	G > B	-
	Hanson & Mullis, 1985	Self report	*M* age = 12.72	36	28	G > B	.61
			M age = 16.90	54	78	G > B	1.73
	Olweus & Endresen, 1998	Self report	Grades 6–7	526	575	G > B	.83[esr]
			Grades 8–9	557	608	G > B	1.17[esr]

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Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Roberts & Strayer, 1996	Self report	9, 13 years	19	19*en*	G > B	.93
	Tucker, Updegraff, McHale, & Crouter, 1999	Self report					
		-younger sibs	*M* age = 8.2	98	101	G > B	.59
		-older sibs	*M* age = 10.9	104	95	G > B	1.01
	Van Tilburg, Unterberg, & Vingerhoets, 2002	Self report	11–16 years	265	216	G > B	1.20
Report sadness/sympathy in response to protagonist/peer distress	Holmgren, Eisenberg, & Fabes, 1998	Self report	Grades K-2	97	102		
		-sympathy				G > B	.33
		-sadness				G > B	.29
	Menesini et al., 1997	Self report	8–16 years				
		-Italy		646	730	G > B	.15
		-England		3302	3883	G > B	.28
Interpersonal caring orientation (e.g., feel hurt when loved ones unhappy)	Gore, Alestine, & Colten, 1993	Self report	Grades 9–11	685	523	G > B	.46
Report same feeling as protagonist	Dekovic & Gerris, 1994	Self report	Grades 1, 3, 5	62	63	G = B	−.14
	Feshbach & Feshbach, 1969	Self report	4–5 years	24	24	G = B	.81
			6–7 years	20	20	G = B	.26
	Feshbach & Roe, 1968	Self report	6–7 years	12	12	G > B	-
	Hughes, Tingle, & Sawin, 1981	Self report	Grades K, 2	24	24	G = B	-
	Iannotti, 1985	Self report	52–66 mths	21	31	G = B	−.10
	Roberts & Strayer, 1996	Self report	5, 9, 13 years	36	33*en*	G > B	.54
Other-reported empathy	Roberts & Strayer, 1996	Teacher report	5, 9, 13 years	31	30	G = B	.00
		Friend report		33	29	G = B	.05
Status-Oriented/Agentic Goal Orientation							
Instrumental/control goals	Rose & Asher, 1999	Self report	Grades 4–5	322	345	G < B	−.25
Self-presentation goals	Rose & Asher, 2004	Self report	Grade 5	236	263	G < B	−.32
Privacy goals	Rose & Asher, 2004	Self report	Grade 5	236	263	G < B	−.33
Control goals	Chung & Asher, 1996	Self report	Grades 4–6	62	80	G < B	−.58
	Strough & Berg, 2000	Self report	Grade 6	36	34*d*	G = B	−.19
Hostile goals	Slaby & Guerra, 1988	Self report	15–18 years	72	72	G < B	-

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Dominance goals	Jarvinen & Nicholls, 1996	Self report	Grade 9	137	125*en*	G < B	−.71
Revenge goals	Rose & Asher, 1999	Self report	Grades 4–5	322	345	G < B	−.23

Notes. Studies are listed more than once if they involved more then one relevant construct.

Standardized mean difference effect sizes were computed from means and standard deviations or *F*/*t* values from a one-way ANOVA or *t* test unless otherwise noted.

esp Effect size computed using proportion scores.

esc Effect size computed using point-biserial correlation.

esr Effect size could not be computed but was reported in article.

en *n*s were estimated because exact *n*s were not available.

d Total *n*s are listed but dyads are the units of analyses.

Table 3

Summary of Studies Examining Sex Differences in Exposure to Peer Stress

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Peer Group Stress - General							
	Gore, Aseltine, & Colten, 1993	Self report	Grades 9–11	685	523	G > B	.25
	Greene, 1988	Self report	Grades 4–6	42	42[en]	G > B	-
	Larson & Ham, 1993	Parent report	Grades 5–9	241	242[en]	G > B	-
	Rudolph & Hammen, 1999	Interview					
			8–12 years	15	31		
		-independent peer stress				G = B	−.16
		-dependent peer stress				G = B	−.22
			13–18 years	16	26		
		-independent peer stress				G = B	.20
		-dependent peer stress				G = B	.47
	Siddique & D'Arcy, 1984	Self report	Grades 9–12	526	512	G > B	.15
	Wagner & Compas, 1990	Self report	Grades 6–7	50	43	G > B	.44
			Grades 10–12	90	50	G = B	.39
Physical or Direct Verbal Victimization by Peer Group							
Overt physical and verbal	Baldry & Winkel, 2003	Self report	14–19 years	418	553	G = B	−.25[esp]
	Crick & Bigbee, 1998	Peer report	Grades 4–5	189	194		
		-extreme group analyses				G < B	−.44[esp]
		-mean level analyses				G < B	-
	Crick, Casas, & Ku, 1999	Teacher report	3–5 years	62	67	G < B	−.46
	Grills & Ollendick, 2002	Self report	Grade 6	145	128	G < B	−.37
	Perry, Kusel, & Perry, 1988	Peer report	Grades 3–6	82	83	G = B	-
	Phelps, 2001	Self report	Grades 3–6	251	240	G < B	−.28
	Prinstein, Boergers, & Vernberg, 2001	Self report	Grades 9–12	313	253		
		-extreme group analyses				G = B	−.07[esp]
		-mean level analyses				G < B	−.25
	Rudolph, 2002	Self report	Grades 5–8	230	229	G < B	−.33
	Sandstrom & Cillessen, 2003	Self report	Grade 5	59	59	G = B	-

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Storch, Brassard, & Masia-Warner, 2003	Self report	Grades 9–10				
		-extreme group analyses		235	144	G = B	−.16
		-mean level analyses		236	144	G < B	−.55
	Storch & Esposito, 2003	Self report	Grades 5–6	101	100[en]	G < B	−.41
	Storch, Zelman, Sweeney, Danner, & Dove, 2002	Self report	8–13 years	27	48	G = B	.10[esc]
Physical	Crick & Grotpeter, 1996	Self report	Grades 3–6	225	249	G < B	−.22
	Galen & Underwood, 1997	Self report	Grade 4	50	63	G = B	−.22
			Grade 7	34	29	G = B	−.19
			Grade 10	29	29	G > B	.64
	Paquette & Underwood, 1999	Self report	Grades 7, 8				
		-recall		37	39	G < B	−.60[esp]
		-recognition		36	37	G < B	−.60
	Schafer, Werner, & Crick, 2002	Self report	Grade 6				
		-extreme group analyses		121	97	G = B	−.21[esp]
		-mean level analyses		112	89	G < B	-
		Peer report					
		-extreme group analyses		121	97	G < B	−.61[esp]
		-mean level analyses		121	97	G < B	-
Relational/Social Victimization by Peer Group							
	Baldry & Winkel, 2003	Self report	14–19 years	418	553	G = B	−.08[esp]
	Crick & Bigbee, 1998	Peer report	Grades 4–5	189	194		
		-extreme group analyses				G > B	.33[esp]
		-mean level analyses				G > B	-
	Crick, Casas, & Ku, 1999	Teacher report	3–5 years	62	67	G > B	.31
	Crick & Grotpeter, 1996	Self report	Grades 3–6	225	249	G = B	.00
	Galen & Underwood, 1997	Self report	Grade 4	50	63	G = B	−.10
			Grade 7	34	29	G = B	.48
			Grade 10	29	29	G > B	.92
	Paquette & Underwood, 1999	Self report	Grades 7, 8				
		-recall task		37	39	G > B	.77[esp]

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-recognition task		36	37[en]	G = B	.10
	Phelps, 2001	Self report	Grades 3–6	251	240	G = B	.04
	Prinstein, Boergers, & Vernberg, 2001	Self report	Grades 9–12	313	253		
		-extreme group analyses				G = B	.03[esp]
		-mean level analyses				G = B	−.07
	Schafer, Werner, & Crick, 2002	Self report	Grade 6				
		-extreme group analyses		121	97	G = B	.10[esp]
		-mean level analyses		112	89[en]	G = B	-
		Peer report					
		-extreme group analyses		121	97	G > B	.74[esp]
		-mean level analyses		121	97	G > B	-
	Sandstrom & Cillessen, 2003 (assessed exclusion)	Self report	Grade 5				
		-popular		9	18	G = B	.53
		-neglected		11	5	G > B	1.40
		-average		24	23	G = B	-
		-rejected		15	13	G = B	-
	Storch, Brassard, & Masia-Warner, 2003	Self report	Grades 9–10				
		-extreme group analyses		235	144	G = B	.31[esp]
		-mean level analyses		236	144[en]	G = B	−.01
	Storch & Esposito, 2003	Self report	Grades 5–6	101	100[en]	G = B	−.06
	Storch, Zelman, Sweeney, Danner, & Dove, 2002	Self report	8–13 years	27	48[en]	G = B	.04[esc]
Best Friendship Conflict							
	Bukowski, Hoza, & Boivin, 1994	Self report	Grades 5–7	216	168[en]	G = B	-
	Forteza, Snyder, Palos, & Tapia, 1996	Self report	13–15 years	307	321	G > B	.19
	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	91[en]	G = B	-
	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G = B	.04
	Parker & Asher, 1993	Self report	Grades 3–5	232	237	G = B	.00
	Patterson, Kupersmidt, & Griesler, 1990	Self report	Grades 3–4	277	238	G < B	-
	Rose & Asher, 1999	Self report	Grades 4–5	186	184	G = B	−.10

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Rose & Asher, 2004	Self report	Grade 5	152	157	G = B	−.22
Level of Friendship Stress							
	Rudolph, 2002	Self report	Grades 5–8	230	229	G > B	.32
	Forteza, Snyder, Palos, & Tapia, 1996	Self report	13–15 years	307	321		
		-friend quit talking to me				G > B	.31
		-friend told my secret				G > B	.20
		-friend made fun of me				G = B	-
Physical Victimization by Friend							
	Crick & Nelson, 2002	Self report	Grades 3–6	167	142		
		-extreme group analyses				G < B	−.42*esp*
		-mean level analyses				G < B	-
Relational Victimization by Friend							
	Crick & Nelson, 2002	Self report	Grades 3–6	167	142		
		-extreme group analyses				G = B	.23*esp*
		-mean level analyses				G = B	-
Network Events							
Events in network including peers	Wagner & Compas, 1990	Self report	Grades 6–7	50	43	G > B	.60
			Grades 10–12	90	50	G > B	.78
Events among peers							
	Gore, Alestine, & Colten, 1993	Self report	Grades 9–11	685	523	G > B	.37

Notes. Studies are listed more than once if they involved more then one relevant construct.

Standardized mean difference effect sizes were computed from means and standard deviations or *F*/*t* values from a one-way ANOVA or *t* test unless otherwise noted.

esp Effect size computed using proportion scores.

esc Effect size computed using point-biserial correlation.

en *n*s were estimated because exact *n*s were not available.

Table 4

Summary of Studies Examining Sex Differences in Coping and Other Responses to Stress

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Support Seeking							
	Bernzweig, Eisenberg, & Fabes, 1993	Self report	Grades K, 2	46	95[en]	G = B	-
		Parent report		49	51[en]	G > B	.39
	Bird & Harris, 1990	Self report	Grade 8	114	89	G > B	1.08
	Bowker, Bukowski, Hymel, & Sippola, 2000[ps]	Self report	Grade 7	103	115[en]	G > B	.42
	Broderick, 1998	Self report	Grades 4–5	100	74[en]		
		-academic stress				G = B	−.08[esp]
		-family stress				G = B	.17[esp]
	Brodzinsky et al., 1992	Self report	Grade 6	107	103[en]	G > B	.42
			Grade 8	129	131[en]	G > B	.44
	Causey & Dubow, 1992	Self report	Grades 4–5	233	248		
		-academic stress				G > B	.34
		-peer stress[ps]				G > B	.44
	Chapman & Mullis, 1999	Self report	Grades 7–12	215	146	G > B	.77
	Ebata & Moos, 1994	Self report	12–18 years	167	146[en]	G > B	.45[esc]
	Eisenberg, Shepard, Fabes, Murphy, & Guthrie, 1998	Teacher report					
		-time 1	Grades K-2	38	44	G > B	.47
		-time 2	Grades 2–4	36	44[en]	G = B	.16
		-time 3	Grades 4–6	30	28[en]	G = B	.05
	Gomez, Holmberg, Bounds, Fullarton, & Gomez, 1999	Self report	12–13 years	130	138	G > B	.48
	Halstead, Johnson, & Cunningham, 1993	Self report	Grades 9–12	150	153	G > B	.57
	Hastings, Anderson, & Kelley, 1996	Self report	14–17 years	30	34[en]	G > B	.99
	Herman & McHale, 1993	Self report	Grades 4–5	84	67		
		-stress with mom				G = B	.15
		-stress with dad				G = B	.32
	Hunter & Boyle, 2004[ps]	Self report	9–14 years	97	78[en, v]	G > B	.26

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Kliewer, Fearnow, & Miller, 1996	Self report	Grades 4–5	165	135[en]	G > B	.37
	Kurdek, 1987	Self report	Grades 7, 9	157	141	G > B	.55
	Patterson & McCubbin, 1987	Self report	Grades 11–12	241	185	G > B	.95
	Phelps, 2001[ps]	Self report	Grades 3–6	251	240	G > B	.51
	Phelps & Jarvis, 1994	Self report	Grades 9–12	215	260[en]		
		-instrumental reasons				G > B	.26
		-emotional reasons				G > B	.74
	Plancherel & Bolognini, 1995	Self report	Grade 7	138	138	G > B	.41[ese]
	Rose & Asher, 2004[ps]	Self report	Grade 5	243	263	G > B	.47
	Wertlieb, Weigel, & Feldstein, 1987	Self report	7–8 years	51	51	G = B	.30
			10–11 years	37	37	G = B	.52
	Whitesell & Harter, 1996[ps]	Self report	11–15 years	48	48	G = B	-
Distraction/Diversion							
	Bernzweig, Eisenberg, & Fabes, 1993	Parent report	Grades K, 2	49	51[en]	G = B	-
	Bird & Harris, 1990	Self report	Grade 8	114	89	G = B	-
	Broderick, 1998	Self report	Grades 4–5				
		-ratings academic stress		99	72[en]	G = B	.09
		-ratings family stress		100	73[en]	G = B	−.23
		-ratings peer stress [ps]		99	73[en]	G = B	−.27
		-open-ended school (test)		100	74[en]	G < B	−.38[esp]
		-open-ended school (work)		100	74[en]	G < B	−.62[esp]
		-open-ended family (move)		100	74[en]	G = B	−.26[esp]
		-open-ended family (argue)		100	74[en]	G < B	−.93[esp]
		-open-ended peer (invite)[ps]		100	74[en]	G < B	−.76[esp]
	Chapman & Mullis, 1999	Self report	Grades 7–9	215	146		
		-demanding activities				G > B	.25
		-general diversions				G = B	.03
	Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000	Self report	12–18 years				

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-economic stress		166	136[e]	G > B	.38
		-family stress		182	148[f]	G > B	.46
	Copeland & Hess, 1995	Self report	Grade 7	126	118		
		-physical diversions				G < B	−.56
		-passive diversions				G < B	−.45
	Hastings, Anderson, & Kelley, 1996	Self report	14–17 years	30	34[en]		
		-demanding activities				G = B	.01
		-general diversions				G > B	.55
	Kliewer, Fearnow, & Miller, 1996	Self report	Grades 4–5	165	135	G = B	−.11
	Kurdek, 1987	Self report	Grades 7, 9	157	141	G < B	−.39
	Patterson & McCubbin, 1987	Self report	Grades 11–12	241	185		
		-demanding activities				G = B	−.05
		-general diversions				G = B	−.05
	Plancherel & Bolognini, 1995	Self report	Grade 7	138	138	G < B	−.28[ese]
	Rose & Asher, 2004[ps]	Self report	Grade 5	243	263	G > B	.20
	Schwartz & Koenig, 1996	Self report	Grades 9–12	207	120	G = B	.14
Humor							
	Copeland & Hess, 1995	Self report	Grade 7	126	118	G = B	−.08
	Chapman & Mullis, 1999	Self report	Grades 7–12	215	146	G = B	−.20
	Kurdek, 1987	Self report	Grades 7, 9	157	141		
		-joke				G < B	−.47
		-be funny, make light				G < B	−.46
	Patterson & McCubbin, 1987	Self report	Grades 11–12	241	185	G < B	−.26
	Phelps & Jarvis, 1994	Self report	Grades 9–12	215	260[en]	G < B	−.22
	Plancherel & Bolognini, 1995	Self report	Grade 7	138	138	G = B	−.20[ese]
Rumination							
	Broderick, 1998	Self report	Grades 4–5				
		-ratings academic stress		100	72[en]	G > B	.42
		-ratings family stress		97	73[en]	G > B	.32
		-ratings peer stress[ps]		100	73[en]	G > B	.28

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-open-ended school (test)		100	74[en]	G > B	.79[esp]
		-open-ended school (work)		100	74[en]	G > B	.72[esp]
		-open-ended family (move)		100	74[en]	G > B	.37[esp]
		-open-ended family (argue)		100	74[en]	G > B	.57[esp]
		-open-ended peer (invite)[ps]		100	74[en]	G > B	.57[esp]
		-open-ended peer (friends)[ps]		100	74[en]	G = B	.30[esp]
	Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000	Self report	12–18 years				
		-economic stressor		166	136[e]	G = B	.10
		-family stressor		182	148[f]	G > B	.34
Emotional Expression							
	Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000	Self report	12–18 years				
		-economic stressor		166	136[e]	G > B	.45
		-family stressor		182	148[f]	G > B	.66
	Copeland & Hess, 1995	Self report	Grade 7	126	118	G > B	1.37
	Ebata & Moos, 1994	Self report	12–18 years	167	146[en]	G > B	.47[esc]
	Phelps & Jarvis, 1994	Self report	Grades 9–12	215	260[en]	G > B	.56
	Zeman & Shipman, 1997	Self report	Grades 5, 8, 11	70	70[en]	G > B	.42
Avoidance/Withdraw/Denial							
General	Causey & Dubow, 1992	Self report	Grades 4–5	233	248		
		-academic stress				G < B	−.23
		-peer stress[ps]				G < B	−.21
	Chapman & Mullis, 1999	Self report	Grades 7–12	215	146	G < B	−.29
	Copeland & Hess, 1995	Self report	Grade 7	126	118	G < B	−.29
	Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000	Self report	12–18 years				
		-economic stressor		166	136[e]	G > B	.27
		-family stressor		182	148[f]	G > B	.37
	Griffith, Dubow, & Ippolito, 2000	Self report	Grades 7, 9, 12				
		-family stress		175	195	G > B	.25

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
		-school stress		172	193	G = B	.12
		-peer stress[ps]		168	189	G > B	.37
	Halstead, Johnson, & Cunningham, 1993	Self report	Grades 9–12	150	153	G = B	−.20
	Hastings, Anderson, & Kelley, 1996	Self report	14–17 years	30	34[en]	G = B	.35
	Hunter & Boyle, 2004[ps]	Self report	9–14 years	97	78[en, v]	G = B	−.12
	Kavsek & Seiffge-Krenke, 1996	Self report	11–16 years	218	184	G = B	-
			17–19 years	191	134	G = B	-
	Kliewer, Fearnow, & Miller, 1996	Self report	Grades 4–5	165	135	G = B	.21
	Patterson & McCubbin, 1987	Self report	Grades 11–12	241	185	G = B	−.14
	Seiffge-Krenke & Stemmler, 2002	Self report		58	45[en]		
		-year 1	14 years			G = B	.22
		-year 2	15 years			G = B	.03
		-year 3	16 years			G = B	−.16
		-year 4	17 years			G = B	−.12
Behavioral	Bernzweig, Eisenberg, & Fabes, 1993	Parent report	Grades K, 2	49	51[en]	G = B	-
	Bowker, Bukowski, Hymel, & Sippola, 2000[ps]	Self report	Grade 7	103	115[en]	G = B	−.26
	Brodzinsky et al., 1992	Self report	Grade 6	107	103[en]	G = B	.03
			Grade 8	129	131[en]	G = B	.02
	Phelps & Jarvis, 1994	Self report	Grades 9–12	215	260	G = B	−.07
	Rose & Asher, 2004[ps]	Self report	Grade 5	243	263	G < B	−.24
Cognitive	Bernzweig, Eisenberg, & Fabes, 1993	Self report	Grades K, 2	46	49[en]	G = B	-
	Bowker, Bukowski, Hymel & Sippola, 2000[ps]	Self report	Grade 7	103	115[en]	G = B	-
	Brodzinsky et al., 1992	Self report	Grade 6	107	103[en]	G = B	.06
			Grade 8	129	131[en]	G = B	−.18
	Ebata & Moos, 1994	Self report	12–18 years	167	146[en]	G = B	.16[esc]
	Herman & McHale, 1993	Self report	Grades 4–5	84	67		
		-stress with mom				G = B	−.42
		-stress with dad				G = B	−.35
	Phelps & Jarvis, 1994	Self report	Grades 9–12	215	260[en]	G = B	.07

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
	Whitesell & Harter, 1996 [ps]	Self report	11–15 years	48	48	G = B	-

Note. Studies are listed more than once if they involved more then one relevant construct.

Standardized mean difference effect sizes were computed from means and standard deviations or *F*/*t* values from a one-way ANOVA or *t* test unless otherwise noted.

[esp] Effect size computed using proportion scores.

[esc] Effect size computed using point-biserial correlation.

[ese] Effect size estimated using *p* value from *t* test.

[ps] Coping was assessed in response to a peer stressor.

[en] *n*s were estimated because exact *n*s were not available.

[o] Total *n*s are listed but open-ended responses are the units of analyses.

[v] Sample included subset of youth who reported at least some victimization.

[f] Sample included subset of youth who reported at least some family stress.

[e] Sample included subset of youth who reported at least some economic stress.

Table 5

Summary of Studies Examining Sex Differences in Peer Relationship Provisions

Construct	Reference	Method	Age/Grade	*n* Girls	*n* Boys	Significance Test	Effect Size
Closeness/Affection/Nurturance							
Closeness	Bukowski, Hoza, & Boivin, 1994	Self report	Grades 5–7	216	168[en]	G > B	.24
	Camerena, Sarigiani, & Peterson, 1990	Self report	Grade 8	148	130	G > B	.74
Affection	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	91[en]	G > B	-
	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G > B	.66
	Patterson, Kupersmidt, & Griesler, 1990	Self report	Grades 3–4	277	238	G > B	-
Nurturance	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G > B	.42
Trust/Security							
Trust	Sharabany, Gershoni, & Hoffman, 1981	Self report	Grades 5, 7, 11	120	120	G > B	.40[est]
Security	Bukowski, Hoza, & Boivin, 1994	Self report	Grades 5–7	216	168[en]	G > B	.23
Validation/Acceptance/Enhancement of Worth							
Validation	Parker & Asher, 1993	Self report	Grades 3–5	230	238	G > B	.27
Acceptance	Crockett, Losoff, & Peterson, 1984	Self report	Grades 6–8	59	58	G > B	.42
Enhancement of Worth	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	92[en]	G > B	-
Satisfaction							
	Crockett, Losoff, & Peterson, 1984	Self report	Grades 6–8	59	58	G = B	.10
	Furman & Buhrmester, 1985	Self report	Grades 5–6	85	91[en]	G = B	-
	Lempers & Clark-Lempers, 1993	Self report	Grades 6–12	305	271	G > B	.36
	Parker & Asher, 1993	Self report	Grades 3–5	228	236[en]	G = B	−.20
	Patterson, Kupersmidt, & Griesler, 1990	Self report	Grades 3–4	277	238	G = B	-
Enjoyment							
	Benenson, Morganstein, & Roy, 1998	Observation	4 years	28	28[en, g]	G = B	−.38
			6 years	24	24[en, g]	G < B	−1.55
Positive Emotionality							
	Martin & Fabes, 2001	Observation	3–6 years	33	27		
		-time 1				G = B	−.29
		-time 2				G < B	−1.42

Notes. Studies are listed more than once if they involved more then one relevant construct.

[est] Effect size estimated from 2-way ANOVA.

[en] *ns* were estimated because exact *ns* were not available.

[g] Total *ns* are listed but playgroups of four are the units of analyses.