Clin Child Fam Psychol Rev (2010) 13:91–128
DOI 10.1007/s10567-009-0063-2

# Peer Experiences of Anxious and Socially Withdrawn Youth: An Integrative Review of the Developmental and Clinical Literature

**Julie Newman Kingery · Cynthia A. Erdley · Katherine C. Marshall · Kyle G. Whitaker · Tyson R. Reuter**

Published online: 13 January 2010


**Abstract** Prior research indicates that both anxious youth and socially withdrawn youth tend to experience challenges and difficulties in various aspects of their peer relationships and social functioning. While clinical psychology researchers have examined how anxiety relates to peer experiences using normative and clinically anxious samples, developmental psychologists have focused primarily on the peer experiences of shy and withdrawn children. Research from these two fields has progressed on related yet separate paths, producing similar results despite using different terminology and assessment techniques. The purpose of this review is to bring together the developmental and clinical bodies of literature on the peer experiences of anxious and socially withdrawn youth by identifying common themes and unique contributions of each discipline. Studies reviewed focus specifically on the peer constructs of acceptance, friendship, peer victimization, social skills, and social-cognitive processes. Limitations including methodological inconsistencies and insufficient examination of age-, gender-, and ethnicity-related issues are identified. Recommendations for future collaborations between developmental and clinical researchers as well as implications for interventions targeting the peer relations of anxious and withdrawn youth are discussed.

J. N. Kingery (✉) · K. C. Marshall · K. G. Whitaker · T. R. Reuter
Department of Psychology, Hobart and William Smith Colleges, 300 Pulteney Street, Geneva, NY, USA
e-mail: kingery@hws.edu

C. A. Erdley
Department of Psychology, University of Maine, Orono, ME, USA

**Keywords** Anxiety · Social withdrawal · Peer acceptance · Friendship · Social skills

Fears are a normative aspect of development, though the nature of common fears changes from childhood through adolescence (Muris et al. 2000). In distinguishing typical fears from clinically significant anxiety, it is important to determine whether a child's fears and worries are age appropriate (e.g., fears of separation for a younger child versus an adolescent), and the extent to which his or her distress interferes with daily functioning (e.g., school performance, participation in social activities). The latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR, American Psychiatric Association 2000) includes nine different types of anxiety disorders, all of which can affect both children and adolescents. In terms of prevalence rates, anxiety is common; as many as one in five youth meet the criteria for an anxiety disorder (Costello et al. 2004).

Separation anxiety, generalized anxiety disorder, social phobia, and specific phobia are the anxiety disorders most commonly diagnosed among children and adolescents. These disorders are often comorbid with each other and have overlapping features (Kingery and Walkup 2005). For example, youth tend to express their anxiety in the form of physical complaints (e.g., headaches, stomachaches; Ginsburg et al. 2006), difficulty sleeping (e.g., falling asleep, nightmares; Alfano et al. 2007), disturbances in mood or mental state (e.g., irritability, difficulty concentrating), and behavioral symptoms (e.g., clinging to parents, tantrums, avoidance of feared situations).

Researchers in the field of clinical psychology have examined the impact of anxiety on academic, emotional, and interpersonal functioning. Anxious youth typically

have poor academic performance and difficulty attending school. They often avoid participating in extracurricular activities and social events (e.g., sleepovers, birthday parties), are less well-liked by their peers, and tend to have poor social skills (Albano et al. 2003). Time spent with peers increases from childhood through adolescence, and peer relationships offer important benefits (e.g., development of intimacy, companionship). Therefore, the disruptions in social functioning caused by anxiety can interfere significantly with children's development. Although most of the research examining associations between anxiety and social adjustment has been conducted with normative samples, a small number of studies have investigated the social functioning of clinically anxious youth. In general, the studies conducted with both normative and clinical samples have been published in clinical psychology journals, and little attention has been paid to key developmental issues, such as how the relationship between anxiety and specific aspects of social functioning (e.g., peer acceptance, friendship) varies depending upon the age or gender of the child.

## Social Withdrawal and Shyness

Although social withdrawal overlaps with anxiety, this construct is viewed as a behavioral symptom that is associated with various psychological disorders, including social and separation anxiety, phobias, and depression (Rubin and Burgess 2001). Research on the social functioning of withdrawn children has been published primarily by developmental psychologists, and the methods employed to classify these children differ from the strategies that clinical psychology researchers use to assess anxiety. According to Rubin et al. (2003), social withdrawal is a broad construct that can be a consequence of a fearful or inhibited temperament, rejection by the peer group, a lack of social motivation, or a child's desire to play alone. Kagan (1992, 2003) has extensively studied the temperamental attribute of behavioral inhibition, which includes the tendency to withdraw from unfamiliar people or situations. Longitudinal research has shown that behavioral inhibition is a moderately stable attribute. At age 4 months, behaviorally inhibited infants, compared to uninhibited infants, are fussier, show higher motor activity, and display greater physiological arousal (e.g., higher heart rates) when exposed to novel objects. When retested at ages 21 months, 4 years, 5–1/2 years, and 7–1/2 years, the inhibited children were found to be less sociable with unfamiliar peers and adults and more cautious about participating in activities that involved an element of risk than were their uninhibited peers. Notably, studies have demonstrated that individuals who are classified as behaviorally inhibited as infants and toddlers are more likely to be characterized as shy and socially anxious as adolescents (Kagan et al. 2007; Schwartz et al. 1999). The concepts of social withdrawal and behavioral inhibition overlap with the construct of shyness (Fordham and Stevenson-Hinde 1999; Rubin et al. 2006). Shy children have been described as being less talkative, but also exhibiting a lack of interaction with peers characteristic of children who are socially withdrawn (Fordham and Stevenson-Hinde 1999). In the developmental psychology literature, the terms shyness and social withdrawal are often used interchangeably, as these children behave similarly by actively separating themselves from peers (Rubin et al. 2006).

Shyness and social withdrawal can also be a behavioral manifestation of social anxiety (e.g., Rubin and Coplan 2004). When anxious youth experience decreases in anxiety following avoidance of social situations, this process reinforces the anxiety and leads to further avoidance and social withdrawal. Rubin and Burgess (2001) describe the relationship between anxiety and social withdrawal as cyclical in nature. Anxiety symptoms lead to avoidance of social situations, and this lack of peer interaction limits a child's opportunities to develop and practice social skills. Poor social skills lead to less effective peer interactions, heightened social anxiety, lower expectations of performance in social situations, and decreased self-esteem.

Similar to youth experiencing high levels of anxiety, shy and socially withdrawn youth display poor social skills, are not liked by their peers, and have difficulty establishing close friendships (Rubin and Burgess 2001). Given that developmental researchers who study social withdrawal do not typically assess symptoms of anxiety, the extent of overlap between anxiety and social withdrawal is unclear. However, as social withdrawal is a behavioral manifestation of anxiety, research on the social functioning of shy and socially withdrawn children has implications for anxious youth. Just as research on anxiety in the clinical literature could benefit from closer attention to developmental issues, the developmental literature on social withdrawal could be expanded by assessing symptoms of psychopathology, including anxiety and depression.

## Guiding Theoretical Perspective: Developmental Psychopathology

The developmental psychopathology perspective provides a theoretical rationale for integrating research methods, key concepts, and findings from the fields of developmental and clinical psychology. This theoretical approach emphasizes that there is a continuum between normal and abnormal development, and the same basic developmental principles apply to both adaptive and maladaptive developmental

courses. Importance is also placed on examining both normal and atypical patterns of development (Sroufe 1997). Developmental psychopathologists focus on issues such as how symptoms manifest differently across development, the antecedents and consequences of particular disorders, and factors that influence the course of a disorder. They also study children who exhibit risk factors for a particular disorder but do not develop the disorder, as well as those who do develop the disorder (Sroufe and Rutter 1984).

Emphasis is placed on longitudinal research and transactional patterns (i.e., dynamic, reciprocal interactions) between children and various developmental contexts, including the family (e.g., parents, siblings) and other social relationships (e.g., peers). Attention is also given to examining ways in which these contexts influence one another. For example, through secure attachment relationships with parents, children develop empathy and self-confidence, leading to positive interactions with peers (e.g., adaptive social skills, acceptance by the peer group, high quality friendships) from preschool through adolescence (see Contreras and Kerns 2000 for a review). Furthermore, parents socialize the development of children's emotions through direct instruction and modeling of various strategies for coping with emotions. This process of emotion socialization helps children develop emotion regulation skills that lead to social competence and positive interactions with peers (see Zeman et al. 2006 for a review). Parents also influence children's peer relationships by discussing strategies that children can use to navigate challenging social situations and by regulating opportunities for peer interaction (e.g., neighborhood choice, encouraging involvement in extracurricular activities; McDowell and Parke 2009). According to the developmental psychopathology perspective, adaptations to one's environment are heavily influenced by interpersonal relationships with individuals such as parents and peers (Sroufe 1997). Therefore, transactions between the child and his/her family and social contexts as well as interactions between these contexts have important implications for interventions aimed at placing youth on more adaptive developmental pathways.

## Historical Perspective on the Study of Children's Peer Relationships

As peer relationships make vital contributions to children's and adolescents' psychological development and well-being, the disruptions in social functioning experienced by anxious and socially withdrawn youth can have serious implications. Harry Stack Sullivan's (1953) interpersonal theory outlines a developmental progression of interpersonal needs that are satisfied through particular social relationships. Sullivan believed that fulfillment of these needs leads to feelings of security, whereas feelings of anxiety result when these needs are not met. The juvenile stage (6–9 years) is marked by the need for social acceptance. During the preadolescent stage (9–12 years), there is a need for intimacy and consensual validation, which is fulfilled primarily through involvement in same-sex friendships or "chumships." With friends or "chums," individuals share private information and create close friendships that are based on loyalty and trust. Through involvement in an intimate friendship, children and adolescents build a foundation of social skills to implement in both same- and opposite-sex relationships during adolescence and adulthood (Buhrmester 1990; Newcomb and Bagwell 1996).

In the book entitled, "Children's Peer Relations and Social Competence: A Century of Progress," Ladd (2005) discusses the accomplishments of three generations of research that have shaped the study of children's and adolescents' peer relationships. From the first (i.e., 1920s–1940s) to the second generation (i.e., 1970s–1980s), the focus of research shifted from children's *interactions* with peers (i.e., moment-to-moment verbal and physical exchanges) to the concept of their *relationships* with peers (i.e., a strong bond established through patterns of interaction over time). Therefore, much of the research during the second generation focused on making distinctions between friendship and peer acceptance, as well as creating reliable and valid methods for measuring these peer variables.

During the remainder of the second and into the third research generation (i.e., 1990s to present), peer researchers have examined aspects of social competence (primarily social skills and social-cognitive processes such as goals, attributions, self-efficacy, and outcome expectations) and the contributions of peer relationship experiences (e.g., friendship, victimization) to children's adjustment. Within these more recent studies, improvements have included increasingly sophisticated methods (e.g., direct observation combined with self-, peer-, and teacher-report), greater focus on longitudinal designs, and more advanced data analytic strategies. As Ladd (2005) explains, third generation researchers have continued to investigate aspects of friendship (e.g., qualitative aspects, gender differences, friendships of high- and low-accepted children, stability) and peer group acceptance (e.g., characterizing children who differ in acceptance level, identifying subtypes and antecedents of rejection). Recently, attention has also turned to topics such as peer victimization and girls' social behavior and relationships. As highlighted by Ladd (2005), several key peer (i.e., acceptance, friendship, victimization) and social competence (i.e., social skills, social-cognitive processes) variables have been the focus of research examining children's peer relationships during the second

and third generations of research in this field. Therefore, the present review will focus on the relationship between these particular variables (discussed further in the following paragraphs) and the adjustment variables of anxiety and social withdrawal.

## Key Aspects of Children's Peer Experiences and Their Developmental Significance

Over the past several decades, researchers have developed reliable and valid methods for measuring the peer variables of acceptance, friendship, and victimization. Popularity or peer acceptance refers to how well a child is liked by the larger peer group. To assess this variable, researchers often ask children to rate how much they like to play with each of their classmates and then calculate an average acceptance score for each child. Alternatively, children are asked to nominate several "most-liked" and "least-liked" peers, and this information is used to classify children into sociometric status groups [i.e., popular (highly liked, low on dislike), rejected (low on liking, highly disliked), neglected (low on liking and disliking), average, controversial (highly liked and highly disliked); Coie and Dodge 1988].

In contrast to peer acceptance, friendship refers to a mutual, dyadic relationship (Bukowski and Hoza 1989). Friendship is typically assessed by asking children to nominate their best friends within their class or grade, with children being identified as friends if they reciprocate one another's nominations. Researchers have been interested not only in the quantity of friendships in which children are involved but also in the quality of children's friendships (e.g., intimacy, validation, companionship), assessed using interviews and questionnaires. Other aspects of friendship experiences that have been studied include the characteristics of children's friends, the stability of friendships, and children's understanding of the friendship construct.

Peer relations research has increasingly focused on the extent to which youth are victimized or repeatedly harassed by peers. Research on peer victimization was initially conducted in Scandinavian countries in the 1970s, highlighted by the pioneering efforts of Olweus (1978). In contrast, research on peer relationships in North America in the 1970s and 1980s focused almost exclusively on peer acceptance and rejection. Olweus (2001) has argued that the assessment of peer acceptance and rejection does not focus directly on the behavioral and personality characteristics of the child and that it must be recognized that children may be disliked for very different reasons. The North American research tradition had strongly established that aggressive children are more likely to be rejected by peers. However, Olweus found that some children who were rejected by peers were in fact the targets of other children's aggression and showed a pattern of behavior characterized by anxiety and social withdrawal (i.e., passive victims; Olweus 1978). Olweus's plea that North American research on peer relations be expanded to investigate peer victimization has been answered with a growing body of literature. A major focus of these studies has been on the ways in which victimization by peers is related to children's anxiety and socially withdrawn behavior. Moreover, research on victimization has expanded to include assessments of specific forms of victimization, including overt (e.g., physical aggression, teasing) and relational (e.g., excluding others from the group, spreading rumors) victimization. Victimization data are typically obtained through self- and/or peer reports.

There is substantial evidence indicating that these peer experience variables (i.e., peer acceptance, friendship, victimization) make significant contributions to youths' adjustment, including loneliness and depression (e.g., Nangle et al. 2003; Panak and Garber 1992; Parker and Asher 1993), self-esteem (e.g., Berndt and Keefe 1996; Buhrmester 1990), absenteeism, academic achievement, and school drop-out (e.g., Buhs and Ladd 2001; Wentzel et al. 2004). Childhood peer relationship experiences also predict the quality of relationships and mental health in adulthood (e.g., Bagwell et al. 1998). Although relatively fewer in number, studies in the fields of developmental and clinical psychology have also examined links between the peer variables and anxiety. However, based on the limited number of longitudinal studies, the direction of the relationship between peer relationship difficulties and anxiety is unclear. While higher levels of anxiety lead to poorer peer functioning, there is also evidence that peer difficulties contribute to increases in anxiety across time.

To better understand the correlates and consequences of the difficulties that children encounter in their peer relationships, researchers have evaluated aspects of social competence, including social skills and social information processing. Social skills have been defined as the specific abilities that individuals use to effectively produce a certain social response (Clavell 1990). The various skills needed to produce a competent social response include behavioral (e.g., prosocial behavior, conversation skills, assertiveness), emotional (e.g., encoding and decoding affective cues, emotion regulation), and cognitive (e.g., perspective taking, skills for processing/acquisition) abilities (Nangle et al. 2010). Unfortunately, youth who experience high levels of anxiety and tend to withdraw from social situations may have limited opportunities to develop and practice social skills with peers. Across development, their skills are likely to continue to lag behind those of their peers, and consequently, they may not experience the full

potential benefits (e.g., validation, intimacy, companionship) that peer experiences can provide.

In addition to focusing on social skills, researchers studying social competence have been interested in the types of social-cognitive processes that might underlie individuals' behavioral choices (see Erdley et al. 2010, for a review). For example, the attributions children make for their own social successes and failures can influence their likelihood of trying to initiate a social interaction in the future. In addition, children's interpretation of a social partner's intentions in situations involving ambiguous provocation can impact their behavior. Other social-cognitive variables of interest include children's goals, social strategy repertoires, outcome expectations, and self-efficacy perceptions. Research on children's social-cognitive processes has illustrated that distortions or deficiencies in social-information processing may lead to maladaptive behavior. Indeed, socially anxious and behaviorally withdrawn youth tend to think about the social world in ways that discourage further social interaction, such as making self-defeating attributions and having negative outcome expectations.

## Purpose of this Review

As will be highlighted throughout this review, research conducted within the developmental and clinical psychology traditions has utilized different terminology and assessment techniques to examine behaviors and feelings related to anxiety and social withdrawal. Although this research has advanced our understanding of the particular types of challenges and difficulties that characterize the peer relationships of anxious and socially withdrawn youth, it is important to integrate findings from the fields of developmental and clinical psychology rather than continuing on related but separate paths. In keeping with the developmental psychopathology approach, the purpose of this review is to bring together the developmental and clinical bodies of literature on the peer experiences of anxious and socially withdrawn youth. Specifically, this review will focus on studies that have examined associations between several key peer constructs (i.e., acceptance, friendship, victimization, social skills, social-cognitive processes) that have been the focus of peer relations research during recent generations (Ladd 2005) and the adjustment variables of anxiety and social withdrawal. Following a comprehensive review of this literature, findings from the fields of developmental and clinical psychology will be integrated by identifying common themes and unique contributions of each tradition, as well as suggesting directions for future research that incorporate both developmental and clinical psychology principles.

## Identification of Studies and Organization of this Review

The literature search conducted for this review utilized the PsycINFO database and focused on research involving school-aged children and adolescents that has been published in peer-reviewed journals during the past two decades (i.e., from 1988 to 2009). Initially, keywords such as anxiety, shyness, and social withdrawal were combined with keywords for several peer constructs (e.g., acceptance, friendship, friendship quality, peer victimization, social skills, social-information processing). These particular peer variables were selected because they have been the focus of research examining children's peer relations and social competence in recent decades (Ladd 2005). The selection of anxiety-related keywords was guided by terminology used by researchers who have examined links between the peer variables and anxiety-related constructs. Studies in the field of clinical psychology tend to focus on symptoms of anxiety (see La Greca 2001), whereas shyness and social withdrawal have received considerable attention within the field of developmental psychology during the past several decades (see Rubin and Burgess 2001). Additional searches were conducted using author names from the studies identified through the initial keyword search. Studies were also located by reviewing the reference sections of articles obtained through the preliminary PsycINFO searches. To find the limited number of studies on the peer functioning of clinically anxious samples, we retrieved articles cited in book chapters on anxiety disorders among youth and carefully reviewed the method and results sections of these studies to determine their relevance for this review.

For this review, studies have been organized into three main sections. First, we review studies that consider the relationship between anxiety and peer functioning with normative or nonclinical samples. Next, studies examining the peer experiences of clinically anxious youth are discussed, followed by research with shy or socially withdrawn children and adolescents. A separate table of articles that highlights findings relevant to the peer variables is provided for each main section of the paper. Within each section, studies are grouped based on the following peer constructs: peer acceptance and friendship, peer victimization, social skills, and social-cognitive processes.

## Research Examining Links between Anxiety and Peer Experiences in Normative Samples

Research examining associations between anxiety and peer relationships with normative samples has focused primarily on symptoms of social anxiety. In general, findings indicate

that children and adolescents with high levels of social anxiety experience greater difficulties in their peer relationships. Across studies, several aspects of peer functioning have been assessed (e.g., peer acceptance, friendship, social skills, social-cognitive processes) with a variety of methods, including self-report questionnaires, peer nominations, interviews, and less often, direct observation of laboratory-based tasks (e.g., role-play). In addition to investigating direct correlations between anxiety and social functioning with peers, several studies have sought to identify factors that mediate this relationship. A more detailed evaluation of this research is discussed in the following sections.

## Links of Anxiety to Peer Acceptance and Friendship

### Anxiety and Peer Acceptance

Several studies have reported that neglected and rejected children have higher levels of social anxiety in comparison with those from other sociometric groups (Inderbitzen et al. 1997; La Greca et al. 1988; La Greca and Stone 1993). Nevertheless, results regarding the relationship between sociometric status and social anxiety vary somewhat across studies. For example, Bell-Dolan et al. (1995) found that rejected status girls had significantly higher levels of social anxiety symptoms (i.e., social avoidance and distress) than average status participants. However, neglected status girls did not differ significantly from popular or average status girls in terms of social anxiety symptoms. Surprisingly, Crick and Ladd (1993) found that neglected youth had significantly lower levels of social anxiety than both average and rejected groups, and their anxiety scores did not differ significantly from those of popular or controversial status youth. In this study, there was a significant gender by grade interaction, with fifth-grade girls reporting higher social anxiety than the other three groups (i.e., third-grade boys, third-grade girls, fifth-grade boys). Although there was a significant main effect for sociometric status, the sociometric status by gender and sociometric status by grade interactions were not significant. Unlike Crick and Ladd's (1993) study, several of the other studies cited in this paragraph have reported higher levels of social anxiety for girls compared to boys (i.e., Inderbitzen et al. 1997; La Greca et al. 1988; La Greca and Stone 1993) and higher social avoidance and distress for younger versus older children (La Greca et al. 1988; La Greca and Stone 1993); however, none have examined age or gender differences in the relationship between sociometric status and anxiety.

Studies have also explored the relationship between social anxiety and peer acceptance, based on both peer ratings and youths' perceptions of their acceptance by peers. Results indicate that higher levels of social anxiety are associated with lower peer acceptance scores for children and adolescents (Erath et al. 2007; Greco and Morris 2005; La Greca and Lopez 1998; La Greca and Stone 1993). In addition, La Greca and Lopez (1998) found that adolescents with higher levels of social anxiety reported lower levels of perceived acceptance and support from their classmates, and the relationships between social anxiety and social adjustment were stronger for girls than for boys. For girls, higher social anxiety was associated with lower perceived support from classmates and lower perceived peer acceptance. These correlations were significantly lower for boys than girls. In regression analyses, both peer acceptance and the number of close friends were more robust predictors of social anxiety for girls than for boys. In a more recent longitudinal study, Ladd and Troop-Gordon (2003) considered the role of children's perceived acceptance by peers in combination with their global self-worth, a construct that these researchers referred to as perceived social self-acceptance. Results of this study indicated that perceived social self-acceptance partially mediated the relationship between chronic peer difficulties (i.e., friendlessness, peer rejection) and internalizing problems (e.g., symptoms of anxiety and depression) from kindergarten to fourth grade, and the relationships between these variables did not differ for boys and girls. Although the methods used to evaluate peer acceptance have differed across these studies (see Table 1), findings linking social anxiety with lower peer acceptance converge across studies.

Using a different conceptualization of acceptance by the larger peer group, La Greca and Harrison (2005) asked participants to indicate the primary peer crowd with which they identify. Results indicated that adolescents in both high- (i.e., "jocks," "populars") and low-status peer crowds (i.e., "alternatives," "burnouts") reported lower levels of social anxiety. Both types of crowds appear to buffer adolescents from feelings of anxiety, perhaps because regardless of the crowd's status, adolescents affiliated with a crowd have opportunities for companionship and interactions with close friends (La Greca and Harrison 2005). Notably, although girls reported higher levels of social anxiety than boys, gender did not moderate the relationship between peer crowd affiliation and anxiety. In sum, these findings indicate that associations between peer acceptance and anxiety may differ depending upon the nature of the peer variable being assessed (i.e., peer acceptance versus peer crowd affiliation), with peer crowd affiliation serving as a protective factor.

**Table 1** Research examining links between anxiety and peer experiences in normative samples

| Study | Sample size/gender | Age and/or grade | Anxiety measure | Measures of social functioning | Key findings (*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Bell-Dolan et al. (1995) | $N = 129$ (0 boys) | 3rd to 5th grade | SASC; CBCL -parent and teacher | Limited most/least-liked nominations by grade or school to create 4 sociometric status groups (i.e., popular, rejected, neglected, average) | **A/F**—rejected significantly higher than average status on social avoidance and distress subscale of SASC; **A/F**—neglected did not differ from other status groups |
| Cartwright-Hatton et al. (2003) | $N = 110$ (59 boys) | 8–11 years ($M = 9.35$) | SPAI-C, ratings of anxiety before speech task | Children gave a 2-min videotaped speech about themselves; performance/social skills rated by children themselves and observers | **SS**—weak negative relationship between SA and observer-rated performance (i.e., appearing nervous); **SS—**higher anxiety before speech task related to lower self-reported performance |
| Crick and Bigbee (1998) | $N = 383$ (194 boys) | 4th and 5th grade | Social anxiety scale (Franke and Hymel 1984) | SEQ self-report and SEQ peer-report to assess relational and overt victimization | **V—**both relational and overt victimization were unique predictors of avoidance and SA |
| Crick and Grotpeter (1996) | $N = 474$ (249 boys) | 3rd to 6th grade | Social anxiety scale (Franke and Hymel 1984) | SEQ to assess relational and overt victimization | **V—**relational and overt victimization were unique predictors of SA |
| Crick and Ladd (1993) | $N = 338$ (181 boys) | 3rd and 5th grade; ($M = 9.5$ for 3rd grade and $M = 11.4$ for 5th grade) | Social anxiety scale (Franke and Hymel 1984) | Limited most/least-liked nominations by class to create 5 groups (i.e., popular, rejected, neglected, average, controversial) | **A/F**—neglected lower SA than average and rejected; **A/F**—neglected SA scores lower but not significantly different from scores of popular or controversial children |
| Erath et al. (2007) | $N = 333$ (37 males) | 6th and 7th grade | SAS-A | Peer Social Network Diagram; peer nominations of victimization (e.g., students who get picked on); teacher ratings of social withdrawal-disengagement; observation of conversation skills | **A/F**—SA related to lower peer acceptance; **V—**SA related to higher peer victimization; **SC—**negative performance expectations mediated relationship between SA and peer acceptance |
| Greco and Morris (2005) | $N = 333$ (144 boys) | 8–12 years ($M = 9.45$) | SPAI-C | Social preference/impact ratings based on unlimited most/least-liked nominations by classroom; limited friendship nominations; FQQ for very best friendship; SSRS by teachers | **A/F**—SA related to low levels of peer acceptance; **A/F**—friendship quality moderated the relationship between peer acceptance and SA for girls only; **SS—**social skills mediated the relationship between SA and acceptance |
| Grills and Ollendick (2002) | $N = 279$ (131 boys) | 11–13 years ($M = 11.75$); 6th to 8th grade | MASC | PVS; SPPC for global self-worth | **V—**higher victimization correlated with higher anxiety; **V—**for girls, self-worth was a mediator between peer victimization and anxiety; **V—**for boys, self-worth was a moderator |
| Hannesdóttir and Ollendick (2007) | $N = 92$ (35 boys) | 10–14 years ($M = 11.4$); 5th to 8th grade | SPAI-C | Self-Efficacy Questionnaire for Social Skills for Children (Ollendick and Schmidt 1987); Outcome Expectancy Questionnaire (Ollendick and Schmidt 1987) | **SC—**higher SA negatively correlated with self-efficacy and outcome expectancy; **SC—**self-efficacy with friends and with strangers (but not outcome expectancy) predicted SA in regression analysis |

**Table 1** continued

| Study | Sample size/gender | Age and/or grade | Anxiety measure | Measures of social functioning | Key findings (*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Inderbitzen et al. (1997) | $N = 973$ (473 boys) | 6th to 9th grade | SAS-A | Limited most-liked/least-liked nomination of same-sex classmates to create 5 groups (i.e., popular, rejected, neglected, average, controversial) | **A/F**—neglected and rejected had significantly higher SA than other three sociometric groups |
| Ladd and Troop-Gordon (2003)*<br>*Longitudinal: T1 (K), T2 (4th grade) | $N = 399$ (206 boys) at T1; $N = 381$ at T2 | $M = 5$ years, 6 months at T1; $M = 10$ years, 1 month at T2 | Aggressive and Anxious/Fearful subscales of CBS completed by teachers at T1; Withdrawn and Anxious/Depressed subscales of CBCL by teachers at T2 | Peer acceptance ratings, limited friendship nominations; limited nominations of physical and verbal victimization; chronicity of rejection, victimization, and friendlessness from 1st to 3rd grade (i.e., chronic peer difficulties); perceived acceptance and self-worth subscales of SPPC (i.e., perceived acceptance); PBI and PTQ for peer perceptions (e.g., prosocial, bossy, honest) | **A/F**—chronic friendlessness directly predicted T2 internalizing problems; **A/F**—relationship between chronic peer difficulties and internalizing problems partially mediated by perceived social self-acceptance for both boys and girls |
| La Greca and Harrison (2005) | $N = 421$ (174 boys) | 14–19 years ($M = 16.5$) | SAS-A | Peer Crowd Questionnaire (La Greca et al. 2001); victimization subscale of Revised Peer Experiences Questionnaire (Prinstein et al. 2001); Network of Relationship Inventory-Revised (Furman and Buhrmester 1985) | **A/F**—high and low-status peer crowd affiliation and positive best friend quality related to lower SA; **A/F**—negative best friend quality associated with higher SA; **V—**relational victimization associated with higher SA |
| La Greca et al. (1988) | $N = 287$ (158 boys) | 2nd to 6th grade ($M = 7.87$ for 2nd grade and $M = 11.88$ for 6th grade) | SASC; RCMAS | Limited nomination of most-liked peers and peer acceptance ratings; nominations and ratings from same-sex classmates to create 5 groups (i.e., popular, rejected, neglected, average, controversial) | **A/F**—neglected and rejected status had highest SA, followed by average, popular, and controversial; **A/F**—no group differences on RCMAS; **A/F**—mean liking score across sample correlated negatively with SA |
| La Greca and Lopez (1998) | $N = 250$ (101 boys) | 15–18 years ($M = 17.04$); 10th to 12th grade | SAS-A | SSSCA for perceived support from classmates and close friends; unlimited nonreciprocal best friend nominations; interview about quality of 3 closest friendships; SPPA for perceived social competence and close friendships | **A/F**—higher SA related to lower levels of perceived support from classmates and social acceptance; **A/F**—for girls, higher SA related to fewer friendships, lower intimacy, companionship, and support in close friendships |
| La Greca and Stone (1993) | $N = 587$ (294 boys) | 9–13 years ($M = 10.99$); 4th to 6th grade | SASC-R | Limited nomination of most-liked peers and peer acceptance ratings from same-sex classmates to create 4 groups (i.e., popular, rejected, neglected, average); SPPC for perceived acceptance | **A/F**—high SA related to lower social acceptance; **A/F**—neglected and rejected status children had higher SA than average or popular groups |
| London et al. (2007)*<br>*Longitudinal: T1 (fall of 6th), T2 (spring of 6th) | $N = 150$ (77 boys) | 6th grade | SASC-R | CRSQ to assess anxious/angry expectations of rejection; limited nomination of most-liked/least-liked peers by class to calculate social preference score and categorical measure of rejection | **SC**—for boys, T1 peer rejection predicted increased expectations of rejection; **SC**—T1 anxious expectations predicted increases in SA; **SC**—T1 angry expectations predicted decreases in SA |

**Table 1** continued

| Study | Sample size/gender | Age and/or grade | Anxiety measure | Measures of social functioning | Key findings(*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Morgan and Banerjee (2006) | $N = 56$ (30 boys) | 11–14 years ($M = 12.8$ for high SA group and $M = 12.5$ for low SA group) | SAS-A (scores > 49 selected for high SA group; scores < 35 selected for low SA group) | Social skills and refusal responses in role-play task adapted from Behavioral Assertiveness Test for Children (Bornstein et al. 1977); pre- and post-performance questionnaire (Spence et al. 1999) | **SS**—high SA made more eye contact, had fewer constructive refusal responses, and shorter response lengths (particularly girls); **SC**—high SA had more negative performance expectations |
| Slee (1994) | $N = 114$ (50 boys) who participated in Study 2 | 9–13.1 years ($M = 10.8$) | SASC | Tendency to be victimized (child self-report measure created by author) | **V**—tendency to be victimized significantly associated with fear of negative evaluation for boys and girls and also with social avoidance, especially for girls |
| Smári et al. (2001) | $N = 184$ (86 boys) | 14–15 years | SPAI-C | PCSC for social competence; participants were presented with hypothetical aversive social events and rated the likelihood of event happening, how costly it would be | **SC**—higher SA associated with lower perceived social competence, and higher likelihood and cost of negative social events |
| Storch et al. (2003a) | $N = 383$ (145 boys) | 13–16 years ($M = 14$); 9th and 10th grade | MASC; SAS-A; SPAI-C | SEQ to assess relational and overt victimization | **V**—overt and relational victimization were positively associated with three anxiety factors: fear of negative evaluation, physiological symptoms, social avoidance |
| Storch et al. (2003b) | $N = 205$ (95 boys) | 10–13 years ($M = 10.83$); 5th and 6th grade | SASC-R | SEQ to assess relational and overt victimization | **V**—overt victimization positively related to SA (i.e., fear of negative evaluation, social avoidance); **V**—for girls, relational victimization related to SA |
| Storch and Masia-Warner (2004) | $N = 561$ (0 boys) | 13–17 years ($M = 14$); 9th to 11th grade | SAS-A | SEQ to assess relational and overt victimization, and frequency of receiving prosocial behavior | **V**—overt and relational victimization positively correlated with SA (i.e., fear of negative evaluation, avoidance of general and new situations) |
| Storch et al. (2005)*<br>*Longitudinal: T1 (fall), T2 (one year later) | $N = 198$ (72 boys) at T1 and $N = 144$ (50 boys) at T2 | At T1, 13–15 years ($M = 13.9$); 9th grade | SAS-A; SPAI-C | SEQ to assess relational and overt victimization | **V**—T1 relational victimization predicted T2 SPAI-C but not SAS-A score; **V**—T1 anxiety did not predict T2 victimization; **V**—for boys, increases in anxiety were associated with increases in victimization across time |

**Table 1** continued

| Study | Sample size/gender | Age and/or grade | Anxiety measure | Measures of social functioning | Key findings(*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Vernberg et al. (1992)*<br>*Longitudinal: T1 (Sept.), T2 (Nov.), T3 (May) | $N = 68$ (38 boys) | 12–14 years ($M = 12.9$); 7th to 8th grade | SASC-R | Companionship and intimacy domains from The Friendship Interview (Berndt and Perry 1986); Rejection Experiences Questionnaire (Vernberg 1990a, b) | **A/F**—SA predicted companionship and intimacy in new friendships but not frequency of rejection; **A/F**—changes in friendship quality and rejection influence SA across time |

*CBCL* Child Behavior Checklist (Achenbach and Edelbrock 1978), *CBS* Child Behavior Scale (Ladd and Profilet 1996), *CRSQ* Children's Rejection Sensitivity Questionnaire (Downey et al. 1998), *FQQ* Friendship Quality Questionnaire (Parker and Asher 1993), *MASC* Multidimensional Anxiety Scale for Children (March 1997), *PBI* Peer Belief Inventory (Rabiner et al. 1993), *PCSC* Perceived Competence Scale for Children (Harter 1982), *PTQ* Peer Truth Questionnaire (Ladd and Troop-Gordon 2003), *RCMAS* Revised Children's Manifest Anxiety Scale (Reynolds and Richmond 1978), *SAS-A* Social Anxiety Scale for Adolescents (La Greca and Lopez 1998), *SASC* Social Anxiety Scale for Children (La Greca et al. 1988), *SASC-R* Social Anxiety Scale for Children-Revised (La Greca and Stone 1993), *SEQ* Social Experience Questionnaire Self-Report (Crick and Grotpeter 1996), *SPAI-C* the Social Phobia and Anxiety Inventory for Children (Beidel et al. 1995), *SPPA* Self-Perception Profile for Adolescents (Harter 1988), *SPPC* Self-Perception Profile for Children (Harter 1985a), *SSRS* Social Skills Rating System (Gresham and Elliot 1990), *SSSCA* Social Support Scale for Children and Adolescents (Harter 1985b)

## Anxiety and Friendship

In addition to acceptance by the larger peer group, research has revealed negative relationships between social anxiety and the number and quality of adolescents' friendships. In one of the few studies to examine number of friends, La Greca and Lopez (1998) found that higher levels of social anxiety were associated with involvement in fewer best friendships, but only for girls. In addition, girls with higher levels of social anxiety reported experiencing less intimacy and lower levels of companionship and support in their close friendships. Ladd and Troop-Gordon (2003) reported direct associations between chronic friendlessness from kindergarten to fourth grade and fourth grade internalizing problems. Also using a longitudinal design, Vernberg et al. (1992) considered the influence of social anxiety on companionship and intimacy in newly formed friendships of adolescents who had recently relocated. Data were collected across the school year in September (Time 1), November (Time 2), and May (Time 3). Results indicated a reciprocal relationship between social anxiety and friendship quality with higher intimacy and companionship at Time 1 predicting lower anxiety at Time 2. In turn, higher social anxiety at Time 2 predicted lower intimacy in friendships later in the school year. Furthermore, these relationships were similar for both boys and girls. Perhaps based on the narrow age range of the participants involved in this study (i.e., 12–14 years), age differences in the relationship between friendship and social anxiety were not examined.

More recent studies investigating social anxiety and friendship quality point to the importance of considering the role of both positive and negative aspects of adolescents' best friendships. La Greca and Harrison (2005) found that lower scores on positive friendship quality (e.g., companionship, disclosure, support, reliable alliance) and higher scores on negative friendship quality (e.g., conflict, criticism) were associated with higher levels of social anxiety. With a younger sample, Greco and Morris (2005) reported that relationships between qualitative aspects of friendship and anxiety varied slightly by gender. For both boys and girls, there was a positive correlation between social anxiety and negative friendship quality scores. For girls only, there was a negative relationship between anxiety and positive friendship quality scores. Whereas La Greca and Harrison (2005) suggest that having a best friendship that is high in positive qualities may protect adolescents from feelings of social anxiety, findings from Greco and Morris (2005) indicate that during the elementary school years, this may be true for girls only.

Finally, friendship quantity and quality have also been considered as moderators of the relationship between peer social preference ratings and social anxiety during childhood (Greco and Morris 2005). Results of this study

indicated that friendship quality served as a moderator of this relationship for girls such that girls with low social preference ratings who were also involved in friendships high in negative friendship qualities (e.g., conflict and betrayal) experienced high levels of social anxiety. In contrast, anxiety scores were lower for girls with low social preference ratings whose friendships were low in negative features. Friendship quality did not moderate this relationship for boys, and number of mutual friendships did not serve as a moderator for boys or girls. These researchers assert that their results point to the importance of close friendships, particularly for girls' adjustment (Greco and Morris 2005).

### Conclusion

Findings from the studies reviewed here illustrate associations between social anxiety and multiple dimensions of children's and adolescents' peer relationships. Whereas low peer acceptance is negatively associated with social anxiety, affiliation with peer crowds of varying status levels may actually protect adolescents from these anxious feelings. Research also indicates associations between social anxiety and aspects of friendship (i.e., quantity, quality). In terms of gender differences in the relationships between anxiety and the peer variables, there is some evidence to suggest that the association between peer acceptance and social anxiety is stronger for girls. Also for girls, there are more robust ties between social anxiety and friendship quantity and quality (i.e., La Greca and Lopez 1998). With the exception of one study reporting nonsignificant sociometric status by gender and sociometric status by age interactions (i.e., Crick and Ladd 1993), none of the other studies reviewed here have examined differences by age or gender in the relationship between sociometric status and anxiety. In addition, several studies have found that the relationships between peer variables and anxiety were similar for boys and girls (e.g., Ladd and Troop-Gordon 2003; La Greca and Harrison 2005; Vernberg et al. 1992) As relatively few studies have been conducted, further research is needed to make firm conclusions with respect to gender and age.

Variations in findings across studies may be related to the different methods used to assess peer acceptance and friendship (see Table 1). For example, to define friendships some researchers include all friends named whereas others consider only those friendships that are mutual. Likewise, methods have varied when assessing friendship quality (i.e., using interviews or self-reports, measuring different aspects of friendship quality, focusing on the quality of one best friendship versus averaging the quality of multiple best friendships). Replication of findings using consistent methods and further exploration of potential differences by gender and age will increase our understanding of the relationship between social anxiety and the peer variables. Potential differences by ethnicity should also be explored, as this demographic variable has not been considered in the studies reviewed here.

## Anxiety and Peer Victimization

Several decades of research have firmly established an association between anxiety and peer victimization in children and adolescents (see Hawker and Boulton 2000 for a meta-analytic review). In recent years, increasing attention has been focused on how certain types of victimization may be related to child outcomes. As stated previously, peer victimization can be either overt (e.g., harming others through physical actions and threats) or relational (e.g., harming others through exclusion, manipulation, and spreading rumors). Research has examined the unique contributions of these different forms of peer victimization to social anxiety primarily with adolescent samples. Both overt and relational victimization are associated with higher levels of social anxiety and also make unique contributions to the prediction of anxiety in regression analyses (Crick and Bigbee 1998; Crick and Grotpeter 1996; La Greca and Harrison 2005; Storch et al. 2003). Although Crick and Bigbee (1998) reported that both overt and relational victimization were significant predictors of social avoidance and anxiety for both boys and girls, results of more recent studies suggest that relational victimization may play a particularly important role in predicting social anxiety. La Greca and Harrison (2005) found that, relative to several other peer variables (e.g., overt victimization, peer crowd affiliation, positive and negative qualities of best friendships), relational victimization was one of the most robust predictors of social anxiety for both boys and girls. Regarding ethnicity, the relationship between relational victimization and anxiety was stronger for White than for Latino adolescents. Given that the White adolescents in their sample were a minority group within their school, La Greca and Harrison (2005) suggest the possibility that peer victimization is more detrimental to adolescents who are in the minority, regardless of their ethnic background. Storch et al. (2003b) also reported that relational victimization was a unique predictor of social anxiety (i.e., fear of negative evaluation, social avoidance), but only for girls. With the exception of La Greca and Harrison (2005), none of the studies reviewed in this paragraph examined possible ethnic differences regarding the influence of peer victimization on social anxiety. Finally, perhaps due to the narrow age range of the participants involved in each study, none considered whether the relationship between victimization and anxiety differs for older versus younger participants.

Several studies have examined the relationship between peer victimization and specific types of anxiety symptoms. For example, in a late childhood sample Slee (1994) found that children's self-reports of peer victimization were significantly associated with fear of negative evaluation (e.g., "I worry about what others think of me") for both boys and girls. In addition, victimization experiences were associated with social avoidance (e.g., "I'm quiet when I'm with a group of kids"), especially for girls. More recent research has included samples comprised either exclusively or predominantly of adolescent females (Storch et al. 2003a, b; Storch and Masia-Warner 2004). Across these studies, findings indicate that overt and relational victimization are associated with fear of negative evaluation, self-reported physiological symptoms (e.g., "I feel tense or uptight"), and social avoidance. In addition, both male and female adolescents who experience high levels of relational victimization or the combination of overt and relational victimization have higher social anxiety and avoidance compared to nonvictimized adolescents and those experiencing only overt victimization (Storch et al. 2003a).

In one of the few longitudinal studies to examine relationships between peer victimization and social anxiety, Vernberg et al. (1992) assessed three aspects of social anxiety (i.e., fear of negative evaluation, social avoidance and distress for new situations, general social avoidance and distress) and adolescents' report of their overall frequency of rejection experiences with peers (i.e., being teased or hit, being excluded from activities). Although social anxiety was not a significant predictor of rejection experiences across the school year, rejection experiences were a significant predictor of social anxiety (i.e., fear of negative evaluation) across time. Particularly for girls, greater exclusion from the beginning to middle of the school year was associated with increases in social avoidance and distress related to new situations. For both boys and girls, exclusion by peers from the middle to end of the school year predicted increases in general social avoidance and distress. More recently, Storch et al. (2005) assessed peer victimization and social anxiety during the fall of ninth grade (Time 1) and again one year later (Time 2). Results demonstrated that Time 1 relational victimization, but not overt victimization, significantly predicted scores on the Social Phobia and Anxiety Inventory for Children for both boys and girls, after controlling for gender and Time 1 anxiety scores. Neither overt nor relational victimization predicted the Social Anxiety Scale for Adolescents total score across time (see Table 1). According to Storch et al. (2005), these findings suggest that relational victimization may be a better predictor of specific symptoms of social phobia than of general social anxiety and avoidance.

Recent studies have attempted to further explain the relationship between anxiety and peer victimization. For example, Grills and Ollendick (2002) explored the potential moderating and mediating effects of global self-worth on the relationship between peer victimization (both overt and relational) and anxiety. Results revealed that global self-worth mediated the relationship between peer victimization and anxiety for girls, indicating that victimization negatively influences their self-esteem, and this contributes to higher levels of anxiety. For boys, global self-worth moderated this relationship, such that boys who reported high levels of victimization but also high self-worth had significantly lower levels of anxiety than boys with low self-worth. Similarly, Ladd and Troop-Gordon (2003) found that social self-concept (i.e., perceived peer acceptance and global self-worth) mediated the relationship between victimization and internalizing problems (e.g., symptoms of anxiety and depression) during fourth grade for both boys and girls. In examining another possible moderator, Storch and Masia-Warner (2004) found that prosocial behavior moderated the effects of relational victimization on loneliness but not on social anxiety.

In a more recent study examining factors that influence the relationship between peer victimization and anxiety, Erath et al. (2007) found that boys experienced higher levels of victimization than girls. Furthermore, gender moderated the relationship between social anxiety and victimization (i.e., physical and relational) such that the associations between social anxiety and both peer- and self-reported victimization were stronger for boys than for girls. In explaining their results, Erath et al. (2007) emphasize that their study is among the first to examine gender differences in the relationship between social anxiety and peer victimization. These researchers point out that in contrast to La Greca and Lopez (1998) who found that social anxiety was more closely tied to fewer friends and lower quality friendships for girls, their findings suggest that social anxiety may disrupt peer relationships in a different way for boys. More specifically, boys who exhibit passive and withdrawn behavior associated with social anxiety may be particularly vulnerable to bullying and victimization by other boys, as they are not conforming to socialization pressures to be assertive and involved in the larger peer group. Erath et al. speculate that their findings may relate to the gender difference in peer cultures (i.e., girls' focus on dyadic relationships, boys' orientation to the larger peer group) that emerges in early adolescence.

## Conclusion

Overall, research suggests that both overt and relational victimization contribute to higher levels of various aspects of social anxiety, including fear of negative evaluation,

social avoidance, and self-reported physiological symptoms. In addition, it appears that relational victimization is a particularly important predictor of social anxiety. With respect to gender differences, some studies indicate that relational victimization predicts social anxiety for girls only (i.e., Storch et al. 2003b), whereas others have found that relational victimization is a robust predictor of anxiety for both boys and girls (i.e., La Greca and Harrison 2005; Storch et al. 2003a). Preliminary evidence suggests that the experience of being victimized by peers may have different consequences for boys and girls. Specifically, for boys, the behavioral manifestation of social anxiety (i.e., withdrawal, disengagement from the peer group) may result in an increased vulnerability to victimization by peers (e.g., Erath et al. 2007), whereas for girls peer victimization may contribute to higher levels of social avoidance (Slee 1994). Further research is needed to determine how the relationship between victimization and anxiety varies by gender.

Results of the few longitudinal studies that have been conducted indicate that peer victimization predicts social anxiety across time; however, additional longitudinal research is needed to clarify the direction of the relationship between these variables. Based on one study conducted with a middle school-aged sample (Grills and Ollendick 2002), self-worth appears to be an important mediator of the relationship between peer victimization and anxiety for girls and a moderator of this relationship for boys. Evidence presented by Ladd and Troop-Gordon (2003) suggests that social self-concept mediates the relationship between peer victimization and internalizing difficulties for both boys and girls in late elementary school. The discrepant findings across these two studies could be related to varying methods used to measure self-worth and anxiety or possibly an age-related pattern in the influence of self-concept on the relationship between victimization and social anxiety. Additional research is needed to replicate these findings and explore other potential mediators and moderators including age and ethnicity, variables that have been considered in very few studies that have been conducted thus far. La Greca and Harrison (2005) suggest that peer victimization may be more detrimental to youth in the group that is considered the ethnic minority, although this assumption awaits empirical validation.

## Relationship of Anxiety to Social Skills and Social-Cognitive Processes

### Anxiety and Social Skills

In recent years, researchers have sought to identify factors that might explain why youth experiencing high levels of social anxiety tend to have poor social adjustment. Some investigations have explored the role of social skills. Greco and Morris (2005) found that social skills (e.g., cooperation, assertiveness, self-control) as reported by teachers mediated the relationship between social anxiety and peer acceptance in a sample of 8- to 12-year-old boys and girls. Another study that examined the relationship between social anxiety and social skills during a videotaped speech task found relatively low correlations between social anxiety and observers' ratings of social skills (Cartwright-Hatton et al. 2003). However, children with high levels of anxiety perceived themselves as having poor social skills, as evidenced by their low self-reported performance ratings. Regression analyses examining the relative contributions of children's ratings of their own skills and observer ratings of social skills revealed that only children's ratings were a significant predictor of social anxiety. Older children exhibited slightly higher levels of social anxiety than younger children, and girls reported significantly higher levels of anxiety than boys. However, this study did not examine possible age or gender differences in the relationship between social skills and anxiety.

### Anxiety and Social-Cognitive Processes

In addition to social skills, studies have examined how various social-cognitive processes, including children's expectations for their performance and outcomes in social situations and their self-efficacy perceptions (i.e., confidence, ability to be successful in a social interaction), might relate to social anxiety. For example, Smári et al. (2001) reported that youth with higher levels of social anxiety have poorer perceptions of their social abilities and more negative appraisals of social situations (i.e., rate negative hypothetical social events as being both more likely to occur and having more aversive consequences). Although girls' ratings of the costs and likelihood of negative events were higher than those of boys in the Smári et al. (2001) study, gender was not a significant predictor of social anxiety in regression analyses and gender by situational appraisal interaction terms were not examined. Similar to Smári et al., Morgan and Banerjee (2006) found that, compared to youth with low levels of social anxiety, those with high anxiety made more eye contact (perhaps due to reassurance seeking), provided shorter responses (particularly girls), had fewer constructive responses (e.g., offering a question or solution), anticipated more negative outcomes prior to a peer role-play task, and rated a videotape of their performance more negatively. Finally, Erath et al. (2007) found that participants' negative expectations on a videotaped task (i.e., talk show interview with a research assistant) and their socially withdrawn behavior (as rated by teachers)

mediated the relationship between social anxiety and peer acceptance. In this study, the models linking social anxiety with peer adjustment were not examined separately by gender. Taken together, these results provide evidence that both social skills deficits and negative outcome expectancies are associated with social anxiety among youth.

Extending research on outcome expectations, Hannesdóttir and Ollendick (2007) explored the role of children's feelings of self-efficacy in social situations and the relative contributions of self-efficacy versus outcome expectations to social anxiety in response to hypothetical situations with friends and strangers. To control for gender and age, these variables were entered as covariates in the regression analyses, but findings related to these two variables are not reported. Results indicated that self-efficacy in interactions with friends and strangers was a better predictor of social anxiety than outcome expectations, suggesting that children's confidence in their performance plays an especially important role in their anxiety about social situations. Finally, examining a different type of social expectations, London et al. (2007) considered social anxiety as a consequence of anxious and angry expectations of rejection (i.e., extent to which youth feel nervous and/or mad in response to situations involving potential rejection by peers). This longitudinal study followed participants from the fall (Time 1) to the spring (Time 2) of their sixth-grade year to examine whether peer rejection predicts increases in anxious and angry expectations of rejection and whether these expectations predict changes in social anxiety across time. In this study, gender and race (i.e., Latino, African American) were entered as predictors to control for these variables, and gender interaction terms were also created to test for gender differences in the regression analyses. Results revealed that for boys only, peer rejection at Time 1 predicted increased anxious and angry expectations at Time 2. For all participants, anxious expectations of rejection at Time 1 predicted increased levels of social anxiety at Time 2, and angry expectations at Time 1 predicted decreases in social anxiety across time. As London et al. (2007) suggest, anxious expectations of rejection increase youths' vulnerability to social anxiety. Although it appears that rejection may be perceived differently by boys as compared to girls, there was no evidence of gender differences in the relationship between anxious or angry expectations and social anxiety. Overall, these findings point to the importance of examining the cognitive processes that may help explain the relationship between peer rejection and maladaptive behavior such as anxiety and aggression.

### Conclusion

Research has demonstrated that poor social skills, negative outcome expectancies, and low self-efficacy are associated with elevated levels of social anxiety. These results have important implications for intervention, indicating that it may be necessary to target both social skills and social-cognitive processes (e.g., performance expectations, self-efficacy) in order to reduce social anxiety among children and adolescents. Greco and Morris (2005) speculate that because socially anxious youth have limited practice in social situations, this interferes with the development of social skills. In turn, poor skills and negative interactions with peers lead to increased avoidance and further social anxiety. As Erath et al. (2007) suggest, the relationship between social performance expectations and anxiety is likely reciprocal, as negative expectations can hinder children's actual behavior in social situations (e.g., lead to less positive affect, fewer verbalizations), and these difficulties cause further increases in negative expectations. Overall, there is support for the premise that youth experiencing high levels of anxiety have social skills deficits, as well as lower expectations for their performance and outcomes for social situations. Additional research is needed to determine the relative importance of and reciprocal relationships among these variables. Furthermore, very few of the studies reviewed in this section have examined possible differences by age, gender, or ethnicity in the relationship between social skills or social-cognitive processes and anxiety. Results of one study conducted by London et al. (2007) suggest that for boys, peer rejection leads to greater expectations of rejection which, in turn, predicts increases in social anxiety. Further research examining age and gender differences in youths' perceptions of situations with peers could elucidate social-cognitive mechanisms and social behavior that link negative peer experiences with higher levels of social anxiety for both boys and girls.

## Research Examining Links between Anxiety and Peer Experiences in Clinically Anxious Youth

Although many studies have examined the peer relationship experiences of children who exhibit symptoms of social anxiety, a more limited amount of research has investigated the social functioning of children and adolescents with anxiety disorders. Not surprisingly, clinically anxious youth tend to have difficulties in a variety of social interactions. They are less accepted by the peer group and are less apt to have friends. Although research indicates that more severe symptoms are associated with higher rates

of peer victimization among youth diagnosed with obsessive–compulsive disorder (OCD), little is known about the victimization experiences of other diagnostic groups. Children and adolescents diagnosed with various types of anxiety disorders tend to show deficiencies in social skills, and their lack of positive peer contact leaves them with little opportunity to develop and practice skills. Moreover, anxious youth tend to have negative perceptions about their effectiveness in social situations, further contributing to an avoidance of social interactions and maintenance of social anxiety. Research that has examined the social functioning of clinically anxious youth is reviewed in the following paragraphs.

## Links of Clinical Anxiety to Peer Acceptance and Friendship

In comparison to research conducted with normative samples, a relatively small number of studies have evaluated the peer acceptance and friendships of clinically anxious children and adolescents. Given that these studies are typically conducted in clinic rather than school settings, researchers rely more on information from parents and teachers than on peer reports (e.g., reciprocal friendship nominations, peer acceptance ratings, peer ratings of behavior).

### Clinical Anxiety and Peer Acceptance

In one of the few studies to obtain information from peers, Strauss et al. (1988) found that youth diagnosed with anxiety disorders received significantly fewer liked-most nominations than controls and were also more likely to be classified in the neglected peer status group. Chansky and Kendall (1997) also reported that anxious youth were perceived as being less well-liked than their nonanxious peers; however, this finding was based on sociability ratings completed by parents and teachers (e.g., "How well-liked is your child?") instead of a sociometric classification.

In addition to obtaining information from peer or adult informants, several studies have examined children's perceptions of their social acceptance using the Self-Perception Profile for Children. This measure assesses the extent to which children feel popular, have friends, and feel that most kids like them (Harter 1985a). Although this construct has been referred to as social competence, Harter (1985a) states that these items do not directly assess social skills. In this review, these findings will be discussed as children's perceptions of their social acceptance. In an early study on this topic, Strauss et al. (1989) found that clinically anxious children's perceptions of their social acceptance were significantly lower than those of children who met the criteria for a psychological disorder other than anxiety (e.g., conduct disorder, Attention-Deficit/Hyperactivity Disorder) and children who did not meet criteria for any disorder. Chansky and Kendall (1997) also found that clinically anxious children perceived themselves as being less well-liked and accepted by their peers relative to control children when faced with a situation that involved joining a group of unfamiliar peers. Finally, based on a large sample of youth who met the criteria for various anxiety disorders, Ginsburg et al. (1998) reported that higher scores on a self-report measure of social anxiety were associated with lower levels of perceived social acceptance for girls, but not for boys.

A recent study used a novel methodological approach to evaluate peers' perceptions of anxious youths' behavior, as well as peer liking (Verduin and Kendall 2008). In this study, unfamiliar peers rated anxious participants' videotaped speech samples for state anxiety and peer liking (e.g., how much they liked the child on the videotape, how much they thought the child would make a good friend). Results indicated that peer ratings of anxiety were inversely related to peer liking scores, suggesting that children who are perceived by their peers as anxious are less well-liked than those who do not look anxious. In addition, anxious youth diagnosed with social phobia had significantly lower peer liking scores and higher peer-rated anxiety scores compared to controls. Furthermore, social phobia was the only anxiety disorder that emerged as a unique predictor of lower peer liking in regression analyses, after controlling for peer-reported anxiety scores. Verduin and Kendall (2008) also reported that anxious children's age was not associated with the peer anxiety ratings or peer liking scores. Furthermore, factors such as the anxious youths' age and racial status or the racial status of the peer raters did not moderate the relationship between peer-rated anxiety and the peer liking scores. These researchers emphasize the importance of obtaining peer report when assessing the social functioning of anxious youth, given that internalizing difficulties are not as readily noticed by adult reporters (e.g., parents, teachers).

### Clinical Anxiety and Friendship

A small number of studies have assessed anxious children's friendships and involvement in peer interactions. For example, Chansky and Kendall (1997) found, based on parent report, that children with an anxiety disorder had significantly fewer friends than did controls. However, parents and teachers reported that anxiety disordered children were just as likely as control children to have at least one best friend. Interestingly, for controls but not for anxious youth, having a best friend was associated with lower levels of social anxiety. Using a structured interview to assess friendship experiences, Beidel et al. (1999)

discovered that 75% of their participants with social phobia reported having no or few friends. In addition, Beidel et al. (1999) reported that 50% of their child and adolescent participants with social phobia were not involved in any extracurricular or peer activities. Behavioral observations of peer interactions at school have also revealed that children diagnosed with social phobia spend less time interacting with peers, initiate fewer interactions, and receive fewer positive responses from their peers compared with controls (Spence et al. 1999). Although Spence et al. found no gender or age differences on these measures, they emphasize that it is premature to make definitive conclusions due to the small number of participants involved in their study (i.e., 27 children diagnosed with social phobia and 27 control children).

### Conclusion

Based on a relatively limited number of studies, it appears that clinically anxious youth are less well-accepted by their peers, although it is unclear whether these children are simply neglected or actively rejected. Further research is needed, including examining whether social anxiety has different consequences for peer acceptance as a function of child age, ethnicity, and gender. In addition to being less accepted by their peers, anxious youth report feeling less popular, having fewer friends, and feeling that other children do not like them. These findings indicate that they are aware of their lower levels of acceptance, which could exacerbate feelings of social anxiety and cause other adjustment difficulties such as loneliness or depression.

In terms of friendship, little is known about how friendship status may vary for different diagnostic groups (e.g., social phobia vs. separation anxiety) and researchers have yet to examine specific qualitative aspects and anxious youths' friendships. It is possible that anxious youth have lower quality friendships or, as suggested by Chansky and Kendall (1997), that anxious children have doubts about the extent to which their friend actually likes them. Little is known about the identity of anxious children's friends. Based on the concept of homophily, anxious children may develop friendships with other anxious children, and through processes such as co-rumination they may expand one another's feelings of anxiety. Clearly, much more research is needed to understand the size and quality of anxious children's friendship networks. Finally, high levels of social anxiety among clinical samples are associated with limited involvement in activities with peers and more negative peer interactions. Additional studies utilizing peer reports of anxious children's social functioning and laboratory-based tasks involving interactions with peers will provide further insight into the peer interactions of these youth.

## Clinical Anxiety and Peer Victimization

The few studies to examine peer victimization among clinically anxious samples have focused almost exclusively on the diagnostic category of OCD. For example, Storch et al. (2006) found that children and adolescents with OCD experience higher rates of peer victimization as compared to youth with a chronic medical condition (i.e., Type I diabetes) as well as healthy controls. In addition, children and adolescents with more severe OCD symptoms report higher levels of peer victimization which, in turn, predict child reports of loneliness and depression and parent reports of externalizing (but not internalizing) symptoms (Storch et al. 2006). Notably, among the youth diagnosed with OCD in this study, rates of peer victimization did not vary by age or gender. Research also indicates that after controlling for age, gender, and severity of OCD symptoms, higher levels of perfectionism predict higher levels of victimization among youth diagnosed with OCD (Ye et al. 2008). In one of the few studies to examine victimization among youth diagnosed with various anxiety disorders other than OCD (e.g., simple phobia, separation anxiety disorder, generalized anxiety disorder, panic, social phobia), Ginsburg et al. (1998) found that higher social anxiety scores were associated with more negative peer interactions (e.g., being teased or hit).

### Conclusion

With the exception of the findings reviewed here, little is known about the nature and extent of peer victimization among clinically anxious youth. The role of gender, age, and the severity and chronicity of anxiety should be explored further. Research is also needed to better understand the victimization experiences of children and adolescents with anxiety disorders other than OCD and to compare levels of victimization for various diagnostic subgroups. Similar to the Ye et al. (2008) study, it will be important for future studies to identify factors (e.g., particular behaviors or beliefs) that help explain why youth with OCD and perhaps other anxiety diagnoses are more likely to be victimized by their peers.

## Relationship of Clinical Anxiety to Social Skills and Social-Cognitive Processes

### Clinical Anxiety and Social Skills

In general, research findings indicate that anxious youth have lower social skills relative to their nonanxious peers. Social skills have been evaluated using questionnaires and

behavioral assessment techniques. Several studies have utilized structured role-plays with peer confederates and a videotaped read-aloud task to assess the social skills of children and adolescents diagnosed with social phobia (see Table 2). For the read-aloud task, children read an age-appropriate story (e.g., Jack and the Beanstalk) aloud for 10 minutes in front of a peer confederate and one or two adult assessors involved in the research study (i.e., Alfano et al. 2006; Beidel et al. 1999). The role-plays involve situations such as having a conversation with a peer, receiving a peer's offer to help, and asking a peer to change his or her behavior (i.e., Alfano et al. 2006; Beidel et al. 1999; Spence et al. 1999). Observers rate the overall effectiveness of children's behavior in these situations, as well as specific social skills such as eye contact, response latency, and speech length. Findings indicate that during the role-play task, compared to controls, anxious youth are rated lower on overall effectiveness (Alfano et al. 2006; Beidel et al. 1999) and assertiveness (Spence et al. 1999), have longer speech latencies (Alfano et al. 2006; Beidel et al. 1999), and use fewer words when responding to peers (Spence et al. 1999). Children with social phobia are also rated as being less effective (Alfano et al. 2006; Beidel et al. 1999) and have longer speech latencies (Alfano et al. 2006) during the read-aloud task.

To examine possible age effects in observer-rated performance, Alfano et al. (2006) compared the scores of adolescent (i.e., 12–16 years) and child (i.e., 7–11 years) participants. Results indicated no age effect or age by group interaction for ratings of social effectiveness or facial gaze in the role-play or read-aloud tasks. For speech latencies, there was a main effect for age with younger children having significantly longer speech latencies during the role-play task than adolescents. In addition, results of a significant group by age interaction for speech latencies revealed that children with social phobia had significantly longer latencies than youth in the other three groups (i.e., control group children, control group adolescents, adolescents with social phobia). The studies conducted by Spence et al. (1999) and Beidel et al. (1999) did not examine age or the interaction between age and diagnostic status (i.e., social phobia, control group) in relation to observer-rated social skills.

When using questionnaires to assess anxious children's social skills, researchers have obtained results similar to those found when relying on observer ratings. For example, Strauss et al. (1989) reported that compared to controls, children who met the criteria for various anxiety disorders (not including social anxiety) were rated by parents and teachers as having lower levels of appropriate social skills and higher levels of shyness. Parent ratings of social skills and assertiveness have also been found to be lower specifically for children with social phobia (Spence et al. 1999). Using samples of children diagnosed with various anxiety disorders including social anxiety, Chansky and Kendall (1997) reported that anxious children were rated lower than controls on the broad construct of sociability (e.g., shyness, withdrawal, acceptance) by both parents and teachers, whereas Ginsburg et al. (1998) found that only girls who reported higher levels of social anxiety were rated by parents as being lower in assertive and responsible social behavior.

### Clinical Anxiety and Social-Cognitive Processes

In several studies, laboratory-based tasks have been used to assess clinically anxious children's performance expectations and thoughts related to social situations. Researchers have measured these social-cognitive processes using the same structured role-plays and videotaped read-aloud tasks described previously (see also Table 2). Whereas Spence et al. (1999) found that clinically anxious youth have more negative expectations for their performance compared to controls on both of these tasks, Alfano et al. (2006) found this group difference for the role-play but not the read-aloud task. When examining possible age effects, Alfano et al. revealed a group by age interaction for the role-play task such that adolescents with social phobia had significantly lower expectations of their performance than adolescents in the control group. In contrast, the performance expectations of socially anxious children were not significantly different from those of control children for the role-play task. Furthermore, when watching a videotape of their involvement in the role-play and read-aloud tasks, anxious participants have reported a significantly greater number of negative thoughts about their performance (Alfano et al. 2006; Spence et al. 1999). In terms of children's self-evaluations of performance, Alfano et al. reported that anxious youth rated their performance lower relative to controls on the role-play task but not the read-aloud task. In contrast, Spence et al. found no significant difference between the two groups on either of these tasks.

Anxious children's thoughts about social situations have also been assessed using hypothetical or anticipated social situations. For example, Chansky and Kendall (1997) asked anxious and control children to list their thoughts about an anticipated social interaction (i.e., possibly joining a group of unfamiliar peers playing a game in the next room). Results indicated that anxious youth were more likely than controls to anticipate being rejected and disliked by the group (Chansky and Kendall 1997). In a subsequent study, Spence et al. (1999) assessed anxious and control participants' ratings of the likelihood that they would experience hypothetical events (i.e., positive/social, negative/social, positive/nonsocial, negative/nonsocial). Results revealed that clinically anxious children and

**Table 2** Research examining links between anxiety and peer experiences in clinically anxious youth

| Study | Sample size/gender (*AD* anxiety disorder, *C* control) | Age and/or grade | Groups (*GAD* generalized anxiety disorder, *SAD* separation anxiety disorder, *SP* social phobia) | Measures of social functioning | Key findings (*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Alfano et al. (2006) | $N = 80$ (41 boys) AD = 50; C = 30 | 7–16 years ($M = 11.94$ for AD and $M = 11.87$ for C) | AD met DSM-IV criteria for SP | Role-play task with peer confederate to assess social skills; read-aloud task; child ratings for expectations of performance; observer ratings of performance; coded children's self-talk while watching video of performance | **SS**—AD < C on observer ratings of performance during two tasks; **SC**—AD < C on expectations of performance for role-play but not read-aloud task; **SC**—AD > C on negative performance thoughts |
| Beidel et al. (1999) | $N = 72$ (45 boys) AD = 50; C = 22 | 7–14 years ($M = 10.1$ for AD and $M = 11.7$ for C) | AD met DSM-IV criteria for SP | SPAI-C; ratings of skill and anxiety in a peer role-play task and a read-aloud performance task; ADIS-C interview questions about friendship and activity involvement | **A/F**—75% of AD reported no or few friends; **A/F**—50% of AD not involved in any extracurricular or peer activities; **SS**—AD < C on social skills during both tasks; **SS**—AD > C on speech latencies in role-play task |
| Chansky and Kendall (1997) | $N = 78$ (45 boys) AD = 47; C = 31 | 9–15 years ($M = 11.42$ for AD and $M = 11.45$ for C) | AD met DSM-III-R criteria for overanxious disorder, SAD, or avoidant disorder | CBCL social competence subscale completed by parents and teachers; CSS by parents and teachers; SASC-R; social self-perception subscale of the SPPC; SEQ; thought listing task | **A/F**—AD < C for perceived social competence and number of friends; **SS**—AD < C for sociability and AD > C avoidance of social situations; **SC**—AD > C for negative social expectations and thoughts |
| Ginsburg et al. (1998) | $N = 154$ (93 boys) AD = 154; C = 0 | 6–11 years ($M = 8.58$) | DSM-III-R primary diagnosis: simple phobia ($n = 65$), SAD ($n = 36$), overanxious disorder ($n = 25$), SP ($n = 13$), panic/agoraphobia ($n = 6$), GAD ($n = 5$), avoidant disorder ($n = 1$) | FQ to assess positive and negative peer interactions; SASC-R; SPPC; SSRS completed by parents | **A/F**—higher SA scores correlated with lower perceived social competence; **V—**higher SA related to more negative interactions with peers; **SS**—greater SA associated with lower social skills for girls but not for boys |
| Spence et al. (1999) | $N = 52$ (24 boys) AD = 27; C = 27 | 7–14 years ($M = 10.93$ for AD and $M = 11.00$ for C) | AD had primary diagnosis of SP based on ADIS-C-Parent Version | BAT-CR for assertiveness during role-play task; CABS; SSQ-P; SSQ-PU; behavioral observation at school; SCPQ-P; SCPQ-PU; Subjective Probability Scale for hypothetical social events; expectations of performance for role-play and read-aloud tasks; positive and negative cognitions for videos of two tasks | **A/F**—AD fewer interactions with peers at school and less likely to receive positive responses from peers**; SS**—AD < C on assertiveness and number of words during role-play, social skills rated by self and parents; **SC**—AD > C on negative cognitions; **SC**—AD < C on expecting positive hypothetical situations to occur, expectations of performance on two tasks |
| Storch et al. (2006) | $N = 156$ (78 boys) AD = 52; C with Type I diabetes = 52; healthy C = 52 | 8–17 years ($M = 12.0$) | AD met criteria for obsessive–compulsive disorder based on CY-BOCS and clinical interview | SPVS | **V**—AD > C with diabetes and healthy C for peer victimization; **V**—positive correlation between peer victimization and severity of OCD symptoms; **V**—positive correlation between severity of obsessions and compulsions and peer victimization |

**Table 2** Research examining links between anxiety and peer experiences in clinically anxious youth

| Study | Sample size/ gender (*AD* anxiety disorder, *C* control) | Age and/or grade | Groups (*GAD* generalized anxiety disorder, *SAD* separation anxiety disorder, *SP* social phobia) | Measures of social functioning | Key findings (*SA* social anxiety, *A/F* acceptance and friendship, *V* victimization, *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Strauss et al. (1988) | $N = 87$<br>AD = 16; conduct disorder = 26; C = 45 | 6–13 years | AD met DSM-III criteria for overanxious disorder ($n = 4$), SAD ($n = 3$), OCD ($n = 1$), or some combination ($n = 8$) | Limited most-liked/least-liked sociometric nominations by classroom to create 3 sociometric status groups (i.e., popular, rejected, or neglected) | **A/F**–C > AD and conduct disorder for most-liked nominations; conduct disorder > AD and C for least-liked nominations; **A/F**—youth with conduct disorder more likely classified as rejected; **A/F**—youth with AD more likely classified as neglected; only 1 child with AD classified as popular |
| Strauss et al. (1989) | $N = 93$<br>AD = 55, non-AD = 18, C = 20 | 5–17 years ($M = 10.8$ for AD, $M = 9.6$ for non-AD, $M = 9.4$ for C) | AD met DSM-III criteria for SAD ($n = 12$), overanxious disorder ($n = 13$), both SAD and overanxious ($n = 17$), simple phobia of school ($n = 11$), other simple phobia ($n = 2$) | MESSY and PCSC for social competence—completed by children, parents, and teachers; Walker Problem Behavior Identification Checklist (e.g., disturbed peer relations, withdrawal, overall social maladjustment; Walker 1983); teacher ratings of social behavior | **A/F**—AD < non-AD and C on perceived social competence; **SS**—AD < C on self-reported social skills; **SS**—AD < non-AD and C on social skills as rated by parents; **SS**—AD similar to non-AD on teacher measures; **SS**—specific teacher-rated social deficits: AD more shy and timid, non-AD more aggressive and bossy |
| Verduin and Kendall (2008) | $N = 80$ (45 boys)<br>AD = 62; non-AD = 18 | 9.5–13 years | AD met DSM-IV criteria for GAD, SP or SAD; non-AD could have another nonanxiety disorder | Peer raters completed 4-item measure of peer liking for videotaped speech samples (measure based on peer acceptance/ friendship selection research by Chung and Asher 1996; Erdley and Asher 1996); peer-rated target children's anxiety with modified version of MASC | **A/F**—AD with SP > non-AD for MASC peer rating; **A/F**—MASC peer rating negatively correlated with peer liking scores; **A/F**—AD with SP < non-AD for peer liking scores; **A/F**—SP unique predictor of lower peer liking |
| Ye et al. (2008) | $N = 31$ (18 boys)<br>AD = 31; C = 0 | 7–18 years ($M = 11.77$) | AD met criteria for obsessive–compulsive disorder based on CY-BOCS and clinical interview, also completed AMPS | MPRS to assess quality of each child's primary friendship; SPVS | **V**—severity of OCD symptoms positively correlated with peer victimization; **V**—AMPS sensitivity to mistakes positively correlated with peer victimization and negatively correlated with MPRS; **V**—in regressions, AMPS sensitivity to mistakes predicted higher victimization and AMPS contingent self-esteem predicted MPRS score |

*ADIS-C* Anxiety Disorders Interview Schedule for Children (Silverman and Albano 1996), *AMPS* Adaptive–Maladaptive Perfectionism Scale (Rice and Preusser 2002), *BAT-CR* Revised Behavioral Assertiveness Test for Children (Ollendick 1981), *CABS* Children's Assertive Behavior Scale (Michelson and Wood 1982), *CBCL* Child Behavior Checklist (Achenbach 1991), *CSS* Child Sociability Scale, *FQ* the Friendship Questionnaire (La Greca and Stone 1993), *CY-BOCS* Children's Yale–Brown Obsessive–Compulsive Scale (Scahill et al. 1997), *MASC* Multidimensional Anxiety Scale for Children (March 1997), *MPRS* McCloskey's Peer Relationship Scale (McCloskey and Stuewig 2001), *PCSC* Perceived Competence Scale for Children (Harter 1982), *SASC-R* Social Anxiety Scale-Revised (La Greca and Stone 1993), *SCPQ-P* Social Competence Questionnaire-Parent (Spence 1995), *SCPQ-PU* Social Competence Questionnaire-Pupil (Spence 1995), *SEQ* Social Expectancies Questionnaire, *SPAI-C* Social Phobia and Anxiety Inventory (Beidel et al. 1995), *SPPC* the Self-Perception Profile for Children (Harter 1985a), *SPVS* Schwartz Peer Victimization Scale (Schwartz et al. 2002), *SSRS* the Social Skills Rating System (Gresham and Elliot 1990), *SSQ-P* Social Skills Questionnaire-Parent (Spence 1995), *SSQ-PU* Social Skills Questionnaire-Pupil (Spence 1995)

adolescents held lower expectations for the occurrence of positive social situations than controls. Anxious youth also expected more negative social situations to happen, although this difference was not statistically significant. There was no difference between groups for the nonsocial hypothetical situations.

### Conclusion

Based on these studies, it is evident that clinically anxious youth lack appropriate social skills. In addition, they are more likely than controls to anticipate negative outcomes for social situations and to experience more negative cognitions during interactions with peers. They also rate their actual performance in social tasks as less successful. Notably, the negative cognitions held by clinically anxious youth appear to be particularly relevant to social situations and may not apply to nonsocial situations. What is less clear, however, is whether socially anxious children lack knowledge regarding social skills, or if instead they know what is appropriate to do but are too anxious to perform the requisite behaviors. Notably, Clavell (1990) views social competence as a multilevel construct, and future research with clinically anxious youth should examine in what areas of social competence these children are deficient.

Studies with anxious youth have defined social skills in a variety of ways, often broadly. In addition, these studies are limited in relying primarily on the perspectives of parents and teachers. Recent research on this topic has employed behavioral assessment techniques such as role-plays and read-aloud tasks, allowing researchers to focus on specific aspects of children's behavior in social situations. Future research using observations in laboratory and naturalistic settings is necessary to continue identifying the nuances of anxious children's social behaviors during interactions with peers. Two of the studies reviewed here (i.e., Alfano et al. 2006; Spence et al. 1999) involved participants diagnosed only with social phobia, whereas Chansky and Kendall (1997) included children with a variety of anxiety disorders, including social anxiety. To date, there is not enough empirical evidence to firmly conclude whether the social skills and social-cognitive characteristics described here are unique to social anxiety or simply related to anxiety disorders in general. Future research should compare the social skills and cognitions of various diagnostic groups (e.g., social phobia vs. generalized anxiety vs. separation anxiety). Finally, with the exception of preliminary age effects presented by Alfano et al. (2006), research examining whether the social skills and social-cognitive processes of clinically anxious youth vary as a function of age, ethnicity, or gender awaits empirical evaluation.

## Research Examining Links between Social Withdrawal and Peer Experiences

Similar to youth experiencing high levels of anxiety, socially withdrawn children tend to be less well-liked and are more apt to be victimized by their peers. Withdrawn children's perceptions of their own popularity are also negative, indicating that they are aware of how they are viewed by peers. A small set of studies have examined the number, quality, and stability of withdrawn children's friendships. Although their friendships are lower in number and quality, it appears that withdrawn children are just as likely as nonwithdrawn youth to have a best friend. Given that withdrawn children and their friends tend to have similar behavioral characteristics and peer experiences (e.g., lower prosocial behavior, higher peer victimization), the benefits of these friendships may be limited. Withdrawn children have generally been found to exhibit poor social skills. In terms of social-cognitive processing, withdrawn children tend to make negative attributions for social situations, and although they endorse prosocial goals, they appear to have difficulty implementing these goals. Notably, researchers have utilized different terminology to describe socially withdrawn youth (e.g., shy, anxious/withdrawn, shy/withdrawn, withdrawn) and various criteria to identify youth who are shy or withdrawn (see Table 3). As these studies explore the same general construct, they will be reviewed together in the following section.

## Links of Social Withdrawal to Peer Acceptance and Friendship

### Social Withdrawal and Peer Acceptance

Research indicates that social withdrawal is related to peer acceptance, both concurrently and over time. Across studies, peer acceptance has been defined and assessed in a variety of ways (e.g., observations of peer interactions, sociometric ratings, children's perceptions of their acceptance). Using group comparisons based on peer nominations of behavior (e.g., withdrawn, aggressive, nonwithdrawn-nonaggressive controls), two studies reported that withdrawn and aggressive children had significantly lower peer-rated acceptance than controls (Hymel et al. 1993; Rubin et al. 1993). Hymel et al. (1993) also found that the withdrawn group had lower perceived social competence (i.e., popular, gets along well with other children) compared to the other groups; however, the small number of participants in the unpopular subgroups prevented these researchers from examining gender differences. In a study that did consider the role of gender, Rubin et al. (1993) reported that withdrawn boys had lower

**Table 3** Research examining links between social withdrawal and peer experiences

| Study | Sample size/ gender | Age (in years) and/ or grade | Measure of social withdrawal/groups (*A* aggressive, *C* control *SW* shy/ withdrawn, *S* shyness) | Measures of social functioning | Key findings (*A/F* acceptance and friendship, *V* victimization; *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Boivin and Hymel (1997) | $N = 793$ (400 boys) | 3rd to 5th grade; 8–10 years; ($M = 9.58$) | RCP for peer perceptions of withdrawn behavior (i.e., total nominations received for items "rather play alone than with others" and "very shy") | Affiliative relationships assessed by asking children to name peers who hang out together; limited most-liked/least-liked nominations; SPPC; victimization subscale of the Modified Peer Nomination Inventory (Perry et al. 1988) | **A/F**—SW negatively correlated with social preference, perceived acceptance, number of affiliations; **A/F**—SW and perceived acceptance association mediated by preference and affiliations; **V**—SW positively correlated with victimization; **V—**SW/acceptance mediated by victimization |
| Burgess et al. (2006) | $N = 966$ (475 boys) | 5th and 6th grade | ECP; SW group ($n = 323$): top 33% on S/withdrawal for gender and grade and bottom 50% on aggression; A and nonaggressive/nonwithdrawn C groups also identified | Limited friendship nominations; hypothetical ambiguous provocation situations with unfamiliar peer or best friend; ACQ assessed attributions for each situation | **SC**—A > SW and C for external blame attributions; **SC**—SW less likely to make internal blame attributions for situations with a mutual friend vs. those with an unfamiliar peer |
| Dill et al. (2004)*<br>*Longitudinal, T1 (Spring of 3rd or 4th); T2 (Spring of 4th or 5th) | $N = 296$ (140 boys) | 3rd to 5th grade | Two subscales of T-CRSa: S/anxiety (i.e., withdrawn, shy, anxious) and peer social negative (i.e., disliked by peers, poor social skills) | Peer Experiences Questionnaire (Vernberg et al. 1999) to examine self-reported victimization | **A/F**—SW positively correlated with peer rejection; **V**—SW positively correlated with victimization; **V**—relationship between SW and victimization mediated by peer rejection and social skills deficits |
| Fordham and Stevenson-Hinde (1999)*<br>*Longitudinal: children assessed previously at 4.5 and 7 years | $N = 50$ (26 boys) | 8 years, 5 months to 10 years, 7 months; ($M = 9$ years, 5 months)<br>Younger group ($M = 9$, $n = 28$, 15 boys); Older group ($M = 10$, $n = 22$, 11 boys) | S composite: EAS Temperament Survey for Children (Buss and Plomin 1984), global shyness rating by mothers/ teachers, and shyness interview during home visits | Limited friendship nominations; FQQ; SPPC; SSSCA; STAIC | **A/F**–S negatively correlated with positive friendship quality; **A/F**–S perceptions of friendship quality lower than those of their friends; **A/F**—for older children, positive friendship quality associated with greater perceived classmate support and lower trait anxiety |
| Harrist et al. (1997)*<br>*Longitudinal: summer before K to 3rd grade | $N = 567$ (295 boys)<br>150 of these children classified as SW and followed for 4 years | Kindergarten | Frequency of socially withdrawn play during free time on playground or in classroom; CBCL-TRF; TCPR; cluster analysis identified four withdrawn groups: unsociable, passive-anxious, active-isolate, and sad/depressed | Limited most-liked/least-liked nominations for sociometric status (i.e., popular, rejected, neglected, controversial, average); hypothetical ambiguous provocation situations | **A/F**—unsociable more likely classified as neglected; **A/F**—active-isolates higher rejection; **SC**—active-isolates had lowest social-information processing skills (e.g., more hostile attributions, fewer competent responses) |

**Table 3** continued

| Study | Sample size/gender | Age (in years) and/or grade | Measure of social withdrawal/groups (*A* aggressive, *C* control *SW* shy/withdrawn, *S* shyness) | Measures of social functioning | Key findings (*A/F* acceptance and friendship, *V* victimization; *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Hymel et al. (1993) | $N = 346$ (165 boys) | 4th and 5th grade ($M = 9.58$) | Peer nomination of withdrawal (i.e., child plays alone, is shy; Rubin and Mills 1988); unpopular withdrawn ($n = 14$): withdrawal score .5 SD above mean/aggression score .5 SD below mean; unpopular A, unpopular A/withdrawn, and C groups also identified | Peer acceptance ratings; SDQ for self-concept in peer relations domain; peer ratings of social competence and popularity (i.e., popular, gets along well with other children) | **A/F**—SW = A children < C on peer acceptance; **A/F**—all unpopular groups < C for peer-rated social competence; **A/F**—SW perceived competence lower than other groups |
| Ladd and Burgess (1999)*<br>*Longitudinal, T1 (K-fall); T2 (K-spring); T3 (1st grade); T4 (2nd grade) | $N = 250$ (136 boys) | Kindergarten to 2nd grade; ($M = 5$ years, 7 months in K and 8 years, 1 month in 2nd) | CBS completed by teachers for peer-related A and asocial behavior; withdrawn ($n = 46$): above 67th percentile on asocial and below 33rd percentile on aggression; A, A/withdrawn, and C groups also identified | Limited friendship nominations for number of mutual friends and very best friendship, acceptance ratings; self-report of peer victimization | **A/F**—SW children similar to C group in peer acceptance, number of friends, and changes in these variables across time; **V**—SW children also similar to C group in peer victimization |
| Nelson et al. (2005)*<br>*Longitudinal, T1 (4yrs); T2 (7yrs) | $N = 163$ (74 boys) | 4.5 at T1 ($M = 4.63$); 7 at T2 ($M = 7.34$) | POS to assess behavior during free play, including solitary-passive withdrawal (i.e., time in solitary play) and reticence (i.e., time in unoccupied or onlooking behaviors) | Peer acceptance (i.e., successful initiations of peer interactions during free play); Pictorial Scale of Perceived Competence (Harter and Pike 1984) to assess children's perceptions of their peer acceptance | **A/F**—for both boys and girls, reticence and SW negatively correlated with observed peer acceptance; **A/F**—for boys at T2, reticence and SW associated with perceived peer acceptance; **A/F**—for girls, observed peer acceptance at T1 associated with self-perceptions at T2 |
| Pedersen et al. (2007)*<br>* Longitudinal: every spring from K to 7th grade | $N = 551$ (301 boys) | Kindergarten to 7th grade; ($M = 6.10$ in K and 13.09 in 7th) | Anxiety/social withdrawal items on SBQ (combination of mother and teacher report) | Limited most-liked/least-liked nominations at ages 8–11; number of yrs in rejected category was computed; limited friendship nominations | **A/F**—SW from ages 6 to 7 negatively associated with the number of friendships but not with peer rejection at ages 8–9 |
| Rubin et al. (1993) | $N = 178$ (87 boys)<br>Selected from normative sample of $N = 224$ | 5th grade; ($M = 10.6$ for normative sample) | RCP; SPPC for perceived social competence; SW ($n = 31$): RCP withdrawal scores top 15% and aggression scores bottom 75% for gender; A and average groups also identified | Average peer acceptance ratings from classmates; limited most-liked/least-liked nominations to classify children as popular, average, rejected, or neglected; T-CRSa ratings of shy-anxious behavior, leadership, and social skills | **A/F**—SW and A < average for peer acceptance; **A/F**—SW boys < average and A on perceived social competence; **SS**—SW < average and A for shy/anxious behavior; **SS**—SW < average and A for social skills, leadership, assertiveness |

**Table 3** continued

| Study | Sample size/gender | Age (in years) and/or grade | Measure of social withdrawal/groups (*A* aggressive, *C* control *SW* shy/withdrawn, *S* shyness) | Measures of social functioning | Key findings (*A/F* acceptance and friendship, *V* victimization; *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Rubin et al. (2006)*<br>*Longitudinal: T1 (October); T2 (May) | $N = 47$ SW (22 boys) and 48 C (22 boys) visited laboratory with best friend<br>Selected from normative sample of $N = 827$ | 5th grade; ($M = 10.33$ for normative sample) | RCP, extended version; T-CRSb; SW: RCP withdrawal scores top 33% and aggression scores bottom 50%; C: scores in bottom 50% on SW and aggression for gender and grade | Limited best friendship nominations; FQQ | **A/F**—SW and best friends had similar levels of victimization, prosocial behavior, popularity; **A/F**—friends of SW > victimization than C friends; **A/F**—SW < C on friendship quality; **A/F**—best friends of SW < quality ratings than C friends; **A/F**—SW with best friend > popularity than SW without a best friend |
| Schneider (1999)*<br>*Longitudinal: November (T1) and May (T2) of the same school year | $N = 116$ (58 friendship dyads, gender not available) | 8–9 years | RCP passive-isolation items; 29 withdrawn dyads (i.e., 22 "mixed" dyads with one withdrawn child, 7 dyads with both withdrawn children) and a comparison group of 29 nonwithdrawn dyads | Unlimited friendship nominations; conversation between dyads during play sessions videotaped and coded (e.g., criticism, responsiveness, intimacy); Friendship Qualities Scale (Bukowski et al. 1994) | **A/F**—SW good quality friendships if with a nonwithdrawn peer; **A/F**—companionship > for mixed vs. nonwithdrawn dyads; **A/F**—help scores higher in dyads with 1 vs. 2 SW children; **A/F**—SW > nonwithdrawn friend on ratings of closeness/help; **SS**—SW fewer utterances and lower competitiveness during play |
| Schneider and Tessier (2007) | $N = 38$ withdrawn/anxious (20 boys) and 38 C (20 boys) | 10 years, 0 months to 12 years, 11 months ($M = 11.4$ for withdrawn group and $M = 11.7$ for C) | Behavior-Based Peer Nomination Measure of Social Withdrawal (Younger et al. 2001); SPAI-C; withdrawn group: scores > 18 on SPAI-C and top third on nomination measure | Interviewed children about friendship expectations (Bigelow 1983), interview responses coded for themes (e.g., help received from friend, intimacy, common activities) | **A/F**—SW focused on the benefits and support they received in the relationship vs. mutual support expressed by C; **A/F**—SW < C on help and intimacy; **A/F**—overall, SW had a less mature understanding of friendship |
| Schneider (2009) | $N = 38$ withdrawn/anxious (20 boys) and 38 C (20 boys)—sample is the same as that used in Schneider and Tessier (2007) | 10 years, 0 months to 12 years, 11 months ($M = 11.4$ for withdrawn group and $M = 11.7$ for C) | Behavior-Based Peer Nomination Measure of Social Withdrawal (Younger et al. 2001); SPAI-C; withdrawn group: scores > 18 on SPAI-C and top third on nomination measure | Friendship nominations were completed; participants brought best friend to the laboratory; dyads videotaped during three tasks; tasks coded for conflict engagement/avoidance, positive affect, and acceptance/rejection of proposals for sharing | **SS**—withdrawn/anxious more passive and less actively engaged than C; **SS**—withdrawn/anxious < C for positive affect; **SC** –withdrawn/anxious < C for mastery-oriented responses |
| Stewart and Rubin (1995) | $N = 30$ withdrawn/internalizing (13 boys) and 25 average (11 boys) | K, 2nd and 4th grade; K approx. 6 years, 2nd approx 8 years, 4th approx 10 years | For K, peer nominations of withdrawal and teacher ratings of internalizing symptoms on PBQ, withdrawn had scores 1 SD above the mean on these 2 measures and aggression/externalizing behavior ≤ the mean; for 2nd and 4th, RCP and TCRSb used to identify withdrawn; average group also identified | Mother-withdrawn child dyads paired with mother-average child dyads, children's behavior was observed during free play, behavior coded for problem-solving attempts, inferred social goals and strategies | **SS**—W < average for initiations of social problem-solving, assertive strategies; **SS**—W less successful than average in attempts to initiate and less likely to re-initiate after social failure |

**Table 3** continued

| Study | Sample size/gender | Age (in years) and/or grade | Measure of social withdrawal/groups (*A* aggressive, *C* control *SW* shy/withdrawn, *S* shyness) | Measures of social functioning | Key findings (*A/F* acceptance and friendship, *V* victimization; *SS* social skills, *SC* social cognitions) |
|---|---|---|---|---|---|
| Wichmann et al. (2004) | $N = 457$ (210 boys) | 4th to 6th grade; ages 9–13 ($M = 10.6$) | RCP; withdrawn group ($n = 50$), RCP social-withdrawal scores > 1 SD above the mean and aggression–disruption score below the mean; A and nonwithdrawn/nonaggressive C also identified | Rated strategies and social goals for hypothetical ambiguous provocation situations (Erdley and Asher 1996); rated attributions for hypothetical social success and failure situations (Erdley et al. 1997) | **SC**—SW > other groups for familiarity with failure, self-defeating attributions, withdrawn social responses; **SC**—SW < other groups for assertive goals; **SC**—SW and C > A for relationship maintenance goals |

*ACQ* Attribution and Coping Questionnaire (Burgess et al. 2006), *CBCL-TRF* Child Behavior Checklist—Teacher Report Form (Achenbach and Edelbrock 1986), *CBS* Child Behavior Scale (Ladd and Profilet 1996), *ECP* Extended Class Play (Burgess et al. 2003), *FQQ* Friendship Quality Questionnaire (Parker and Asher 1993), *PBQ* Preschool Behavior Questionnaire (Behar and Stringfield 1974), *POS* Play Observation Scale (Rubin 2001), *RCP* Revised Class Play (Masten et al. 1985), *SBQ* Social Behavior Questionnaire (Tremblay et al. 1991), *SDQ* Self-Description Questionnaire (Marsh et al. 1983), *SPAI-C* the Social Phobia and Anxiety Inventory for Children (Beidel et al. 1995), *SPPC* Self-Perception Profile for Children (Harter 1985a), *SSSCA* Social Support Scale for Children and Adolescents (Harter 1985b), *STAIC* State-Trait Anxiety Scale for Children (Spielberger 1973), *TCPR* Teacher's Checklist of Peer Relationships (Dodge 1986), *T-CRSa* the Teacher-Child Rating Scale (Primary Mental Health Project 1999), *T-CRSb* Teacher-Child Rating Scale Mutual (Hightower et al. 1986)

perceived social competence compared to aggressive and average (i.e., nonagressive and nonwithdrawn) boys. For girls, significant differences in perceived competence across the three subgroups did not emerge. Rubin et al. also pointed out that although the withdrawn group was the least well-accepted, the aggressive children were highest in terms of active dislike. In contrast to these findings, Ladd and Burgess (1999) reported that withdrawn children were similar to controls in their peer acceptance ratings and number of mutual friends, as well as mean changes in these aspects of peer functioning across time during the early elementary school years. As Ladd and Burgess suggest, it is possible that withdrawn behavior serves as a more significant risk factor for peer difficulties later in development when relationships with same-aged peers become increasingly important. It should be noted that Ladd and Burgess were not able to examine gender differences, given that girls were underrepresented in the aggressive and aggressive/withdrawn groups and adding gender as a factor would have resulted in small and unequal cell sizes. Future studies should investigate further how the relations between social withdrawal and peer acceptance might vary as a function of developmental level and gender.

In a unique study examining the sociometric status of various subtypes of withdrawn children, Harrist et al. (1997) found that children who are unsociable (i.e., prefer to play alone) were more likely to be classified as neglected, whereas withdrawn children categorized as active-isolates (i.e., children who are socially unskilled and whose peers will not play with them) were more apt to be rejected by their peers. Interestingly, children in the passive-anxious cluster (i.e., avoid play with peers due to their own fearfulness about social interaction) did not have a higher likelihood of being classified as either neglected or rejected based on sociometric ratings provided by peers. Harrist et al. reported that main effects for gender and group by gender interactions were not significant. These findings point to the importance of examining the peer experiences of particular subgroups of withdrawn children.

Other studies on this topic have explored mediators of the relationship between withdrawal and perceived acceptance, as well as gender differences in this association. Utilizing a withdrawal score based on peer nominations (e.g., shy, would rather play alone), Boivin and Hymel (1997) reported that the relationship between withdrawn behavior and perceived acceptance was mediated by sociometric status, victimization, and number of affiliations with classmates. These results indicate that the influence of withdrawal on perceived acceptance is mediated by actual interactions with peers, some of which are negative. With respect to gender, Boivin and Hymel reported that the patterns of associations between variables were generally similar for boys and girls. However, withdrawal was more

strongly associated with negative peer status for boys than for girls. In a more recent study, Nelson et al. (2005) found that at both ages four and seven, solitary-passive withdrawal (i.e., time spent in solitary play) and reticence (i.e., unoccupied or onlooking behaviors) during free play with peers were negatively correlated with observed peer acceptance (i.e., successfully initiating interactions with peers). For boys only, reticence and withdrawal were associated with lower perceived acceptance. For girls, observed peer acceptance was a more robust predictor of their perceived acceptance. Although results of these two studies provide evidence for an association between social withdrawal and both observed and perceived peer acceptance, additional studies using consistent methods to assess withdrawn behavior and peer acceptance are needed to clarify possible gender differences and mediators of this relationship.

## Social Withdrawal and Friendship

In addition to examining the relationship between withdrawal and peer acceptance, research has evaluated the friendship experiences of socially withdrawn children, including their number of friends, friendship stability, quality of friendships, and characteristics of their friends. In a recent longitudinal study, Pedersen et al. (2007) found that social withdrawal at ages 6 and 7 was negatively associated with number of friendships at ages 8 and 9. Furthermore, they reported that the relationships among the study variables were similar for boys and girls. These researchers suggested that the most salient developmental impact of early social withdrawal may be that it hinders the development of mutual friendships. This is particularly problematic as experiences with close friends during childhood form the basis for friendships and romantic relationships during late childhood and adolescence.

Aside from considering an overall number of friendships, researchers have examined the likelihood of withdrawn children being involved in at least one close friendship and the stability of this relationship. In one study, shy/withdrawn children were just as likely as controls to have a mutual best friend, and withdrawn children with a best friend had higher levels of popularity than withdrawn youth who did not have a best friend (Rubin et al. 2006). Group by gender analyses did not produce significant effects for gender or the group by gender interaction, indicating that that these findings applied to both boys and girls. Regarding friendship stability, Rubin et al. (2006) found that compared to the friendships of control children, withdrawn children's friendships had similar levels of stability from the beginning to the end of the school year. The friendship stability findings also did not vary by gender. Relatedly, Schneider (1999) observed no differences in the stability of reciprocal friendships for the following friendship dyads: nonwithdrawn (i.e., two nonwithdrawn children), mixed (i.e., one withdrawn and one nonwithdrawn child), or withdrawn (i.e., two withdrawn children). Gender differences in stability rates across these three types of dyads were not examined, perhaps due to the small number of participants in each group. Overall, these findings indicate that many withdrawn children are involved in at least one stable mutual friendship, which may serve as a protective factor, buffering them from low peer acceptance.

Although not necessarily having a negative impact on the likelihood of a withdrawn child having a friend, research indicates that shyness and social withdrawal are associated with lower friendship quality. For example, Fordham and Stevenson-Hinde (1999) found that positive friendship qualities (e.g., validation, intimacy) were negatively correlated with shyness for both boys and girls. More recently, studies have compared qualitative aspects of the friendships of shy/withdrawn children with those of controls. Based on self-report measures (i.e., Rubin et al. 2006) and open-ended interview questions (i.e., Schneider and Tessier 2007), withdrawn children score significantly lower than controls on several qualitative dimensions (e.g., help and guidance, intimate exchange, conflict resolution). Although Rubin et al. found significant main effects for gender (i.e., girls scoring higher than boys on friendship quality total score and several of the dimensions), there were no significant group by gender interactions for friendship quality. The quality of a withdrawn child's friendship is also related to whether his or her friend is socially withdrawn (Schneider 1999). Specifically, friendship dyads that are mixed (i.e., one child scoring high on withdrawal) or nonwithdrawn (i.e., both children scoring low on withdrawal) report higher levels of helpfulness in comparison with dyads in which both children are socially withdrawn. Taken together, these results indicate that shy and withdrawn children may obtain fewer benefits from their best friendships than do nonwithdrawn children, but those withdrawn children who are involved in a relationship with a nonwithdrawn peer are more likely to experience higher quality friendships.

Several studies have compared information about friendship quality provided by different informants. For example, one study found that shy children have lower perceptions of friendship quality compared to their friends' perceptions of quality (Fordham and Stevenson-Hinde 1999). In contrast, Schneider (1999) reported that withdrawn children's ratings of closeness and help in the friendship were higher than the ratings provided by their nonwithdrawn friends on these dimensions, perhaps indicating that withdrawn children receive greater benefits from the friendship than do their friends. Finally, Rubin

et al. (2006) found that the best friendships of socially withdrawn children were lower in help and guidance, companionship and recreation, and overall quality than the best friendships of control children. Although some studies indicate that withdrawn children are involved in friendships of lower quality, results on this topic have varied depending upon which child is providing the information. It would be interesting for future studies to compare perceived friendship quality from various perspectives with multiple measures of quality (e.g., interviews, observations of interactions between friends in laboratory or naturalistic settings).

In addition to having lower quality friendships, socially withdrawn children have a less sophisticated understanding of their close friendships. When interviewing children about their friendships with open-ended questions, Schneider and Tessier (2007) found that compared to nonwithdrawn controls, withdrawn/anxious children focused more on the benefits that they received from the relationship (e.g., help received from friend) and mentioned intimacy less frequently. In contrast, children in the control group were more likely to emphasize intimacy and mutual support when describing their friendships. Interestingly, the tendency to mention intimacy as an important theme increased with age for the control group but not for the withdrawn/anxious group. Results did not reveal any significant gender differences or gender by group (i.e., withdrawn/anxious, control) interactions. These researchers conclude that the less mature understanding of friendship expressed by withdrawn youth could have an impact on behaviors within a friendship, the quality of the relationship, and even children's ability to form new friendships. These effects could become more apparent with age, particularly with respect to increased intimacy in friendships that is typical during the adolescent years.

In the only study to focus on friends' characteristics, Rubin et al. (2006) found that compared to the best friends of nonwithdrawn children, withdrawn children's best friends had higher levels of withdrawal and victimization by peers. Regarding behavioral similarity between friends, findings also revealed that shy/withdrawn children and their friends had similar levels of victimization, prosocial behavior, and popularity, with both groups demonstrating poorer adjustment than control children on these measures (Rubin et al. 2006). There were no significant group by gender interactions, indicating that these relationships were similar for boys and girls. Based on these results, it is possible that the usual benefits obtained from involvement in a best friendship may be attenuated for withdrawn children, as their friends' maladjustment may interfere with the ability to offer support, assistance, or positive coping strategies.

### Conclusion

Overall, findings from these studies suggest that withdrawn children have negative perceptions of their peer acceptance. Moreover, these perceptions appear to be accurate, as withdrawn children are rated as less well-liked by their peers. However, sociometric status varies for different subtypes of withdrawn children, with active-isolates experiencing the highest rates of rejection. Although withdrawn children's friendship networks tend to be smaller, they are just as likely as nonwithdrawn children to have at least one close friend, and their friendships tend to stay intact across the school year. There is some evidence indicating that the quality of withdrawn children's friendships is lower than that of nonwithdrawn children. However, friendship quality appears to be closely tied to a child's perceptions of the relationship. Although the quality of friendships between withdrawn children is lower than that of control children, some withdrawn children perceive the quality of their friendships to be high, perhaps because of the benefits that they are receiving from a friendship with a nonwithdrawn peer. Findings on behavioral similarity suggest that withdrawn children and their friends tend to experience similar levels of maladjustment, perhaps leading to friendships that do not offer as many provisions (e.g., help, guidance, buffering from victimization by peers) to the withdrawn child.

With respect to gender, there is some evidence to suggest that social withdrawal may be more detrimental for the peer acceptance of boys than girls (Boivin and Hymel 1997; Rubin et al. 1993). Research conducted by Rubin et al. (2006) has not found gender differences in aspects of withdrawn children's friendships such as quality or stability. Nevertheless, many of the studies reviewed in this section did not examine the role of gender. Additional research is needed to explore possible differences in the social consequences of withdrawn behavior by gender, age, and ethnicity and to develop a more comprehensive understanding of withdrawn children's peer acceptance, friendship quality and stability, and the characteristics of their friends. Furthermore, longitudinal studies could elucidate how withdrawn children's peer relationships change with age and impact various domains of adjustment across development.

## Social Withdrawal and Peer Victimization

Despite being involved in friendships that can serve as a protective factor, withdrawn children are more likely to experience victimization by their peers, perhaps due to poor social skills and their low peer acceptance that can mark them as easy, vulnerable targets for bullies. In

addition to reporting positive correlations between withdrawal and peer victimization, two studies have attempted to explain the relationship between these variables using mediational models. In a study mentioned previously, Boivin and Hymel (1997) found that withdrawn behavior as identified by peers leads to low social preference, which predicts peer-reported victimization (e.g., nominating children who are teased, hit) for both boys and girls. Similarly, results of a study by Dill et al. (2004) supported a model in which shyness/social withdrawal as rated by teachers predicted teacher reports of negative peer interactions (i.e., peer rejection, poor social skills). This combination of peer rejection and social difficulties predicted both overt and relational victimization by peers. Relationships among the variables were not examined separately by age or gender. In a more recent study supporting the association between withdrawal and victimization, Rubin et al. (2006) found that shy/withdrawn children and their best friends reported experiencing similar levels of peer victimization, and these levels were higher than those of children in a nonwithdrawn control group. This pattern of results was similar for boys and girls. In contrast to these studies, Ladd and Burgess (1999) observed that withdrawn children had rates of peer victimization that were similar to those of the control group; however, youth with high levels of both aggression and withdrawal reported high rates of peer victimization. As stated previously, the role of gender was not examined in this study. These results suggest that, particularly for younger children, a behavioral profile involving both aggression and withdrawal may place youth at highest risk for overt and relational victimization by peers.

### Conclusion

Findings from a small number of studies clearly indicate that withdrawn children are at risk for being victimized by their peers. Given that the experience of peer victimization is associated with lower levels of perceived peer acceptance (Boivin and Hymel 1997), loneliness, and negative affect (e.g., sadness, fear, anger; Dill et al. 2004), the combination of withdrawal and victimization places children on a pathway that could lead to a host of future social and emotional adjustment difficulties. Although shy/withdrawn children may have a mutually reciprocated friendship, the protection offered by friendship could be lacking due to the victimization experienced by both the withdrawn child and his or her best friend (Rubin et al. 2006). It has been suggested that the relationship between social withdrawal and victimization is a vicious cycle with withdrawal and victimization predicting negative affect, which then leads to subsequent withdrawal and victimization (Dill et al. 2004). Although poor social skills and peer rejection have been identified as factors that partially explain the relationship between withdrawal and victimization, additional research is needed to more precisely identify the behavioral and emotional characteristics of withdrawn children that cause them to be targeted as victims of physical and verbal harassment by peers. This type of research could inform the development of intervention programs for withdrawn children aimed at enhancing their peer acceptance and reducing their risk of being victimized by peers. Although some studies have reported patterns of results that are similar for boys and girls (e.g., Boivin and Hymel 1997; Rubin et al. 2006), the role of gender, age, and ethnicity in the relationship between social withdrawal and peer victimization has been largely unexplored.

## Relationship of Social Withdrawal to Social Skills and Social-Cognitive Processes

### Social Withdrawal and Social Skills

To better understand why withdrawn children experience peer relationship difficulties, it is also important to evaluate their social skills and how they process information in social situations. Several studies have indicated that withdrawn children have poorer social skills, based on self-ratings, peer reports, teacher reports, and behavioral observations during interactions with a best friend. Rubin et al. (1993) found that teachers viewed withdrawn children (both boys and girls) as being more shy/anxious and less assertive compared to their peers (i.e., aggressive, nonwithdrawn/nonaggressive controls). Peers also rated these children as being less likely to hold leadership roles. In addition, withdrawn boys evaluated themselves as being less socially skilled than their peers. Similarly, Stewart and Rubin (1995) observed that compared to nonwithdrawn peers, withdrawn children exhibited fewer social problem-solving attempts during free play (e.g., initiating a peer interaction, giving a command), were less successful in their attempts to initiate play, and were less likely to reinitiate an interaction after a failed attempt. Although a similar pattern of results was found across grade levels (i.e., kindergarten, second grade, fourth grade), gender by subgroup (i.e., withdrawn, nonwithdrawn) interactions were not examined. Observations of children's conversations and behavior while playing with a reciprocal friend have also shown that dyads with one or two withdrawn children have a significantly lower number of utterances spoken, and dyads with no withdrawn children have higher levels of competitiveness than the other two groups (Schneider 1999). As stated previously, the small number of participants in each of these groups precluded an examination of possible gender differences.

More recent research examining socially withdrawn children's behavior with friends in laboratory-based interaction tasks indicates that compared to controls, these children are more passive when deciding how to share an object (i.e., chocolate egg with toy inside), less competitive and actively engaged during a fast-paced car race game, and display less positive affect in these tasks (Schneider 2009). Notably, there were no significant gender by withdrawal status interaction effects in the behaviors observed across these tasks. Despite these behavioral differences during structured laboratory tasks, Rubin et al. (2006) found that withdrawn children (both boys and girls) with best friends were rated higher in sociability by peers than those without best friends, indicating that involvement in a friendship could provide opportunities for withdrawn children to develop and practice key skills that are necessary for successful interactions with peers.

## Social Withdrawal and Social-Cognitive Processes

It is also important to understand how withdrawn children process social situations, as these cognitions influence their behavior. In the initial steps of social-information processing, children must encode and interpret social cues. Research indicates that in response to socially challenging situations, withdrawn children (both boys and girls) are more likely than aggressive and control children to show a self-defeating attributional style, characterized by attributing success to external-unstable factors (e.g., good mood) and failures to internal-stable factors (e.g., low social ability; Wichmann et al. 2004). Similarly, when asked to provide explanations for their behavior during a laboratory-based drawing task with friends (i.e., copying complicated line drawings), withdrawn children (both boys and girls) are less likely than control children to give mastery-oriented explanations (i.e., glancing at a friend's drawing to figure out how to do as well as possible) and more likely to give comparison-related reasons (i.e., glancing to see how good the friend's drawing was) for their behavior (Schneider 2009). Interestingly, Burgess et al. (2006) found that shy/withdrawn boys and girls are less likely to make internal attributions for negative situations involving a best friend than those involving an unfamiliar peer. Because withdrawn children seem to be less apt to exhibit a self-defeating attributional style with friends, this may allow for more positive interactions between withdrawn children and their friends (Burgess et al. 2006).

Another aspect of interpreting social situations involves evaluating the intent of the actor, particularly when some type of harm has been caused and the intent of the actor is unclear. In response to such ambiguous provocation situations, withdrawn children have generally been found not to assume hostile intent. However, an investigation that considered subgroups of withdrawn children revealed that the active-isolate subgroup (i.e., children who are socially unskilled and whose peers will not play with them) exhibited a hostile attributional bias, believing that peers caused harm to them on purpose (Harrist et al. 1997). The pattern of results in this study was similar for boys and girls. Other behaviorally withdrawn subgroups, including unsociable (i.e., prefer to play alone) and passive-anxious (i.e., avoid play with peers due to their own fearfulness about social interaction), did not show such a bias. Thus, it appears that only some withdrawn children make negative assessments of peers' intentions under ambiguous conditions.

After interpreting social situations, children must choose which goals to pursue. Wichmann et al. (2004) have found that withdrawn children are less apt than their peers to endorse assertive goals. Nevertheless, withdrawn children are just as likely as control children, and more likely than aggressive children, to endorse goals focused on relationship maintenance and seeking peaceful solutions. When generating social strategies, withdrawn children tend to produce fewer socially assertive strategies (e.g., more indirect requests, fewer commands) than their more prosocial peers (Stewart and Rubin 1995) and tend to select behaviorally withdrawn responses (Wichmann et al. 2004). Finally, when judging their ability to implement certain strategies, withdrawn children report lower self-efficacy than their peers for carrying out assertive behaviors. Interestingly, withdrawn children are more confident than aggressive children but less confident than comparison children in their ability to enact problem-solving responses (Wichmann et al. 2004). The pattern of findings reported by Wichmann et al. was similar for both boys and girls.

## Conclusion

Taken together, these findings provide insight into the behavioral responses and social-cognitive processes of withdrawn youth. Based on the limited number of studies conducted thus far, these children exhibit poorer social skills during interactions with peers and interpret social cues negatively. Although withdrawn children are less apt to endorse assertive goals, have low confidence in their ability to be assertive, and tend to favor withdrawn behavioral strategies, they are similar to controls in other aspects of social-information processing (e.g., emphasis on relationship maintenance goals). As Wichmann et al. (2004) have suggested, it appears that withdrawn children may have the knowledge of appropriate social behavior, but shyness or feelings of anxiety may prevent them from carrying out this behavior during social situations. Based on studies reviewed in this section, this pattern of findings appears to be similar for withdrawn boys and girls. Additional research examining the role of gender, age, and

ethnicity in the social skills and social-cognitive processes of withdrawn youth appears warranted. It is also important for future studies to investigate the extent to which withdrawn children experience a social performance deficit versus a deficit in knowledge of social skills and to identify factors that interfere with or facilitate withdrawn children's performance in social situations (e.g., interacting with a friend versus an unfamiliar peer). In addition to examining responses to hypothetical situations, more research involving observations of withdrawn children's behavior during real-life peer interactions is needed.

## Discussion

In investigating the peer experiences of socially anxious and withdrawn youth, the fields of developmental and clinical psychology have progressed on related yet separate paths. Guided by the developmental psychopathology perspective with its emphasis on understanding both normative and atypical patterns of development, the goal of this review was to integrate these two subdisciplines of psychology. Bringing together the developmental and clinical bodies of literature has allowed us to identify common themes and unique contributions of each tradition, which will be presented in the following sections. We will also discuss key limitations, directions for future research, and implications for interventions aimed at improving the peer relationships of these children and adolescents.

### Peer Acceptance and Friendship

#### *Common Themes*

Studies published by both developmental and clinical researchers have found that higher anxiety or withdrawal is associated with lower levels of acceptance, based on both peer- and self-reports. Studies conducted with normative samples and published primarily by researchers in the field of clinical psychology indicate that neglected and rejected youth have higher levels of social anxiety than those from other sociometric groups (e.g., Inderbitzen et al. 1997; La Greca and Stone 1993). However, it is still unclear whether clinically anxious youth are neglected or actively rejected by their peers (e.g., Chansky and Kendall 1997; Strauss et al. 1988). Although higher anxiety and withdrawal are related to having fewer friends (e.g., Beidel et al. 1999; La Greca and Lopez 1998; Pedersen et al. 2007), withdrawn and clinically anxious youth are just as likely as controls to have a best friend (e.g., Chansky and Kendall 1997; Rubin et al. 2006). For these children, involvement in a best friendship may serve as a protective factor against low levels of acceptance by the larger peer group. There is some evidence to suggest that withdrawn youth have lower quality friendships than control children. However, some withdrawn children perceive the quality of their friendships to be high, perhaps because of the benefits that they receive from a friendship with a nonwithdrawn peer. In comparison with research conducted with normative and withdrawn samples, much less is known about the friendships of clinically anxious youth, both in terms of number and quality. However, results of research on associations between social anxiety and peer functioning conducted with normative samples can be applied to clinically anxious youth. Based on the developmental psychopathology perspective, it is quite possible that the impact of anxiety on peer functioning is a matter of degree. More specifically, higher levels of anxiety may be associated with more pervasive impacts on peer functioning. Based on the concept of transactional patterns (i.e., dynamic, reciprocal interactions) between children and their developmental contexts (e.g., parents, peers), it is likely that clinically anxious youth are on a social pathway characterized by peer difficulties that become more maladaptive across time. The cyclical interaction between anxiety symptoms and avoidance of peer interactions likely leads to an exacerbation of anxiety severity and a range of peer difficulties, including lower peer acceptance, fewer friends, and lower quality friendships.

#### *Unique Contributions*

The few studies to examine gender differences in the relationship between anxiety and peer acceptance or friendship have been conducted primarily by clinical psychology researchers using normative samples. Results of these studies indicate that relationships between these peer variables and anxiety may be stronger for girls (e.g., Greco and Morris 2005; La Greca and Lopez 1998). Another unique contribution from the clinical literature is the consideration of peer crowd affiliation as a buffer against anxiety; however, only one study to date has examined the role of peer crowds (La Greca and Harrison 2005). Studies involving clinically anxious youth are unique in conducting behavioral observations of peer interactions at school (Spence et al. 1999). In addition, clinical researchers are to be applauded for utilizing novel methodological approaches to evaluate peer liking and peers' perceptions of anxious youths' behavior (Verduin and Kendall 2008). This research sheds light onto the transactional processes that occur when clinically anxious youth interact with their peers. Findings from Verduin and Kendall (2008) indicate that peers notice the visible signs of anxiety displayed by clinically anxious youth and, in turn, rate them lower in terms of peer liking. These negative perceptions by peers

likely provide fewer opportunities for clinically anxious youth to interact with their peers, leading to further avoidance of social situations and maintenance of anxiety symptoms. Relatively few studies have examined mediators of the relationship between anxiety or withdrawal and peer acceptance. However, one developmental study that investigated this association found that sociometric status, victimization, and affiliations with classmates mediated the relationship between withdrawal and perceived acceptance by peers (Boivin and Hymel 1997). Finally, another unique contribution from the developmental literature comes from research by Harrist et al. (1997) indicating that children classified within the active-isolate subtype of social withdrawal are more likely to be rejected by their peers.

With respect to friendship, a novel methodological contribution from the field of clinical psychology involves using a longitudinal design to examine reciprocal relationships between social anxiety and friendship quality (Vernberg et al. 1992). Considering associations between both positive and negative aspects of friendship quality and anxiety, as well as gender differences in these relationships, is also a unique contribution made by clinical studies conducted with normative samples (Greco and Morris 2005; La Greca and Harrison 2005). Developmental psychology researchers have contributed significantly to a more in-depth understanding of withdrawn children's friendships, exploring factors such as the stability of these relationships (e.g., Schneider 1999) and the characteristics of withdrawn children's friends (Rubin et al. 2006). These studies have also considered the relative influence of withdrawal on friendship and acceptance (Pedersen et al. 2007), a research question that clinical psychology researchers have largely overlooked and that warrants empirical investigation with both normative and clinically anxious samples. In one of the few studies to explore the friendships of clinically anxious youth, Chansky and Kendall (1997) found that having a best friend was associated with lower levels of social anxiety for nonanxious controls but not for anxious youth, a finding that is in need of replication. Based on research conducted with normative samples, the protective function of friendship may be attenuated for clinically anxious youth due to the fact that their friendships are of lower quality. However, a more in-depth examination of the quality and characteristics of the anxious youth's friendships is needed to make more definitive conclusions.

## Peer Victimization

### *Common Themes*

Across studies from the fields of developmental and clinical psychology, higher anxiety and withdrawal are associated with a greater likelihood of being victimized by peers. Furthermore, research conducted with normative samples provides evidence that both overt and relational victimization are associated with specific types of anxiety symptoms, including fear of negative evaluation, physiological symptoms, and avoidance of social situations (e.g., Storch et al. 2003a; Storch and Masia-Warner 2004). A small number of studies have identified variables, such as global self-worth, as mediators of the relationship between peer victimization and anxiety (Grills and Ollendick 2002), and low social preference or peer rejection as mediators of the association between withdrawn behavior and peer victimization (Boivin and Hymel 1997; Dill et al. 2004). With the exception of a few studies examining peer victimization among children and adolescents diagnosed with obsessive–compulsive disorder, very little is known about the nature or extent of peer victimization among clinically anxious samples. Based on research conducted with normative samples indicating that youth experiencing high levels of anxiety are at risk for being victimized by their peers, we can surmise that clinically anxious youth are also targets for victimization, which would impede opportunities for positive peer interaction and further exacerbate their social anxiety.

### *Unique Contributions*

A novel contribution of clinical psychology research with normative samples is its examination of gender differences in the associations between overt versus relational victimization and anxiety. Although there is some evidence to suggest that relational victimization may be a particularly important predictor of social anxiety for girls (Storch et al. 2003b), replication of these findings is needed. A notable contribution made by Rubin's developmental research team is that withdrawn children and their friends experience similar rates of victimization by peers (Rubin et al. 2006). Research conducted by Ladd and Burgess (1999) provides preliminary evidence that, especially for younger children, the combination of withdrawal and aggression may place youth at highest risk for victimization by peers. However, research evaluating differences between younger and older participants within a single study is needed to confirm these results. Although fewer in number, one strength of the clinical studies is that they consider the predictors and consequences of peer victimization among a particular diagnostic group (i.e., youth with obsessive–compulsive disorder), an approach that is consistent with the developmental psychopathology perspective. Further research examining the transactional process of peer victimization for youth who meet criteria for a broader range of anxiety diagnoses will help to identify specific issues that should be targeted in interventions aimed at decreasing the incidence of peer victimization among anxious youth.

## Social Skills and Social-Cognitive Processes

### *Common Themes*

Both highly anxious and withdrawn youth display lower social skills during peer interactions (e.g., less assertiveness, fewer words spoken) relative to their nonanxious and nonwithdrawn counterparts. They also have lower perceptions of their social skills (e.g., Greco and Morris 2005; Rubin et al. 1993; Spence et al. 1999). Regarding social-cognitive processes, anxious and withdrawn youth tend to hold negative expectations for their performance (e.g., Smári et al. 2001), have low confidence in their social abilities (e.g., Hannesdóttir and Ollendick 2007), make negative attributions for social situations, and are less apt to endorse assertive goals (e.g., Wichmann et al. 2004). Based on research from the field of clinical psychology conducted with both normative and clinically anxious samples, there is also evidence that anxious youth are likely to expect rejection from peers (Chansky and Kendall 1997; London et al. 2007). What is less understood, however, is whether there is a deficit in anxious and withdrawn children's knowledge of social skills, or if they are aware of appropriate social behaviors, but shyness or anxiety interfere with their ability to carry out these behaviors in social situations. Research from the field of developmental psychology indicates that withdrawn children are similar to controls in some aspects of their information processing (e.g., tendency to endorse relationship maintenance goals), providing preliminary evidence that they may indeed possess fundamental knowledge of appropriate social behavior (Wichmann et al. 2004) but lack the confidence to enact these behaviors. In applying these results to anxious youth, it is possible that those with subclinical levels of anxiety initially possess the knowledge of appropriate social behavior with peers. However, if their anxiety reaches clinical levels and their avoidance of social situations increases, they may lack opportunities to practice social skills with peers leading to social skills deficits that become more severe as their anxiety increases across time. Longitudinal research that follows children at risk who do not develop an anxiety disorder as well as those whose anxiety reaches clinical levels is needed to better understand the relationship between anxiety and social skills during interactions with peers.

### *Unique Contributions*

Studies conducted by clinical psychology researchers with normative samples have explored social skills (e.g., cooperation, assertiveness) as a mediator of the relationship between social anxiety and peer acceptance (Greco and Morris 2005). Results such as these shed light onto the possible reasons why socially anxious youth are less well-liked by their peers. Consistent with the transactional patterns emphasized by the developmental psychopathology perspective, if clinically anxious youth display poor social skills during peer interactions, they will be less well received by their peers and these social interactions will be less positive. When faced with future opportunities to interact with peers, anxious youth will experience heightened anxiety and behavioral avoidance. This reciprocal cycle between anxiety symptoms, avoidance, and negative peer interactions will likely continue, resulting in further impairments in social skills and the maintenance of anxiety symptoms. Developmental psychology research has utilized distinctive methodologies, including observations of interactions with friends and the presentation of hypothetical situations, to gain insight into the social skills and social-cognitive processes of withdrawn youth. For example, Rubin et al. (2006) discovered that withdrawn children with best friends were rated higher in sociability by peers than those without best friends. Furthermore, Burgess et al. (2006) found that shy/withdrawn children were less likely to make negative attributions for situations with friends than for those involving an unfamiliar peer. Perhaps the most innovative observational studies are those conducted with clinically anxious samples. These studies have utilized structured role-plays with peer confederates to assess social skills and video-mediated recall procedures to uncover children's thought processes in social situations (e.g., Alfano et al. 2006; Beidel et al. 1999). These studies indicate that clinically anxious youth feel less confident during peer interactions and appraise their social performance more negatively than nonanxious youth. In accordance with the developmental psychopathology perspective, research on associations between social-cognitive processes and anxiety with normative samples can shed light onto the social-cognitive processes of clinically anxious youth. As stated previously, high levels of social anxiety are associated with particular patterns of social-cognitive processing (e.g., negative performance expectations and attributions for social situations, low confidence in social abilities, lower likelihood of endorsing assertive goals) among normative samples. It is likely that clinically anxious youth exhibit similar social-cognitive processes, perhaps to an even greater degree. As relatively little is known about the social skills and social-cognitive processes of anxious and withdrawn youth, additional research on this topic is needed. Studies with novel observational techniques such as those utilized by Alfano et al. may be particularly informative.

## Limitations

The developmental and clinical bodies of literature reviewed in this paper share several limitations related to

age, gender, and ethnicity; methodology; and study design. With respect to age, a limited number of studies have examined age differences, and the few studies to explore differences between older and younger participants have included a relatively narrow age range. Although research with clinically anxious samples often includes a broad age range (e.g., 7–17 years), age differences have not been evaluated (see Alfano et al. 2006 for an exception). Preliminary findings suggest that withdrawn behavior may be a more significant risk factor for peer difficulties during late childhood or adolescence (Ladd and Burgess 1999), and the protective function of friendship may be more salient for socially anxious adolescents than children (Greco and Morris 2005; La Greca and Harrison 2005). However, much more research is needed to understand whether anxiety and social withdrawal have different consequences for social adjustment as a function of age.

Similarly, few studies have examined gender differences in the associations between anxiety or withdrawal and children's peer experiences. Based on a small number of studies, there appear to be more robust ties between social anxiety and particular peer variables (i.e., acceptance, number of friends, specific dimensions of friendship quality) for girls (e.g., Greco and Morris 2005; Storch et al. 2003b). However, several studies have reported that the associations between these peer variables and anxiety do not vary by gender (e.g., Ladd and Troop-Gordon 2003; La Greca and Harrison 2005; Vernberg et al. 1992). Findings related to peer victimization are also mixed, with some studies indicating that relational victimization predicts social anxiety for girls only (i.e., Storch et al. 2003b) and others reporting that relational victimization is a predictor of anxiety for both boys and girls (i.e., La Greca and Harrison 2005; Storch et al. 2003a). There is evidence to suggest that mediators and moderators of the relationship between peer victimization and anxiety may vary by gender (Grills and Ollendick 2002); however, more research on this topic is needed. Regarding social withdrawal, some findings indicate that withdrawal may be more detrimental for the peer acceptance of boys than girls (i.e. Boivin and Hymel 1997; Rubin et al. 1993). Interestingly, however, Rubin et al. (2006) reported no gender differences in aspects of withdrawn children's friendships (i.e., quality, stability). In addition, the role of gender (as well as age and ethnicity) in the relationship between social withdrawal and peer victimization has been largely unexplored. Overall, further research is needed to clarify gender differences in the relationship between peer functioning and both anxiety and social withdrawal.

With respect to clinically anxious youth, little is known about whether clinical levels of social anxiety have different consequences for social adjustment (e.g., peer acceptance, number of friends, friendship quality, peer victimization) as a function of child age or gender. There is also limited research across samples (i.e., normative, clinically anxious, socially withdrawn), regarding how social skills and social-cognitive processes may vary by age or gender. Finally, very few studies have examined the ways in which the relations between peer experiences and social anxiety or withdrawal vary as a function of children's ethnicity and whether those associations differ depending on whether children's ethnic group is a majority or minority within their community (for an exception, see La Greca and Harrison 2005).

The body of research reviewed for this paper is also plagued with methodological and definitional inconsistencies. Numerous methods have been utilized to assess peer acceptance and friendship, and to classify children as shy or socially withdrawn. The constructs of perceived acceptance, social competence, social skills, and peer victimization have been defined and assessed in a variety of ways. Furthermore, different combinations of social-cognitive variables (e.g., outcome expectations, self-efficacy, expectations of rejection, attributions, goals) are included in each study, making comparisons across studies difficult. Nevertheless, there is justification for including this collection of studies in one review given that they assess closely related peer constructs frequently examined in the literature on children's peer relationships (Ladd 2005). Despite these methodological inconsistencies, consistent links have been established between these variables and social anxiety across studies involving children and adolescents. Finally, very few longitudinal studies have been conducted. Although there is some evidence to indicate that rejection experiences and expectations may trigger future social anxiety (London et al. 2007; Vernberg et al. 1992) and early withdrawal may hinder the development of future friendships (Pedersen et al. 2007), additional longitudinal studies are needed to clarify the direction of the relationship between anxiety or social withdrawal and the peer variables.

Studies from the field of clinical psychology that involve normative samples are limited in that they rely on self-report measures as the primary source for gathering information about participants' symptoms of social anxiety. In addition, few of these studies have considered anxiety symptoms outside of the social domain (e.g., separation, somatic symptoms). Research conducted with anxious samples in clinic settings assesses social functioning based on reports from parents and teachers rather than peers. As such, very few studies have evaluated the sociometric status of clinically anxious youth, and little is known about the extent to which these children and adolescents are victimized by their peers. As the majority of the clinical studies have not made comparisons between diagnostic groups, it is unclear whether the peer difficulties

and negative social cognitions are unique to social anxiety or characteristic of anxiety disorders in general. Studies on social withdrawal have utilized various terminologies (e.g., shy, withdrawn, shy/withdrawn, anxious/withdrawn) and methods to identify shy or withdrawn participants, which makes comparisons across studies difficult. Developmental researchers who study social withdrawal typically do not assess symptoms of psychopathology (e.g., anxiety, depression), providing few clues as to exactly why these children withdraw from social situations.

## Future Directions and Implications for Intervention

In terms of directions for future research, additional studies are needed to explore age, gender, and ethnic group differences in the predictors and social consequences of anxiety symptoms and withdrawn behavior with both normative and clinical samples. Consistent methods of assessing peer experiences, anxiety, and withdrawal would facilitate comparisons of results across studies. Furthermore, incorporating an assessment of symptoms of psychopathology into developmental studies on shyness and social withdrawal would facilitate an understanding of the extent of overlap between these constructs and clinical levels of anxiety. Longitudinal studies are also needed to examine how anxious and withdrawn children's peer relationships and social behavior change with age and to determine whether anxiety and withdrawal have differential impacts on adjustment across development. Grounded in the developmental psychopathology perspective, such research would help to identify risk and protective factors for anxiety and social withdrawal across development and lead to a greater understanding of the ways in which peer interactions can exacerbate anxiety or, alternatively, place youth on more adaptive developmental pathways.

Additional research examining mediators and moderators of the relationship between anxiety or withdrawal and the peer variables could lead to a more in-depth understanding as to why anxious and withdrawn youth experience peer relationship difficulties. Such research could help to identify targets for interventions aimed at improving the social interactions of these children and adolescents. Similarly, developmental and clinical researchers could consider combining methods used by each respective field. For example, developmental researchers have observed withdrawn children's interactions with their best friends and also evaluated attributions and goals with hypothetical situations. Research with anxious youth could be expanded by implementing these methods. Likewise, developmental psychologists could utilize the role-play and video-mediated recall tasks that have been used more often in research with clinically anxious samples. In general, the fields of developmental and clinical psychology could benefit from employing multiple methods and informants to gain a more comprehensive understanding of the social functioning of youth experiencing high levels of anxiety or withdrawal.

In general, much more research is needed on the peer experiences of clinically anxious youth, including studies exploring the size and quality of their friendship networks, characteristics of their friends, and possible differences in peer acceptance, friendship status, and social-cognitive processes for different diagnostic groups. With both anxious and withdrawn samples, research is also needed to determine the relative importance of social skills deficits versus social-cognitive processing in contributing to the lower social skills that these youth display during interactions with peers. Clarifying the extent to which anxious and withdrawn children experience social performance deficits versus deficits in their knowledge of social skills would inform interventions aimed at improving the peer interactions of these youth. One such intervention for children and adolescents diagnosed with social phobia, Social Effectiveness Therapy for Children (SET-C), combines individual in vivo exposure sessions with group social skills training followed by the opportunity to practice these skills in group activities with nonanxious peers (Beidel et al. 2000). There is empirical support for the effectiveness of this program (i.e., reduced social anxiety, improvements in social skills and interactions) compared to a study skills control condition, at both post-treatment and 6-month follow-up (Beidel et al. 2000). In addition, the majority of participants maintain treatment gains three and five years later (Beidel et al. 2005, 2006). Involving parents in cognitive-behavioral therapy (CBT) for anxious youth also appears to be a promising strategy; however, the impact of involving parents as co-clients on treatment effectiveness varies across studies (see Barmish and Kendall 2005 for a meta-analytic review). Results of a recent study indicate that family-based CBT may be more effective than individual CBT when both parents have an anxiety disorder (Kendall et al. 2008). Based on empirical links between parent and peer interactions (e.g., Contreras and Kerns 2000; McDowell and Parke 2009), intervening to teach parents skills to reduce their modeling of anxious and avoidant behaviors and promote effective family problem-solving skills in family-based CBT would likely have a positive impact on children's future interactions with peers.

Developmental researchers have identified negative consequences of early social withdrawal for children's involvement in friendship during middle childhood (Pedersen et al. 2007), which points to the importance of early intervention for children experiencing anxiety and social withdrawal. Such interventions should include a component aimed specifically at improving peer interactions. Research focused on understanding the processes underlying peer difficulties could allow clinicians to

deliver more focused interventions (e.g., targeting social skills, social-cognitive processes, or both). Based on research indicating that withdrawn children have lower self-efficacy in their ability to be assertive, interventions may need to help children develop confidence in their ability to enact particular behavioral strategies. Understanding more about why withdrawn children shy away from interactions with peers (e.g., anxiety, depression, lack of interest), perhaps through further study of particular subtypes of social withdrawal (e.g., Harrist et al. 1997), would also guide intervention strategies.

Based on the evidence suggesting that many anxious or withdrawn children do have a best friend, interventions aimed at improving the quality of these relationships could be beneficial. In addition, clinicians may find it helpful to involve anxious children's friends in intervention programs. For example, a child with social phobia who is facing his or her fears (e.g., meeting new people) during an exposure task may be more likely to practice these skills with the presence and encouragement of a close friend. Finally, knowledge of how relationships between peer variables and anxiety or withdrawal vary by gender and change across development could help clinicians tailor interventions to match a particular child's gender, age and developmental level. Consistent with the developmental psychopathology perspective, collaboration between developmental and clinical researchers would likely lead to a greater understanding of both normal and atypical patterns of development and inform interventions aimed at directing anxious and withdrawn youth toward more adaptive social pathways.

## References


Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4–18 and 1991 Profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin, 85*, 1275–1301.

Achenbach, T. M., & Edelbrock, C. S. (1986). *Manual for the Teacher's Report Form and Teacher Version of the Child Behavior Profile*. Burlington, VT: University of Vermont Press.

Albano, A. M., Chorpita, B. F., & Barlow, D. H. (2003). Childhood anxiety disorders. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 279–329). New York: The Guilford Press.

Alfano, C. A., Beidel, D. C., & Turner, S. M. (2006). Cognitive correlates of social phobia among children and adolescents. *Journal of Abnormal Child Psychology, 34*, 189–201.

Alfano, C. A., Ginsburg, G. S., & Kingery, J. N. (2007). Sleep-related problems among children and adolescents with anxiety disorders. *Journal of American Academy of Child and Adolescent Psychiatry, 46*, 224–232.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text revision). Washington, DC: Author.

Bagwell, C. L., Newcomb, A. F., & Bukowski, W. M. (1998). Preadolescent friendship and peer rejection as predictors of adult adjustment. *Child Development, 69*, 140–153.

Barmish, A. J., & Kendall, P. C. (2005). Should parents be co-clients in cognitive-behavioral therapy for anxious youth? *Journal of Clinical Child and Adolescent Psychology, 34*, 569–581.

Behar, L., & Stringfield, S. (1974). A behavioral rating scale for the preschool child. *Developmental Psychology, 10*, 601–610.

Beidel, D. C., Turner, S. M., & Morris, T. L. (1995). A new inventory to assess childhood social anxiety and phobia: The Social Phobia and Anxiety Inventory for Children. *Psychological Assessment, 7*, 73–79.

Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of American Academy of Child and Adolescent Psychiatry, 38*, 643–650.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68*, 1072–1080.

Beidel, D. C., Turner, S. M., & Young, B. J. (2006). Social effectiveness therapy for children: Five years later. *Behavior Therapy, 37*, 416–425.

Beidel, D. C., Turner, S. M., Young, B., & Paulson, A. (2005). Social effectiveness therapy for children: Three-year follow-up. *Journal of Consulting and Clinical Psychology, 73*, 721–725.

Bell-Dolan, D. J., Foster, S. L., & Christopher, J. S. (1995). Girls' peer relations and internalizing problems: Are socially neglected, rejected, and withdrawn girls at risk? *Journal of Clinical Child Psychology, 24*, 463–473.

Berndt, T. J., & Keefe, K. (1996). Relations of friendship quality to self-esteem in early adolescence. *Journal of Early Adolescence, 16*, 110–129.

Berndt, T. J., & Perry, T. B. (1986). Children's perceptions of friendships as supportive relationships. *Developmental Psychology, 22*, 640–648.

Bigelow, B. J. (1983). Assessing children's friendship expectations: Supplementing the semistructured interview with picture sequence tasks. *Human Relations, 36*, 285–308.

Boivin, M., & Hymel, S. (1997). Peer experiences and social self-perceptions: A sequential model. *Developmental Psychology, 33*, 135–145.

Bornstein, M. R., Bellack, A. S., & Hersen, M. (1977). Social-skills training for unassertive children: A multiple-baseline analysis. *Journal of Applied Behavior Analysis, 10*, 183–195.

Buhrmester, D. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development, 61*, 1101–1111.

Buhs, E. S., & Ladd, G. W. (2001). Peer rejection as an antecedent of young children's school adjustment: An examination of mediating processes. *Developmental Psychology, 37*, 550–560.

Bukowski, W. M., & Hoza, B. (1989). Popularity and friendship: Issues in theory, measurement, and outcome. In T. J. Berndt & G. W. Ladd (Eds.), *Peer relationships in child development* (pp. 15–45). Oxford, England: Wiley.

Bukowski, W. M., Hoza, B., & Boivin, M. (1994). Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. *Journal of Social and Personal Relationships, 11*, 472–484.

Burgess, K. B., Wojslawowicz, J. C., Rubin, K. H., Rose-Krasnor, L., & Booth, C. L. (2003). *The "Extended Class Play": A longitudinal study of its factor structure, reliability and validity*. Presented at the biennial meeting of the Society for Research in Child Development, Tampa, FL.

Burgess, K. B., Wojslawowicz, J. C., Rubin, K. H., Rose-Krasnor, L., & Booth-LaForce, C. (2006). Social information processing and

coping strategies of shy/withdrawn and aggressive children: Does friendship matter? *Child Development, 77*, 371–383.

Buss, A. H., & Plomin, R. (1984). *Temperament: Early developing personality traits*. Hillsdale, NJ: Lawrence Erlbaum.

Cartwright-Hatton, S., Hodges, L., & Porter, J. (2003). Social anxiety in childhood: The relationship with self and observer rated social skills. *Journal of Child Psychology and Psychiatry, 44*, 737–742.

Chansky, T. E., & Kendall, P. C. (1997). Social expectancies and self-perceptions in anxiety-disordered children. *Journal of Anxiety Disorders, 11*, 347–363.

Chung, T. Y., & Asher, S. R. (1996). Children's goals and strategies in peer conflict situations. *Merrill Palmer Quarterly, 42*, 125–147.

Clavell, T. A. (1990). Social adjustment, social performance, and social skills: A tri-component model of social competence. *Journal of Clinical Child Psychology, 19*, 111–122.

Coie, J. D., & Dodge, K. A. (1988). Multiple sources of data on social behavior and social status in the school: A cross-age comparison. *Child Development, 59*, 815–829.

Contreras, J. M., & Kerns, K. A. (2000). Emotion regulation processes: Explaining links between parent-child attachment and peer relationships. In K. A. Kerns, J. M. Contreras, & A. M. Neal-Barnett (Eds.), *Family and peers: Linking two social worlds* (pp. 1–25). Westport, CT: Praeger.

Costello, E. J., Egger, H. L., & Angold, A. (2004). Developmental epidemiology of anxiety disorders. In T. H. Ollendick & J. S. March (Eds.), *Phobic and anxiety disorders in children and adolescents* (pp. 61–91). New York: Oxford University Press, Inc.

Crick, N. R., & Bigbee, M. A. (1998). Relational and overt forms of peer victimization: A multiinformant approach. *Journal of Consulting and Clinical Psychology, 66*, 337–347.

Crick, N. R., & Grotpeter, J. K. (1996). Children's treatment by peers: Victims of relational and overt aggression. *Development and Psychopathology, 8*, 367–380.

Crick, N. R., & Ladd, G. W. (1993). Children's perceptions of their peer experiences: Attributions, loneliness, social anxiety, and social avoidance. *Developmental Psychology, 29*, 244–254.

Dill, E. J., Vernberg, E. M., Fonagy, P., Twemlow, S. W., & Gamm, B. K. (2004). Negative affect in victimized children: The roles of social withdrawal, peer rejection, and attitudes toward bullying. *Journal of Abnormal Child Psychology, 32*, 159–173.

Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *Minnesota symposium on child psychology* (Vol. 18, pp. 77–125). Hillsdale, NJ: Erlbaum.

Downey, G., Lebolt, A., Rincón, C., & Freitas, A. L. (1998). Rejection sensitivity and children's interpersonal difficulties. *Child Development, 69*, 1074–1091.

Erath, S. A., Flanagan, K. S., & Bierman, K. L. (2007). Social anxiety and peer relations in early adolescence: Behavioral and cognitive factors. *Journal of Abnormal Child Psychology, 35*, 405–416.

Erdley, C. A., & Asher, S. R. (1996). Children's social goals and self-efficacy perceptions as influences on their responses to ambiguous provocation. *Child Development, 67*, 1329–1344.

Erdley, C. A., Pietrucha, C. A., & Qualey, L. L. (1997). *Children's processing of social failure situations: Relations to social competence*. Paper presented at the biennial meeting of the Society for Research in Child Development, Washington, DC.

Erdley, C. A., Rivera, M., Shepherd, E., & Holleb, L. J. (2010). Social-cognitive models and skills. In D. W. Nangle, D. J. Hansen, C. A. Erdley, & P. J. Norton (Eds.), *Practitioner's guide to empirically based measures of social skills* (pp. 21–35). New York: Springer.

Fordham, K., & Stevenson-Hinde, J. (1999). Shyness, friendship quality, and adjustment during middle childhood. *Journal of Child Psychology and Psychiatry, 40*, 757–768.

Franke, S., & Hymel, S. (1984). *Social anxiety in children: The development of self-report measures*. Paper presented at the biennial meeting of the University of Waterloo Conference on Child Development, Waterloo, Ontario, Canada.

Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology, 21*, 1016–1024.

Ginsburg, G. S., La Greca, A. M., & Silverman, W. K. (1998). Social anxiety in children with anxiety disorders: Relation with social and emotional functioning. *Journal of Abnormal Child Psychology, 26*, 175–185.

Ginsburg, G. S., Riddle, M. A., & Davies, M. (2006). Somatic symptoms in children and adolescents with anxiety disorders. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*, 1179–1187.

Greco, L. A., & Morris, T. L. (2005). Factors influencing the link between social anxiety and peer acceptance: Contributions of social skills and close friendships during middle childhood. *Journal of Behavior Therapy, 37*, 197–205.

Gresham, F. M., & Elliot, S. N. (1990). *The Social Skills Rating System*. Circle Pines, MN: American Guidance.

Grills, A. E., & Ollendick, T. H. (2002). Peer victimization, global self-worth, and anxiety in middle school children. *Journal of Clinical Child and Adolescent Psychology, 31*, 59–68.

Hannesdóttir, D. K., & Ollendick, T. H. (2007). Social cognition and social anxiety among Icelandic schoolchildren. *Child & Family Behavior Therapy, 29*, 43–58.

Harrist, A. W., Zaia, A. F., Bates, J. E., Dodge, K. A., & Pettit, G. S. (1997). Subtypes of social withdrawal in early childhood: Sociometric status and social-cognitive differences across four years. *Child Development, 68*, 278–294.

Harter, S. (1982). The Perceived Competence Scale for Children. *Child Development, 53*, 87–97.

Harter, S. (1985a). *Manual for the Self-Perception Profile for Children*. Denver: University of Denver.

Harter, S. (1985b). *Manual for the Social Support Scale for Children and Adolescents*. Denver: University of Denver.

Harter, S. (1988). *Manual for the Self Perception Profile for Adolescents*. Denver: University of Denver.

Harter, S., & Pike, R. (1984). The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children. *Child Development, 55*, 1969–1982.

Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross-sectional studies. *Journal of Child Psychology and Psychiatry, 41*, 441–455.

Hightower, A. D., Work, W. C., Cowen, E., Lotyczewski, B. S., Spinell, A. P., Guare, J. C., et al. (1986). The Teacher-Child Rating Scale: A brief objective measure of elementary children's school problem behaviors and competencies. *School Psychology Review, 15*, 393–409.

Hymel, S., Bowker, A., & Woody, E. (1993). Aggressive versus withdrawn unpopular children: Variations in peer and self-perceptions in multiple domains. *Child Development, 64*, 879–896.

Inderbitzen, H. M., Walters, K. S., & Bukowski, A. L. (1997). The role of social anxiety in adolescent peer relations: Differences among sociometric status groups and rejected subgroups. *Journal of Clinical Child Psychology, 26*, 338–348.

Kagan, J. (1992). Behavior, biology, and the meaning of temperamental constructs. *Pediatrics, 90*, 510–513.

Kagan, J. (2003). Biology, context, and developmental inquiry. *Annual Review of Psychology, 54*, 1–23.

Kagan, J., Snidman, N., Kahn, V., & Towsley, S. (2007). The preservation of two infant temperaments into adolescence. *Monographs of the Society for Research in Child Development, 72*(2), 1–95. (2, Serial No. 287).

Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E. F., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: A randomized clinical trial evaluating child and family modalities. *Journal of Consulting and Clinical Psychology, 76*, 282–297.

Kingery, J. N., & Walkup, J. T. (2005). Anxiety disorders in children. In H. S. Singer, E. H. Kossoff, A. L. Hartman, & T. O. Crawford (Eds.), *Treatment of pediatric neurologic disorders* (pp. 501–506). New York: Taylor & Francis Group.

La Greca, A. M. (2001). Friends or foes? Peer influences on anxiety among children and adolescents. In W. K. Silverman & P. D. Treffers (Eds.), *Anxiety disorders in children and adolescents: Research, assessment and intervention* (pp. 159–186). New York: Cambridge University Press.

La Greca, A. M., Dandes, S. K., Wick, P., Shaw, K., & Stone, W. L. (1988). Development of the Social Anxiety Scale for Children: Reliability and concurrent validity. *Journal of Clinical Child Psychology, 17*, 84–91.

La Greca, A. M., & Harrison, H. M. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child and Adolescent Psychology, 34*, 49–61.

La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: Linkages with peer relations and friendships. *Journal of Abnormal Child Psychology, 26*, 83–94.

La Greca, A. M., Prinstein, M. J., & Fetter, M. D. (2001). Adolescent peer crowd affiliation: Linkages with health-risk behaviors and close friendships. *Journal of Pediatric Psychology, 26*, 131–143.

La Greca, A. M., & Stone, W. L. (1993). Social Anxiety Scale for Children-Revised: Factor structure and concurrent validity. *Journal of Clinical Child Psychology, 22*, 17–27.

Ladd, G. W. (2005). *Children's peer relations and social competence: A century of progress*. New Haven, CT: Yale University Press.

Ladd, G. W., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/withdrawn children during early grade school. *Child Development, 70*, 910–929.

Ladd, G. W., & Profilet, S. M. (1996). The Child Behavior Scale: A teacher-report measure of young children's aggressive, withdrawn, and prosocial behaviors. *Developmental Psychology, 32*, 1008–1024.

Ladd, G. W., & Troop-Gordon, W. (2003). The role of chronic peer difficulties in the development of children's psychological adjustment problems. *Child Development, 74*, 1344–1367.

London, B., Downey, G., Bonica, C., & Paltin, I. (2007). Social causes and consequences of rejection sensitivity. *Journal of Research on Adolescence, 17*, 481–506.

March, J. (1997). *Multidimensional Anxiety Scale for Children*. North Tonawanda, NY: Multi-Health Systems.

Marsh, H. W., Smith, I. D., & Barnes, J. (1983). Multitrait-multimethod analyses of the Self Description Questionnaire: Student-teacher agreement on multidimensional ratings of student self-concept. *American Educational Research Journal, 20*, 333–357.

Masten, A., Morison, P., & Pellegrini, D. (1985). A revised class play method of peer assessment. *Developmental Psychology, 21*, 523–533.

McCloskey, L. A., & Stuewig, J. (2001). The quality of peer relationships among children exposed to family violence. *Development and Psychopathology, 13*, 83–96.

McDowell, D. J., & Parke, R. D. (2009). Parental correlates of children's peer relations: An empirical test of a tripartite model. *Developmental Psychology, 45*, 224–235.

Michelson, L., & Wood, R. (1982). Development and psychometric properties of the Children's Assertive Behavior Scale. *Journal of Behavioral Assessment, 4*, 3–13.

Morgan, J., & Banerjee, R. (2006). Social anxiety and self-evaluation of social performance in a nonclinical sample of children. *Journal of Clinical Child and Adolescent Psychology, 35*, 292–301.

Muris, P., Merckelbach, H., Gadet, B., & Moulaert, V. (2000). Fears, worries, and scary dreams in 4- to 12-year-old children: Their content, developmental pattern, and origins. *Journal of Clinical Child Psychology, 29*, 43–52.

Nangle, D. W., Erdley, C. A., Newman, J. E., Mason, C. A., & Carpenter, E. M. (2003). Popularity, friendship quantity, and friendship quality: Interactive influences on children's loneliness and depression. *Journal of Clinical Child and Adolescent Psychology, 32*, 546–555.

Nangle, D. W., Grover, R. L., Holleb, L. J., Cassano, M., & Fales, J. L. (2010). Defining competence and identifying target skills. In D. W. Nangle, D. J. Hansen, C. A. Erdley, & P. J. Norton (Eds.), *Practitioner's guide to empirically based measures of social skills* (pp. 3–19). New York: Springer.

Nelson, L. J., Rubin, K. H., & Fox, N. A. (2005). Social withdrawal, observed peer acceptance, and the development of self-perceptions in children ages 4 to 7 years. *Early Childhood Research Quarterly, 20*, 185–200.

Newcomb, A. F., & Bagwell, C. L. (1996). The developmental significance of children's friendship relations. In W. M. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), *The company they keep: Friendship in childhood and adolescence* (pp. 289–321). New York: Cambridge University Press.

Ollendick, T. H. (1981). Assessment of social interaction skills in school children. *Behavioral Counseling Quarterly, 1*, 227–243.

Ollendick, T. H., & Schmidt, C. R. (1987). Social learning constructs in the prediction of peer interaction. *Journal of Clinical Child Psychology, 16*, 80–87.

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys*. Washington, DC: Hemisphere Press (Wiley).

Olweus, D. (2001). Peer harassment: A critical analysis and some important issues. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 3–20). New York: Guilford Press.

Panak, W. F., & Garber, J. (1992). Role of aggression, rejection, and attributions in prediction of depression in children. *Development and Psychopathology, 4*, 145–165.

Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology, 29*, 611–621.

Pedersen, S., Vitaro, F., Barker, E. D., & Borge, A. I. H. (2007). The timing of middle-childhood peer rejection and friendship: Linking early behavior to early-adolescent adjustment. *Child Development, 78*, 1037–1051.

Perry, D. G., Kusel, S. J., & Perry, L. L. (1988). Victims of peer aggression. *Developmental Psychology, 24*, 807–814.

Primary Mental Health Project. (1999). *Teacher-Child Rating Scale (T-CRS) 2.1 guidelines*. Rochester, NY: Primary Mental Health Project. [Brochure].

Prinstein, M. J., Boergers, J., & Vernberg, E. M. (2001). Overt and relational aggression in adolescents: Social-psychological adjustment of aggressors and victims. *Journal of Clinical Child Psychology, 30*, 479–491.

Rabiner, D. L., Keane, S. P., & MacKinnon-Lewis, C. (1993). Children's beliefs about familiar and unfamiliar peers in relation to their sociometric status. *Developmental Psychology, 29*, 236–243.

Reynolds, C. R., & Richmond, B. O. (1978). What I Think and Feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology, 6*, 271–280.

Rice, K. G., & Preusser, K. J. (2002). The Adaptive/Maladaptive Perfectionism Scale. *Measurement and Evaluation in Counseling and Development, 34*, 210–221.

Rubin, K. H. (2001). *The Play Observation Scale (POS)*. College Park, MD: University of Maryland.

Rubin, K. H., & Burgess, K. B. (2001). Social withdrawal and anxiety. In M. W. Vasey & M. R. Dadds (Eds.), *The developmental psychopathology of anxiety* (pp. 407–434). New York: Oxford University Press.

Rubin, K. H., Burgess, K. B., Kennedy, A. E., & Stewart, S. L. (2003). Social withdrawal in childhood. In E. J. Mash & R. A. Barkley (Eds.), *Child psychopathology* (pp. 372–406). New York: Guilford Press.

Rubin, K. H., Chen, X., & Hymel, S. (1993). Socioemotional characteristics of withdrawn and aggressive children. *Merrill-Palmer Quarterly, 39*, 518–534.

Rubin, K. H., & Coplan, R. J. (2004). Paying attention to and not neglecting social withdrawal and social isolation. *Merrill-Palmer Quarterly, 50*, 506–534.

Rubin, K. H., & Mills, R. (1988). The many faces of social isolation in childhood. *Journal of Consulting and Clinical Psychology, 6*, 916–924.

Rubin, K. H., Wojslawowicz, J. C., Rose-Krasnor, L., Booth-LaForce, C., & Burgess, K. B. (2006). The best friendships of shy/withdrawn children: Prevalence, stability, and relationship quality. *Journal of Abnormal Child Psychology, 34*, 143–157.

Scahill, L., Riddle, M. A., McSwiggin-Hardin, M., Ort, S. I., King, R. A., Goodman, W. K., et al. (1997). Children's Yale-Brown Obsessive-Compulsive Scale: Reliability and validity. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 844–852.

Schneider, B. H. (1999). A multimethod exploration of the friendships of children considered socially withdrawn by their school peers. *Journal of Abnormal Child Psychology, 27*, 115–123.

Schneider, B. H. (2009). An observational study of the interactions of socially withdrawn/anxious early adolescents and their friends. *Journal of Child Psychology and Psychiatry, 50*, 799–806.

Schneider, B. H., & Tessier, N. G. (2007). Close friendship as understood by socially withdrawn, anxious early adolescents. *Child Psychiatry and Human Development, 38*, 339–351.

Schwartz, D., Farver, J., Change, L., & Lee-Shin, Y. (2002). Victimization in South Korean children's peer groups. *Journal of Abnormal Child Psychology, 30*, 113–125.

Schwartz, C. E., Snidman, N., & Kagan, J. (1999). Adolescent social anxiety as an outcome of inhibited temperament in childhood. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 1008–1015.

Silverman, W., & Albano, A. M. (1996). *The Anxiety Disorders Interview Schedule for Children (DSM-IV)*. Albany, NY: Greywind Publications.

Slee, P. T. (1994). Situational and interpersonal correlates of anxiety associated with peer victimisation. *Child Psychiatry and Human Development, 25*, 97–107.

Smári, J., Pétursdóttir, G., & Porsteinsdóttir, V. (2001). Social anxiety and depression in adolescents in relation to perceived competence and situational appraisal. *Journal of Adolescence, 24*, 199–207.

Spence, S. H. (1995). *Social skills training: Enhancing social competence with children and adolescents*. Windsor, Berkshire, England: NFER-NELSON.

Spence, S. H., Donovan, C., & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal of Abnormal Psychology, 108*, 211–221.

Spielberger, C. D. (1973). *Manual for the State-Trait Anxiety Inventory for Children*. Palo Alto, CA: Consulting Psychological Press.

Sroufe, A. (1997). Psychopathology as an outcome of development. *Development and Psychopathology, 9*, 251–268.

Sroufe, L. A., & Rutter, M. (1984). The domain of developmental psychopathology. *Child Development, 55*, 17–29.

Stewart, S. L., & Rubin, K. H. (1995). The social problem-solving skills of anxious-withdrawn children. *Development and Psychopathology, 7*, 323–336.

Storch, E. A., Brassard, M. R., & Masia-Warner, C. L. (2003a). The relationship of peer victimization to social anxiety and loneliness in adolescence. *Child Study Journal, 33*, 1–18.

Storch, E. A., Ledley, D. R., Lewin, A. B., Murphy, T. K., Johns, N. B., Goodman, W. K., et al. (2006). Peer victimization in children with obsessive-compulsive disorder: Relations with symptoms of psychopathology. *Journal of Clinical Child and Adolescent Psychology, 35*, 446–455.

Storch, E. A., & Masia-Warner, C. L. (2004). The relationship of peer victimization to social anxiety and loneliness in adolescent females. *Journal of Adolescence, 27*, 351–362.

Storch, E. A., Masia-Warner, C. L., Crisp, H., & Klein, R. G. (2005). Peer victimization and social anxiety in adolescence: A prospective study. *Aggressive Behavior, 31*, 437–452.

Storch, E. A., Nock, M. K., Masia-Warner, C., & Barlas, M. E. (2003b). Peer victimization and social-psychological adjustment in Hispanic and African-American children. *Journal of Child and Family Studies, 12*, 439–452.

Strauss, C. C., Lahey, B. B., Frick, P., Frame, C. L., & Hynd, G. W. (1988). Peer social status of children with anxiety disorders. *Journal of Consulting and Clinical Psychology, 56*, 137–141.

Strauss, C. C., Lease, C. A., Kazdin, A. E., Dulcan, M. K., & Last, C. G. (1989). Multimethod assessment of the social competence of children with anxiety disorders. *Journal of Clinical Child Psychology, 18*, 184–189.

Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: W. W. Norton & Company, Inc.

Tremblay, R. E., Loeber, R., Gagnon, C., Charlebois, P., Larivee, S., & LeBlanc, M. (1991). Disruptive boys with stable and unstable high fighting behavior patterns during junior elementary school. *Journal of Abnormal Child Psychology, 19*, 285–300.

Verduin, T. L., & Kendall, P. C. (2008). Peer perceptions and liking of children with anxiety disorders. *Journal of Abnormal Child Psychology, 36*, 459–469.

Vernberg, E. M. (1990a). Experiences with peers following relocation during early adolescence. *American Journal of Orthopsychiatry, 60*, 466–472.

Vernberg, E. M. (1990b). Psychological adjustment and experiences with peers during early adolescence: Reciprocal, incidental, or unidirectional relationships? *Journal of Abnormal Child Psychology, 18*, 187–198.

Vernberg, E. M., Abwender, D. A., Ewell, K. K., & Beery, S. H. (1992). Social anxiety and peer relationships in early adolescence: A prospective analysis. *Journal of Clinical Child Psychology, 21*, 189–196.

Vernberg, E. M., Jacobs, A. K., & Hershberger, S. L. (1999). Peer victimization and attitudes about violence during early adolescence. *Journal of Clinical Child Psychology, 28*, 386–395.

Walker, H. M. (1983). *Walker Problem Behavior Identification Checklist (WPBIC-Revised)*. Los Angeles: Western Psychological Services.

Wentzel, K. R., Barry, C. M., & Caldwell, K. A. (2004). Friendships in middle school: Influences on motivation and school adjustment. *Journal of Educational Psychology, 96*, 195–203.

Wichmann, C., Coplan, R. J., & Daniels, T. (2004). The social cognitions of socially withdrawn children. *Social Development, 13*, 377–392.

Ye, H. J., Rice, K. G., & Storch, E. A. (2008). Perfectionism and peer relations among children with obsessive-compulsive disorder. *Child Psychiatry and Human Development, 39*, 415–426.

Younger, A. J., Schneider, B. H., Wadeson, R., Guirguis, M., & Bergeron, N. (2001). A behavior-based peer-nomination measure of social withdrawal in children. *Social Development, 9*, 544–564.

Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Developmental and Behavioral Pediatrics, 27*, 155–168.