Sex Roles (2014) 70:255–266
DOI 10.1007/s11199-013-0317-9

FEMINIST FORUM

Bashful Boys and Coy Girls: A Review of Gender Differences in Childhood Shyness

Laura Doey · Robert J. Coplan · Mila Kingsbury

Published online: 28 September 2013

Abstract Shyness is a temperamental trait characterized by a fear of novel social situations and self-consciousness in situations of perceived social evaluation. From early childhood to adolescence, shyness is associated with a host of negative outcomes including poor peer relationships (e.g., exclusion, victimization), internalizing problems (e.g., anxiety, depression), and school adjustment difficulties (e.g., lack of academic success, school avoidance). It has been suggested that shyness may be less socially acceptable for boys than for girls because it violates gender norms related to male social assertion and dominance. In the current paper, we review the empirical support for this assertion. More specifically, we examined: (1) possible gender differences in the prevalence of shyness; (2) how important others (i.e., parents, teachers, peers) might respond differentially to shyness in boys compared to girls; and (3) potential gender differences in the implications of shyness across multiple domains. Most of this research has been conducted with school-aged children from Canada and the United States. However, we also explore findings from emerging cross-cultural studies in this area. Possible conceptual mechanisms that may underlie differences in the potential implications of shyness for boys and girls are then discussed, as well as several prospective directions for future research.

L. Doey (✉)
University of Ottawa, 11 Marie Curie Private, Ottawa, ON K1N 9A4, Canada
e-mail: ldoey051@uottawa.ca

R. J. Coplan · M. Kingsbury
Carleton University, 1125 Colonel By Drive, Ottawa, ON K1S 5B6, Canada

Keywords Shyness · Children · Gender differences · Social withdrawal · Unsociability

Introduction

The aim of this review paper was to provide a synthesis of the growing body of literature examining gender differences in the prevalence and correlates of childhood shyness. The last 30 years have witnessed a substantive increase in the study of the causes and consequences of shyness (and related constructs) from early childhood to adolescence (see Rubin et al. 2009, for an extensive review). Some of these studies have either directly or tangentially explored possible gender differences in shyness. It should be noted that unless otherwise indicated, the studies cited herein were conducted with samples from Canada and the U.S. However, there is growing research interest in the cross-cultural similarities and differences in both the meaning and implications of childhood shyness (see Chen 2010 for a recent review). This emerging research area is examined in some detail in a later section. Accordingly, this review may be of interest to readers in many countries.

Drawing upon developmental theory of the importance of peer relationships in childhood (e.g., Rubin et al. 2006a) and gender role stereotype theory casting males as traditionally more dominant/assertive and females as more passive/submissive (e.g., Browne 1998), we undertook a thorough review of the extant literature pertaining to gender differences in shyness from early childhood to adolescence. More specifically, we examined: (1) possible gender differences in the prevalence of shyness; (2) how important others (i.e., parents, teachers, peers) might respond differentially to shyness in boys compared to girls; and (3) potential gender differences in the implications of shyness across multiple domains. We also discuss possible conceptual mechanisms that may

underlie differences in the potential implications of shyness for boys and girls and provide some directions for future research.

This review builds upon previous research examining gender differences in a variety of contexts and settings. For example, previous research has explored gender differences in parental, teacher, and peer attitudes and responses to child characteristics and behaviors (e.g., Birnbaum and Croll 1984; Cahill and Adams 1997; Fagot 1984; Kingsbury and Coplan 2012), as well as gender stereotypes depicted in children's books and cartoons (Fitzpatrick and McPherson 2010; Gooden and Gooden 2001; Hamilton et al. 2006; Thompson and Zerbinos 1997).

Conceptual Overview of Shyness

Shyness is a temperamental trait characterized by fear and anxiety in the face of novel social situations and self-consciousness in situations of perceived social evaluation (Rubin et al. 2009). Shyness shares considerable conceptual overlap with a number of related constructs. For example, *behavioral inhibition* refers to a biologically based tendency towards wariness when exposed to novelty (e.g., Kagan 1997), and *anxious-solitude* denotes social wariness displayed specifically in familiar peer contexts (e.g., Gazelle and Ladd 2003).

In peer contexts, shy boys and girls tend to speak less, make fewer social initiations to peers, and display poorer social skills than their non-shy peers in samples from Canada and the U.S. (e.g., Chen et al. 2006; Coplan et al. 1994; Rimm-Kaufman and Kagan 2005), as well as Swedish samples (e.g., Bohlin et al. 2005). Shy children of both genders are prone to peer relationship difficulties, including peer exclusion, victimization, and poorer quality of friendships (e.g., Gazelle and Ladd 2003; Ladd et al. 2011; Perren and Alsaker 2006 [in a Swedish sample]). Furthermore, shy children (collapsing across gender) also tend to have difficulties at school, including poorer academic achievement, lower school engagement, and less school liking (e.g., Coplan and Weeks 2010; Crozier and Hostettler 2003 [in a British sample]; Hughes and Coplan 2010).

Perhaps as a result, childhood shyness has been associated with indices of internalizing problems among both boys and girls, including loneliness, low self-esteem, and symptoms of anxiety and depression (e.g., Coplan et al. 2007a, 2008; Feng et al. 2008; Mian et al. 2011). In addition, a growing number of retrospective and longitudinal studies indicate that extreme shyness in early and middle childhood (for both boys and girls) encompasses an increased risk for the development of anxiety disorders (particularly social anxiety disorder) in later childhood (e.g., as young as 9 years of age—Gazelle et al. 2010), adolescence and adulthood (e.g., Chronis-Tuscano et al. 2009; McDermott et al. 2009; Muris et al. 2011 [in a Dutch sample]; White et al. 2011).

There is also growing evidence to suggest that child *gender* may play an important role in the development of shyness. Fear and anxiety, which represent prominent emotional features of shyness, are considered more "feminine" by North American standards (e.g., Kimmel 2004). In this regard, it has been suggested that shyness in children from Canada and the U.S. may be less socially acceptable for boys than for girls because it violates gender norms related to male social assertion and dominance (e.g., Bosacki 2008; Rubin and Coplan 2004). In the current paper, we review the empirical support for this assertion by examining findings pertaining to gender differences in the prevalence and correlates of childhood shyness. We then discuss possible conceptual mechanisms that may underlie differences in the potential implications of shyness for boys and girls.

Gender Differences in the Prevalence of Shyness

When exploring questions pertaining to gender differences in shyness and related constructs, the first question of interest is whether the prevalence or frequency of these constructs varies between boys and girls. There has been a general lack of significant gender differences reported in behavioral inhibition and shyness in early and middle childhood, as assessed by observations (Coplan et al. 1994, 2009; Kagan et al. 1988; Mullen et al. 1993), parental ratings (Coplan et al. 2004; Rowe and Plomin 1977), and teacher reports (Bishop et al. 2003 [in an Australian sample]; Coplan and Rubin 1998; Thijs et al. 2004 [in a Dutch sample]). Similarly, girls are not more likely than boys to be nominated by their peers as shy or socially withdrawn (Lemerise 1997; Rubin et al. 1993, 2006b). Of note, Else-Quest et al. (2006) conducted a meta-analysis of gender differences in child temperament (including studies from infancy to age 13 years). For shyness, the mean weighted effect size was significantly different from 0 ($p < .05$) and described as "very small effect sizes favoring girls" (p. 59).

Some gender differences do appear to emerge in older children. For example, results from some longitudinal studies suggest that by later childhood, girls begin to demonstrate higher levels of behavioral inhibition than boys in Norwegian (e.g., Janson and Mathiesen 2008) and Mauritian samples (e.g., Scarpa et al. 1995). Moreover, in later childhood and early adolescence, Chinese (e.g., Chang 2004), British (e.g., Crozier 1995), Canadian (e.g., Findlay et al. 2009), Dutch (e.g., Vervoort et al. 2010), and Indian and Iranian (e.g., Saberi and D'Souza 2009) girls tend to identify themselves as shyer than boys of the same age. In his study, Lazarus (1982) reported that almost twice as many 5th grade girls as boys from the U.S. labeled themselves as "shy".

It is possible that this gender difference in later childhood can be partially explained by the onset of social anxiety disorder occurring most commonly during this age period (Grant et al. 2005). For example, adolescent girls are more socially anxious than boys (e.g., Essau et al. 1999 [in a German sample]; Kendall et al. 2006; Ranta et al. 2007 [in a Finnish sample]). In adulthood, females are approximately 1.5 to 2 times more likely to be diagnosed with social anxiety disorder in samples from the United States (e.g., Kessler et al. 2005) and Germany (e.g., Wittchen and Fehm 2003), as compared to their male counterparts. Given the degree of conceptual overlap between shyness and social anxiety (e.g., Chavira et al. 2002; Degnan and Fox 2007; Rapee and Coplan 2010), the emerging gender difference in self-reports of shyness during this age period may in fact reflect gender differences in social anxiety.

Alternately, this emerging gender difference may be a result of a *reporting* bias in later childhood. For example, girls may be more likely to report feelings of shyness because of the apparent greater social acceptability of such emotions for girls than for boys (e.g., Coplan et al. 2007b). On the other hand, boys may be more likely to underreport such feelings in the face of anticipated negative reactions and responses from others. In this regard, the higher levels of shyness reported by girls in later childhood might be viewed as potential support for a societal-level bias in the relative appropriateness of shyness for girls versus boys. In addition, some gender differences in shyness may also be partially accounted for by measurement issues involving *recall* biases. For example, parent and teacher assessments of child shyness is based on these individuals' own direct observations of child behaviors. If it is more socially acceptable for girls than boys to display shy behaviors, parents and teachers may more readily recall such "gender-stereotypical" behaviors among girls than boys (Renn and Calvert 1993). Alternatively, there is at least some evidence to suggest that socially-withdrawn behaviors among boys (as presented using hypothetical vignettes) may become more salient to peers in later childhood as compared to the same behaviors among girls (e.g., Younger and Boyko 1987).

To avoid biases associated with self- and other-reports, it might be suggested that we rely upon more "objective" assessments of shyness. However, there are some potential difficulties with this as well. For example, observational measures of shyness may be less valid as children grow older and are better able to self-regulate (e.g., McCabe et al. 2004). As a result, older children may *feel* shy but be less inclined to display shy behaviors. This may be particularly true of boys, who may better understand behavior in relation to social acceptability as they grow older given that their ability to behaviorally self-regulate develops later in life when compared to girls (Matthews et al. 2009). Biological indicators of shyness may also be informative. However, there is no specific single biological or psychophysiological marker for shyness (Schmidt et al. 2005). This topic is discussed in more detail in a later section.

Gender Differences in Responses to Shyness

A second question of interest relates to whether shy boys and girls are treated and responded to differently by significant others in their lives, including parents, teachers, and peers. Evidence of such differences can also speak to gender differences in the social acceptability of shyness.

There is growing evidence to suggest that shy, anxious, and fearful behaviors in girls are more likely to be rewarded and accepted by *parents*, whereas shyness in boys is more likely to be discouraged and result in more negative interactions (e.g., Birnbaum and Croll 1984; Coplan et al. 2004; Engfer 1993 [in a German sample]; Eggum et al. 2009; Simpson and Stevenson-Hinde 1985 [in a British sample; for a review see Burgess et al. 2005). For example, in a retrospective study of parents' emotion socialization practices, Garside and Klimes-Dougan (2002) reported that fathers tended to reward girls for expressing sadness and fear, but punished boys for expressing the same emotions. Stevenson-Hinde and Glover (1996) observed more positive maternal interactions for moderately shy girls than for moderately shy boys in a British sample. This was not true for extremely shy children, however, suggesting that parents may respond similarly to extreme shyness in both boys and girls. Kingsbury and Coplan (2012) recently reported that parents' gender role attitudes might moderate their responses to shyness in boys versus girls. More traditional (i.e., less egalitarian) gender role attitudes among mothers were predictive of fewer positive emotions and anticipated benefits in response to vignettes describing shyness in boys, but not girls.

In general, *teachers* also tend to respond more negatively towards both boys and girls who display non-gender stereotypical behaviors (Cahill and Adams; 1997; Fagot 1977, 1984; Sandberg and Pramling-Samuelsson 2005 [in a Swedish sample]). There is also some evidence to suggest that talkative, exuberant, and disruptive behaviors may be more acceptable among boys than girls in the classroom (e.g., DuPaul et al. 2006; Stipek and Miles 2008; for a review see Sadker and Sadker 1994). For example, teachers from the U.S. tend to praise boys for outspoken behaviors, but praise girls for restraining spontaneous conversation in the classroom (AAUW Educational Foundation 1995).

However, when looking at relationships between teachers and *shy* boys and girls, studies of teachers' attitudes, responses, and relationships have not reported any significant gender differences (e.g., Arbeau and Coplan 2007; Arbeau et al. 2010; Coplan and Prakash 2003; Coplan et al. 2011; Justice et al. 2008; Thijs et al. 2006 [in a Dutch sample]). Coplan and colleagues (2011) speculated that teacher training and experiences might come to override gender stereotypes regarding shyness. These authors also suggested that the inclusion of more male teachers in subsequent studies would help to explore this issue further.

Peers are another important source for understanding gender differences in shyness and related constructs. Research shows that both male and female peers also tend to view violations of gender stereotypes more negatively among boys than girls (e.g., Pronk and Zimmer-Gembeck 2010 [in an Australian sample]; Smetana 1986). Consistent with these findings, shyness has been found to be more strongly associated with peer exclusion and rejection among boys than girls (Coplan et al. 2004, 2008; Gazelle and Ladd 2003; Nelson et al. 2005; Spangler and Gazelle 2009).

Lease and colleagues (2002) reported gender differences in the links between social withdrawal and different indices of peer status among elementary school children. Whereas socially withdrawn boys and girls were both rated as less popular than their more sociable counterparts, socially withdrawn unpopular girls were still more liked by their peers as compared to unpopular socially withdrawn boys. However, other researchers have failed to observe gender differences in peer perceptions of shyness in boys and girls. For example, Coplan et al. (2007b) reported no differences in children's peer-related attitudes and responses (e.g., liking, perceived social status) towards hypothetical shy boys and girls (see also Blote et al. 2012; Miers et al. 2010 for similar findings in a Dutch sample). It is possible that differences in the construct assessed (i.e., social withdrawal [which may include aspects of both shyness and unsociability] vs. shyness) and the methodology employed (i.e., peer nominations vs. responses to hypothetical vignettes) contributed towards the variables findings across these studies.

Difficulties in social relationships may persist into adulthood for shy and socially withdrawn males. For example, men from the U.S. who were shy as boys have been found to marry, start families, and enter stable careers later than their non-shy counterparts, whereas the same has not been found for women who were shy as girls (Caspi et al. 1988). Similar findings emerged in a Swedish sample, although no gender differences were observed among shy and non-shy men and women relative to career stability (Kerr et al. 1996). It is possible that cohort effects may partially account for the differences found between these two studies.

In support of this assertion, a more recent longitudinal study of German youth conducted by Asendorpf and colleagues (2008) found occupational and romantic delays for withdrawn girls as well as boys. The authors suggested that the lack of observed gender differences was due to the composition of the sample—Germany was ranked as the second-most egalitarian country at the time that the study was being carried out (Williams and Best 1990). These results suggest that as traditional gender roles begin to erode in European and North American culture, the different trajectories previously observed for shy boys and girls may converge (Asendorpf et al. 2008).

Gender Differences in the Concomitants and Outcomes of Shyness

The final question of interest pertains to gender differences in the associations between shyness and emotional functioning. That is, do shy boys and girls experience the same degree of wellbeing or manifest similar levels of internalizing and externalizing difficulties?

Several researchers have reported stronger associations between shyness and internalizing problems (e.g., anxiety, depression, loneliness, lower self-esteem) among boys as compared to girls in samples from Canada and the U.S. (Colder et al. 2002; Coplan et al. 2007a, b; Coplan and Weeks 2009; Eisenberg et al. 1998; Gest 1997; Rubin et al. 1993), as well as samples from Germany and England (Kienbaum et al. 2001; Stevenson-Hinde and Glover 1996). For example, Colder and colleagues (2002) reported that U.S. boys showing patterns of high fearfulness and low activity level (characteristic of shyness) in the first year of life tended to show an increase in depressive symptoms over time. Comparatively, fearful low-active girls showed a decline in depressive symptoms over time. In the same vein, Gest (1997) found that shyness in middle childhood was associated with emotional distress in late adolescence and early adulthood for boys, but not for girls. Morison and Masten (1991) reported that shy adolescent boys had lower self-esteem as compared to girls.

It should be acknowledged that results pertaining to gender differences in the links between shyness and internalizing problems have not been entirely consistent. For example, Schwartz et al. (1999) reported that the relation between early behavioral inhibition and social anxiety was stronger for girls than for boys. In a similar vein, Crick and Ladd (1993) found a stronger association between loneliness and social anxiety for girls than for boys.

Conceptualizing the Increased Risk of Being a Shy Boy

Overall, the results from our review of the extant empirical literature suggest that: (1) although there is no overall mean gender difference in shyness in early or middle childhood, shy girls report higher levels of shyness than shy boys in later childhood and adolescence; (2) parents and peers (and to a lesser extent, teachers) appear to respond more negatively to shy behaviors in boys as compared to girls; and (3) there is at least some evidence to suggest that shyness is more strongly associated with internalizing problems among boys as compared to girls.

As described earlier, it has been suggested that shyness may be less socially acceptable for boys than for girls because it violates North American gender norms related to male social assertion and dominance (e.g., Bosacki 2008; Rubin and Coplan 2004). The dissemination of these societal attitudes

and expectations regarding shyness appears to be clearly transmitted via parental and peer responses. There is additional evidence to suggest that gender differences in the social acceptability of shyness are also communicated to children through other influential channels.

For example, storybooks constitute a form of media that is readily accessible to children, and which provides a context for children to learn about social roles, expectations, and values (e.g., Tsai et al. 2007). In this vein, Coplan and colleagues (2010) undertook a qualitative study of children's storybooks' portrayal of shy protagonists (from primarily authors in Canada and the U.S.). In the storybooks examined, shy characters of both genders were portrayed as unhappy, and as experiencing difficulties in their relationships with peers, parents, and teachers. However, the portrayed outcomes for shy male characters were found to be more severe and pervasive than for shy female characters. For example, shy male characters tended to experience problems in more domains (e.g., classroom, playground, home) than did shy female characters. The authors suggested that such depictions may not be intentional, but rather reflect authors' own 'real world' experiences with shy children. Such gendered portrayals may also be reflective of authors' own biases towards the social acceptability of shyness in boys versus girls.

Characterizations such as these may serve to create a self-fulfilling prophecy, whereby shy children, and particularly shy boys, come to expect more negative consequences as a result of their shyness. Moreover, gender roles for boys and girls regarding the social appropriateness of shyness may become highly ingrained in childhood. In support of this notion, Bukowski (1990) reported that children tended to better recall information about a hypothetical peer described as shy-withdrawn when that peer was a girl as compared to a boy. It was speculated that this was due to girls fitting into children's cognitive schemas for shyness better than boys.

As a result, there may be cumulative negative effects for shy boys raised with the experience of a societal gender bias in the social acceptability of shyness compared to shy girls. That is, over time, the display of gender-stereotypical incongruent social behaviors may exacerbate shy boys' risk for negative outcomes. Put another way, if shyness is indeed less socially acceptable among boys than girls, it can be postulated that the display of shyness over time might take a greater toll on the emotional wellbeing of shy boys than shy girls.

The previously reviewed studies demonstrating stronger associations between shyness and indices of socio-emotional difficulties among boys as compared to girls can be interpreted as indirect empirical support for this postulation. There is at least some additional evidence to directly suggest that being shy is more *stressful* for boys than for girls.

For example, increased cortisol levels are a well-known physiological marker for the experience of stress (e.g., Gunnar et al. 2009). Dettling et al. (1999) found that shyness in Swedish preschool-aged boys but not girls was associated with increased cortisol levels over the day at childcare. That is, only shy boys appeared to experience greater stress as the day progressed in this social setting. Williams and colleagues (2010) reported that behaviorally inhibited male adolescents were at an increased risk for substance abuse, whereas behavioral inhibition served as a protective factor against the use of substances for female youth. Consequently, socially anxious individuals may resort to drug and alcohol use as a coping mechanism for easing their reactive responses to stressful social situations (e.g., Book et al. 2012). Based on the current literature, substance use as a means of coping may serve as more of a risk factor for socially anxious males compared to females.

One pathway via which shy boys may directly experience increased levels of stress could be through their interactions with parents, peers, and teachers. Indeed, although the experience of less positive relationships with important others has potentially negative consequences for all children, there is accumulating evidence to suggest that shy boys and girls are particularly prone to these negative effects. For example, negative interactions and relationships with parents (e.g., Coplan et al. 2008), siblings (Graham and Coplan 2012), peers (e.g., Gazelle and Ladd 2003), and teachers (e.g., Arbeau et al. 2010) exacerbate the associations between shyness and indices of socio-emotional difficulties. Thus, if shy boys are more likely than shy girls to experience these relationships as more negative in childhood, they may be increasingly prone to the cumulative negative effects of these socio-emotional indices.

It may also be that shy boys are more prone to experiencing negative consequences in the face of these accumulating negative experiences as compared to girls. For example, Gazelle and Rudolph (2004) reported that shy (anxious-solitary) and excluded girls displayed elevated depressive symptoms (relative to the mean) in the spring of grades 5/6—and maintained this relative elevation over an 18-month time period. In contrast, although shy-excluded boys did not differ in their depression scores relative to the mean at the outset, they demonstrated a significant linear increase in self-reported depression symptoms over time, such that at the last time point their depression scores were equivalent to that of girls (and significantly elevated relative to the mean). However, it should be noted that difficulties with social relationships have also been previously suggested to pose greater challenges for girls' wellbeing (e.g., lower friendship quality and stability, higher reassurance-seeking behaviors, higher self-reported symptoms of depression) as compared to boys (e.g., Prinstein et al. 2005).

Recent research suggests that shy boys may also be less equipped than shy girls to cope with the social stressors they experience. In a study of coping styles in children aged 9–13 years, Kingsbury et al. (2012) reported that boys used less

problem-solving coping strategies than their female peers in response to a social stressor. Importantly, low levels of problem-solving coping were associated with more emotional and social difficulties among shy boys than girls and non-shy children of both genders.

Directions for Future Research

Our review of the extant literature has highlighted several important findings with regard to the links between shyness and gender. In this section, we consider several areas for future research in this area.

Biological Foundations

Foremost, future research should explore in more detail any potential gender differences in the biological foundations of shyness. To date, several physiological "markers" of shyness have been researched. For example, as compared to their more outgoing peers, shy children have been reported to display patterns of right frontal EEG asymmetry, a higher and more stable heart rate, and elevated levels of early morning salivary cortisol (e.g., Fox et al. 2001; Henderson et al. 2004; Schmidt et al. 1997; Spangler and Schieche 1998 [in a German sample]), collapsing results across genders. It has been suggested that these psychophysiological characteristics underlie an over-aroused amygdala and combine to result in hyper-reactivity towards novel and stressful situations (Kagan et al. 1993). Researchers have also begun to explore possible genetic contributions to shyness (e.g., Arbelle et al. 2003; Hamidovic et al. 2009; Schmidt et al. 2009). Most recently, Smith and colleagues (2012) concluded that there was strong evidence of a phenotype expressing behavioral inhibition in boys and girls, which appeared to be heritable.

There is at least some preliminary evidence to suggest that there may also be gender differences in the biological foundations of shyness. To begin with, the constellation of psychophysiological characteristics that appears to underlie shyness is thought to be manifested behaviorally in infancy via the display of negative reactivity (e.g., crying, fussing, whining, squirming). Henderson et al. (2001) reported that negative reactivity at age 9 months was associated with social wariness for boys at 4 years of age, but not for girls. More direct evidence can be found in a study by Theall-Honey and Schmidt (2006), who examined EEG activity in shy versus non-shy boys and girls at rest as well as during the processing of positive and negative emotions. Among their results, shy children's (both boys and girls) EEG activity in the *right central* area of the brain was more exertive at rest as compared to non-shy children. However, their results also revealed interesting gender differences in the *mid-frontal* region of the brain. For shy girls, mid-frontal EEG activity was higher when experiencing both positive and negative emotions, whereas shy boys' EEG activation was lower across all emotional conditions comparatively. This points to evidence of possible gender differences in the biological markers of shyness in boys and girls—although the implications of this finding have yet to be explored. Moreover, there is a general paucity of empirical findings related to biological and genetic markers of shyness, and even fewer that have directly explored possible gender differences. Future research should explore the possible differences across a wide range of psychophysiological and genetic assessments.

Media Portrayals

There have been few direct studies of the media portrayal of shy children (e.g., Coplan et al. 2010). However, there is some evidence to suggest that girls are more often portrayed in the media as displaying shy characteristics and behaviors as compared to boys. For example, Fitzpatrick and McPherson (2010) examined gender stereotypes in coloring books from the U.S. Although shyness was not observed in particular, male characters were found to be depicted more frequently in active roles, whereas females were more likely to be shown alone, doing nothing (i.e., exhibiting shy and socially withdrawn behaviors). Similarly, Browne (1998) examined the content of television ads directed at Australian children during the 1990s. She reported that girls in ads were more likely to be depicted as displaying passivity, docility, affection, and nurturance as compared to boys. Most germane to the present topic, girls were also significantly more likely than boys to display acts of "licensed withdrawal" (e.g., shyness, coyness, face covering, and eye aversion). Comparable results have been reported in other studies of media content, with girls typically depicted as more domestic, docile, dependent, emotional, and nurturing as compared to boys in television ads (Ruble et al. 1981), cartoon programs (Davidson et al. 1979; Thompson and Zerbinos 1997), and picture books (Gooden and Gooden 2001; Hamilton et al. 2006).

As described earlier, Coplan et al. (2010) found that shy male characters were depicted as experiencing more negative consequences than shy female characters in young children's storybooks. To date, no further studies have examined how shy or socially withdrawn male and female characters are portrayed in other forms of children's media (e.g., television shows, computer/video games, television shows, movies, etc.). More extensive research is required to examine these other forms of media for portrayals of gender related stereotypes in shyness.

Unsociability

In the current review we have focused on shyness and its related constructs (e.g., behavioral inhibition, anxious-solitude).

Shy boys and girls are known to withdraw from social situations because of social fear and anxiety (e.g., Coplan et al. 2008). However, researchers have more recently begun to distinguish among subtypes of social withdrawal (Rubin et al. 2009). For example, *unsociable* (or *socially disinterested*) children tend to withdraw from social activities due to a preference for solitary activity. In this regard, unsociable children are conceptualized as having a low social approach and low social avoidance motivation (Coplan et al. 2004). Thus, such children may be content to play alone, but also able and willing to interact with peers if offered an attractive social invitation. As compared to shyness, unsociability is considered to be a relatively benign form of social withdrawal. Indeed, from early childhood through adolescence, unsociability (when results are collapsed across gender) has not generally been associated with indices of socio-emotional difficulties (e.g., Bowker and Raja 2011 [in and Indian sample]; Coplan et al. 2004; Coplan and Weeks 2010; Harrist et al. 1997; Ladd et al. 2011; Spangler and Gazelle 2009).

However, there is at least some preliminary evidence suggesting that, like shyness, this form of social withdrawal may also have more negative consequences for boys than for girls, particularly in the peer domain. For example, Coplan and Weeks (2010) reported that unsociable boys experienced significantly more peer difficulties than did their non-withdrawn male and female peers. In contrast, unsociable girls did not differ from their non-withdrawn peers in this respect. In the same vein, Spangler and Gazelle (2009) reported a stronger association between unsociability and peer exclusion for boys than for girls. Future studies should look more closely at the consequences of unsociability for boys versus girls, as well as differences between male and female peers' reactions to unsociability in boys and girls.

Cultural Considerations

Finally, it must be noted that the majority of studies cited in this review have been conducted in European and North American countries. Social behaviors may vary significantly in their meanings and implications across culture (Benedict 1934; Bornstein 1995; Chen and French 2008). Accordingly, researchers have begun to explore the phenomenon of shyness in non-Western cultures (see Chen 2010, for a recent review). As we have described herein, shyness in Canada and the U.S. (e.g., Coplan et al. 2007a, b, 2008; Feng et al. 2008; Mian et al. 2011), as well as Northern European countries (e.g., Crozier and Hostettler 2003; Muris et al. 2011; Stevenson-Hinde and Glover 1996), has been found to be associated with socio-emotional difficulties in childhood and adolescence, including loneliness, low self-esteem, and symptoms of anxiety and depression (for boys and girls alike). It therefore seems likely that countries in these origins share similar beliefs about the roles of males and females and their associated stereotypes. However, in more collectivistic cultures (e.g., China, Japan, Korea, South America) shyness appears to be more positively valued and has in fact been associated with positive outcomes, including psychological wellbeing, positive peer relationships, and school competence (e.g., Chen et al. 1992, 2001; Heinrichs et al. 2006; Hofmann et al. 2010; Hong and Woody 2007; Kim et al. 2008).

Interestingly, it should be noted that as a result of the rapid change in Chinese society toward a market-oriented economy, it has been suggested that the adaptive value of shy behavior in China appears to be declining. In sharp contrast to previous findings, results from recent research indicates that shyness in large urban areas in China is now associated with socio-emotional difficulties, including peer rejection, a lack of leadership at school, and symptoms of depression (e.g., Chen et al. 2005, 2009).

In sum, gender differences in shyness in non-Western cultures remain under-explored, but may be particularly important to investigate. For example, Chinese culture has maintained traditional attitudes towards females (e.g., Liu et al. 2004). Consistent with this assertion, shyness has been found to be more strongly associated with peer exclusion and rejection among Chinese boys than girls (Chang 2004). As well, Coplan et al. (2012) recently examined young children's perceptions of social withdrawal in both China and Canada. Some notable gender differences emerged. Children in both countries reported more negative implications for shy boys than for shy girls. Additionally, Chinese (but not Canadian) children reported that they would be less likely to befriend shy boys compared to girls.

Summary and Conclusions

The primary aim of this research review was to examine gender differences in the prevalence and implications of childhood shyness. However, despite our best efforts to be exhaustive in our literature review, it is likely that some relevant articles escaped our attention (e.g., particularly those that did not focus prominently on gender differences). Moreover, the majority of studies of children's shyness report only main effects of gender (if gender is examined at all) and do not specifically explore results separately for boys and girls (e.g., Evans 2010). Notwithstanding, if challenges posed by multiple conceptualizations and assessments of shyness and its related concepts could be overcome, a comprehensive meta-analysis would be a worthwhile future endeavor that would allow for the quantification of effect sizes regarding gender differences in shyness.

Overall, our review of the extant literature revealed a notable pattern of gender differences with respect to children's shyness. Gender differences in the level and frequency of shyness appear to evolve developmentally. In this regard,

gender main effects of shyness are not typically reported in early and middle childhood, but seem to emerge in later childhood and adolescence, where (across samples from multiple cultures) girls appear to "become" more shy than boys, particularly when measured by self-reports (e.g., Chang 2004; Crozier 1995; Findlay et al. 2009; Janson and Mathiesen 2008; Lazarus 1982; Saberi and D'Souza 2009; Vervoort et al. 2010).

In terms of responses to shyness, a pattern of gender differences also emerged. Most consistently for parents and peers—and less so among teachers—shy boys were found to evoke more negative attitudes and responses from "important others" as compared to shy girls in samples from Canada and the U.S., as well as from Germany and England (e.g., Birnbaum and Croll 1984; Burgess et al. 2005; Coplan et al. 2004; Engfer 1993; Simpson and Stevenson-Hinde 1985). Results pertaining to the links between shyness and behavior problems were less consistent; however, there was at least some evidence to suggest that shy boys tend to be at greater risk for developing internalizing problems as compared to shy girls when generalizing to North American and European samples (e.g., Colder et al. 2002; Gest 1997; Morison and Masten 1991).

Taken together, these findings can be interpreted as evidence in support of the notion that shyness is considered less socially acceptable for boys than for girls. Societal attitudes and expectations regarding shyness appear to be disseminated to children via multiple pathways (i.e., parents, peers, media). We speculate that the increased stresses associated with displaying a societally-determined gender-non-stereotypical trait serves to exacerbate negative outcomes for shy boys across the lifespan.

Notwithstanding, it must be noted that although shyness may be viewed less negatively among girls than among boys, it still appears to impart significant risk upon both genders. Shyness in both boys and girls is associated with socio-emotional difficulties including internalizing problems and poor peer relationships (Rubin et al. 2009). Evolving societal norms regarding gender may eventually mitigate the additional risks associated with being a shy boy. However, future researchers should focus on the development and implementation of early intervention programs designed to specifically ameliorate outcomes for both shy boys and girls.

Acknowledgement Robert J. Coplan wishes to acknowledge the *Social Science and Humanities Research Council of Canada* for supporting this research.

References

AAUW Educational Foundation. (1995). *The AAUW Report: How schools shortchange girls*. New York: Marlowe and Company.

Arbeau, K. A., & Coplan, R. J. (2007). Kindergarten teachers' beliefs and responses to hypothetical prosocial, asocial, and antisocial children. *Merrill-Palmer Quarterly, 53*, 291–318. doi:10.1353/mpq.2007.0007.

Arbeau, K. A., Coplan, R. J., & Weeks, M. (2010). Shyness, teacher-child relationships, and socio-emotional adjustment in grade 1. *International Journal of Behavioral Development, 34*, 259–269. doi:10.1177/0165025409350959.

Arbelle, S., Benjamin, J., Golin, M., Kremer, I., Belmaker, R. H., & Ebstein, R. P. (2003). Relation of shyness in grade school children to the genotype for the long form of the serotonin transporter promoter region polymorphism. *The American Journal of Psychiatry, 160*, 671–676. doi:10.1176/appi.ajp.160.4.671.

Asendorpf, J. B., Denissen, J. J. A., & van Aken, M. A. G. (2008). Inhibited and aggressive preschool children at 23 years of age: Personality and social transitions into adulthood. *Developmental Psychology, 44*, 997–1011. doi:10.1037/0012-1649.44.4.997.

Benedict, R. (1934). *Patterns of culture*. Oxford, England: Houghton Mifflin.

Birnbaum, D. W., & Croll, W. L. (1984). The etiology of children's stereotypes about sex differences in emotionality. *Sex Roles, 10*, 677–691. doi:10.1007/BF00287379.

Bishop, G., Spence, S. H., & McDonald, C. (2003). Can parents and teachers provide a reliable and valid report of behavioral inhibition? *Child Development, 74*, 1899–1917. doi:10.1046/j.1467-8624.2003.00645.x.

Blote, A. W., Bokhorst, C. L., Miers, A. C., & Westenberg, P. M. (2012). Why are socially anxious adolescents rejected by peers? The role of subject-group similarity characteristics. *Journal of Research on Adolescence, 22*, 123–134. doi:10.1111/j.1532-7795.2011.00768.x.

Bohlin, G., Hagekull, B., & Andersson, K. (2005). Behavioral inhibition as a precursor of peer social competence in early school age: The interplay with attachment and nonparental care. *Merrill-Palmer Quarterly, 51*, 1–19. doi:10.1353/mpq.2005.0001.

Book, S. W., Thomas, S. E., Smith, J. P., & Miller, P. M. (2012). Severity of anxiety in mental health versus addiction treatment settings when social anxiety and substance abuse are comorbid. *Addictive Behaviors, 37*, 1158–1161. doi:10.1016/j.addbeh.2012.04.016.

Bornstein, M. H. (1995). Form and function: Implications for studies of culture and human development. *Culture and Psychology, 1*, 123–138. doi:10.1177/1354067X9511009.

Bosacki, S. L. (2008). *Children's emotional lives: Sensitive shadows in the classroom*. New York, NY: Peter Lang Publishing.

Bowker, J. C., & Raja, R. (2011). Social withdrawal subtypes during early adolescence in India. *Journal of Abnormal Child Psychology, 39*, 201–212. doi:10.1007/s10802-010-9461-7.

Browne, B. A. (1998). Gender stereotypes in advertising on children's television in the 1990s: A cross-national analysis. *Journal of Advertising, 27*, 65–82.

Bukowski, W. M. (1990). Age differences in children's memory of information about aggressive, socially withdrawn, and prosociable boys and girls. *Child Development, 61*, 1326–1334. doi:10.2307/1130745.

Burgess, K. B., Rubin, K. H., Cheah, C. S., & Nelson, L. J. (2005). Behavioral inhibition, social withdrawal, and parenting. In W. R. Crozier & L. E. Alden (Eds.), *The essential handbook of social anxiety for clinicians* (pp. 99–120). New York, NY: John Wiley & Sons Ltd.

Cahill, B., & Adams, E. (1997). An exploratory study of early childhood teachers' attitudes toward gender roles. *Sex Roles, 36*, 517–529. doi:10.1007/BF02766688.

Caspi, A., Bem, D. J., & Elder, G. H. (1988). Moving away from the world: Life-course patterns of shy children. *Developmental Psychology, 24*, 824–831. doi:10.1037/0012-1649.24.6.824.

Chang, L. (2004). The role of classroom norms in contextualizing the relations of children's social behaviors to peer acceptance.

Developmental Psychology, 40, 691–702. doi:10.1037/0012-1649.40.5.691.

Chavira, D. A., Stein, M. B., & Malcarne, V. L. (2002). Scrutinizing the relationship between shyness and social phobia. *Journal of Anxiety Disorders, 16*, 585–598. doi:10.1016/S0887-6185%2802%2900124-X.

Chen, X. (2010). Shyness-inhibition in childhood and adolescence: A cross-cultural perspective. In K. H. Rubin & R. J. Coplan (Eds.), *The development of shyness and social withdrawal* (pp. 213–235). New York: Guilford.

Chen, X., & French, D. C. (2008). Children's social competence in cultural context. *Annual Review of Psychology, 59*, 591–616. doi:10.1146/annurev.psych.59.103006.093606.

Chen, X., Rubin, K. H., & Sun, Y. (1992). Social reputation and peer relationships in Chinese and Canadian children: A cross-cultural study. *Child Development, 63*, 1336–1343. doi:10.2307/1131559.

Chen, X., Chen, H., & Kaspar, V. (2001). Group social functioning and individual socioemotional and school adjustment in Chinese children. *Merrill-Palmer Quarterly, 47*, 264–299. doi:10.1353/mpq.2001.0008.

Chen, X., Cen, G., Li, D., & He, Y. (2005). Social functioning and adjustment in Chinese children: The imprint of historical time. *Child Development, 76*, 182–195. doi:10.1111/j.1467-8624.2005.00838.x.

Chen, X., DeSouza, A., Chen, H., & Wang, L. (2006). Reticent behavior and experiences in peer interactions in Chinese and Canadian children. *Developmental Psychology, 42*, 656–665. doi:10.1037/0012-1649.42.4.656.

Chen, X., Wang, L., & Wang, Z. (2009). Shyness-sensitivity and social, school, and psychological adjustment in rural migrant and urban children in China. *Child Development, 80*, 1499–1513. doi:10.1111/j.1467-8624.2009.01347.x.

Chronis-Tuscano, A., Degnan, K. A., Pine, D. S., Perez-Edgar, K., Henderson, H. A., Diaz, Y., ... Fox, N. A. (2009). Stable early maternal report of behavioral inhibition predicts lifetime social anxiety disorder in adolescence. *Journal of the American Academy of Child & Adolescent Psychiatry, 48*, 928–935. doi:10.1097/CHI.0b013e3181ae09df.

Colder, C. R., Mott, J. A., & Berman, A. S. (2002). The interactive effects of infant activity level and fear on growth trajectories of early childhood behavior problems. *Development and Psychopathology, 14*, 1–23. doi:10.1017/S0954579402001013.

Coplan, R. J., & Prakash, K. (2003). Spending time with teacher: Characteristics of preschoolers who frequently elicit versus initiate interactions with teachers. *Early Childhood Research Quarterly, 18*, 143–158. doi:10.1016/S0885-2006%2803%2900009-7.

Coplan, R. J., & Rubin, K. H. (1998). Exploring and assessing nonsocial play in the preschool: The development and validation of The Preschool Play Behavior Scale. *Social Development, 7*, 72–91. doi:10.1111/1467-9507.00052.

Coplan, R. J., & Weeks, M. (2009). Shy and soft-spoken: Shyness, pragmatic language, and socio-emotional adjustment in early childhood. *Infant and Child Development, 18*, 238–254. doi:10.1002/icd.622.

Coplan, R. J., & Weeks, M. (2010). Unsociability in middle childhood: Conceptualization, assessment, and associations with socio-emotional functioning. *Merrill-Palmer Quarterly, 56*, 105–130. doi:10.1353/mpq.2010.0005.

Coplan, R. J., Rubin, K. H., Fox, N. A., Calkins, S. D., & Stewart, S. L. (1994). Being alone, playing alone, and acting alone: Distinguishing among reticence and passive and active solitude in young children. *Child Development, 65*, 129–137. doi:10.2307/1131370.

Coplan, R. J., Prakash, K., O'Neil, K., & Armer, M. (2004). Do you 'want' to play? Distinguishing between conflicted shyness and social disinterest in early childhood. *Developmental Psychology, 40*, 244–258. doi:10.1037/0012-1649.40.2.244.

Coplan, R. J., Closson, L. M., & Arbeau, K. A. (2007a). Gender differences in the behavioral associates of loneliness and social dissatisfaction in kindergarten. *Journal of Child Psychology and Psychiatry, 48*, 988–995. doi:10.1111/j.1469-7610.2007.01804.x.

Coplan, R. J., Girardi, A., Findlay, L. C., & Frohlick, S. L. (2007b). Understanding solitude: Young children's attitudes and responses towards hypothetical socially-withdrawn peers. *Social Development, 16*, 390–409. doi:10.1111/j.1467-9507.2007.00390.x.

Coplan, R. J., Arbeau, K. A., & Armer, M. (2008). Don't fret, be supportive! Maternal characteristics linking child shyness to psychosocial and school adjustment in kindergarten. *Journal of Abnormal Child Psychology, 36*, 359–371. doi:10.1007/s10802-007-9183-7.

Coplan, R. J., DeBow, A., Schneider, B. H., & Graham, A. A. (2009). The social behaviours of inhibited children in and out of preschool. *British Journal of Developmental Psychology, 27*, 891–905. doi:10.1348/026151008X396153.

Coplan, R. J., Hughes, K., & Roswell, H. C. (2010). "Once upon a time there were a blushful hippo and a meek mouse": A content analysis of shy characters in young children's storybooks. In K. H. Rubin & R. J. Coplan (Eds.), *The development of shyness and social withdrawal* (pp. 262–274). New York, NY: Guilford Press.

Coplan, R. J., Hughes, K., Bosacki, S., & Rose-Krasnor, L. (2011). Is silence golden? Elementary school teachers' strategies and beliefs regarding hypothetical shy/quiet and exuberant/talkative children. *Journal of Educational Psychology, 103*, 939–951. doi:10.1037/a0024551.

Coplan, R. J., Zheng, S., Weeks, M., & Chen, X. (2012). Young children's perceptions of social withdrawal in China and Canada. *Early Child Development and Care, 182*, 591–607. doi:10.1080/03004430.2011.566328.

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. doi:10.1037/0012-1649.29.2.244.

Crozier, W. R. (1995). Shyness and self-esteem in middle childhood. *British Journal of Educational Psychology, 65*, 85–95. doi:10.1111/j.2044-8279.1995.tb01133.x.

Crozier, W. R., & Hostettler, K. (2003). The influence of shyness on children's test performance. *British Journal of Educational Psychology, 73*, 317–328. doi:10.1348/000709903322275858.

Davidson, E. S., Yasuna, A., & Tower, A. (1979). The effects of television cartoons on sex-role stereotyping in young girls. *Child Development, 50*, 597–600.

Degnan, K. A., & Fox, N. A. (2007). Behavioral inhibition and anxiety disorders: Multiple levels of a resilience process. *Development and Psychopathology, 19*, 729–746. doi:10.1017/S0954579407000363.

Dettling, A. C., Gunnar, M. R., & Donzella, B. (1999). Cortisol levels of young children in full-day childcare centers: Relations with age and temperament. *Psychoneuroendocrinology, 24*, 519–536. doi:10.1016/S0306-4530%2899%2900009-8.

DuPaul, G. J., Jitendra, A. K., Tresco, K. E., Junod, R. E. V., Volpe, R. J., & Lutz, J. G. (2006). Children with attention deficit hyperactivity disorder: Are there gender differences in school functioning? *School Psychology Review, 35*, 292–308.

Eggum, N. D., Eisenberg, N., Spinrad, T. L., Reiser, M., Gaertner, B. M., Sallquist, J., & Smith, C. L. (2009). Development of shyness: Relations with children's fearfulness, sex, and maternal behavior. *Infancy, 14*, 325–345. doi:10.1080/15250000902839971.

Eisenberg, N., Shepard, S. A., Fabes, R. A., Murphy, B. C., & Guthrie, I. K. (1998). Shyness and children's emotionality, regulation, and coping: Contemporaneous, longitudinal, and across-context relations. *Child Development, 69*, 767–790. doi:10.1111/j.1467-8624.1998.tb06242.x.

Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin, 132*, 33–72. doi:10.1037/0033-2909.132.1.33.

Engfer, A. (1993). Antecedents and consequences of shyness in boys and girls: A 6-year longitudinal study. In K. H. Rubin & J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 49–79). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour Research and Therapy, 37*, 831–843. doi:10.1016/S0005-7967%2898%2900179-X.

Evans, M. (2010). Language performance, academic performance, and signs of shyness: A comprehensive review. In K. H. Rubin & R. J. Coplan (Eds.), *The development of shyness and social withdrawal* (pp. 179–212). New York, NY: Guilford.

Fagot, B. I. (1977). Consequences of moderate cross-gender behavior in preschool children. *Child Development, 48*, 902–907. doi:10.2307/1128339.

Fagot, B. I. (1984). Teacher and peer reactions to boys' and girls' play styles. *Sex Roles, 11*, 691–702. doi:10.1007/BF00288120.

Feng, X., Shaw, D. S., & Silk, J. S. (2008). Developmental trajectories of anxiety symptoms among boys across early and middle childhood. *Journal of Abnormal Psychology, 117*, 32–47. doi:10.1037/0021-843X.117.1.32.

Findlay, L. C., Coplan, R. J., & Bowker, A. (2009). Keeping it all inside: Shyness, internalizing coping strategies and socio-emotional adjustment in middle childhood. *International Journal of Behavioral Development, 33*, 47–54. doi:10.1177/0165025408098017.

Fitzpatrick, M. J., & McPherson, B. J. (2010). Coloring within the lines: Gender stereotypes in contemporary coloring books. *Sex Roles, 62*, 127–137. doi:10.1007/s11199-009-9703-8.

Fox, N. A., Henderson, H. A., Rubin, K. H., Calkins, S. D., & Schmidt, L. A. (2001). Continuity and discontinuity of behavioral inhibition and exuberance: Psychophysiological and behavioral influences across the first four years of life. *Child Development, 72*, 1–21. doi:10.1111/1467-8624.00262.

Garside, R. B., & Klimes-Dougan, B. (2002). Socialization of discrete negative emotions: Gender differences and links with psychological distress. *Sex Roles, 47*, 115–128. doi:10.1023/A:1021090904785.

Gazelle, H., & Ladd, G. W. (2003). Anxious solitude and peer exclusion: A diathesis-stress model of internalizing trajectories in childhood. *Child Development, 74*, 257–278. doi:10.1111/1467-8624.00534.

Gazelle, H., & Rudolph, K. D. (2004). Moving toward and away from the world: Social approach and avoidance trajectories in anxious solitary youth. *Child Development, 25*, 829–849. doi:10.1111/j.1467-8624.2004.00709.x.

Gazelle, H., Workman, J. O., & Allan, W. (2010). Anxious solitude and clinical disorder in middle childhood: Bridging developmental and clinical approaches to childhood social anxiety. *Journal of Abnormal Child Psychology, 38*, 1–17. doi:10.1007/s10802-009-9343-z.

Gest, S. D. (1997). Behavioral inhibition: Stability and associations with adaptation from childhood to early adulthood. *Journal of Personality and Social Psychology, 72*, 467–475. doi:10.1037/0022-3514.72.2.467.

Gooden, A. M., & Gooden, M. A. (2001). Gender representation in notable children's picture books : 1995-1999. *Sex Roles, 45*, 89–101. doi:10.1023/A:1013064418674.

Graham, A. A., & Coplan, R. J. (2012). Shyness, sibling relationships, and young children's socio-emotional adjustment at preschool. *Journal of Research in Childhood Education, 26*, 435–449. doi:10.1080/02568543.2012.711802.

Grant, B. F., Hasin, D. S., Blanco, C., Stinson, F. S., Chou, S. P., Goldstein, R. B., ... Huang, B. (2005). The epidemiology of social anxiety disorder in the United States: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry, 66*, 1351–1361. doi:10.4088/JCP.v66n1102.

Gunnar, M. R., Talge, N. M., & Herrera, A. (2009). Stressor paradigms in developmental studies : What does and does not work to produce mean increases in salivary cortisol. *Psychoneuroendocrinology, 34*, 953–967. doi:10.1016/j.psyneuen.2009.02.010.

Hamidovic, A., Dlugos, A., Skol, A., Palmer, A. A., & de Wit, H. (2009). Evaluation of genetic variability in the dopamine receptor D2 in relation to behavioral inhibition and impulsivity/sensation seeking: An exploratory study with d-amphetamine in healthy participants. *Experimental and Clinical Psychopharmacology, 17*, 374–383. doi:10.1037/a0017840.

Hamilton, M. C., Anderson, D., Broaddus, M., & Young, K. (2006). Gender stereotyping and under-representation of female characters in 200 popular children's picture books: A twenty-first century update. *Sex Roles, 55*, 757–765. doi:10.1007/s11199-006-9128-6.

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. doi:10.2307/1131850.

Heinrichs, N., Rapee, R. M., Alden, L. A., Bogels, S., Hofmann, S. G., Oh, K. J., & Sakano, Y. (2006). Cultural differences in perceived social norms and social anxiety. *Behaviour Research and Therapy, 44*, 1187–1197. doi:10.1016/j.brat.2005.09.006.

Henderson, H. A., Fox, N. A., & Rubin, K. H. (2001). Temperamental contributions to social behavior: The moderating roles of frontal EEG asymmetry and gender. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 68–74. doi:10.1097/00004583-200101000-00018.

Henderson, H. A., Marshall, P. J., Fox, N. A., & Rubin, K. H. (2004). Psychophysiological and behavioral evidence for varying forms and functions of nonsocial behavior in preschoolers. *Child Development, 75*, 251–263. doi:10.1111/j.1467-8624.2004.00667.x.

Hofmann, S. G., Asnaani, A., & Hinton, D. E. (2010). Cultural aspects in social anxiety and social anxiety disorder. *Depression and Anxiety, 27*, 1117–1127. doi:10.1002/da.20759.

Hong, J. J., & Woody, S. R. (2007). Cultural mediators of self-reported social anxiety. *Behaviour Research and Therapy, 45*, 1779–1789. doi:10.1016/j.brat.2007.01.011.

Hughes, K., & Coplan, R. J. (2010). Exploring processes linking shyness and academic achievement in childhood. *School Psychology Quarterly, 25*, 213–222. doi:10.1037/a0022070.

Janson, H., & Mathiesen, K. S. (2008). Temperament profiles from infancy to middle childhood: Development and associations with behavior problems. *Developmental Psychology, 44*, 1314–1328. doi:10.1037/a0012713.

Justice, L. M., Cottone, E. A., Mashburn, A., & Rimm-Kaufman, S. E. (2008). Relationships between teachers and preschoolers who are at risk: Contributions of children's language skills, temperamentally based attributes, and gender. *Early Education and Development, 19*, 600–621. doi:10.1080/10409280802231021.

Kagan, J. (1997). Temperament and the reactions to unfamiliarity. *Child Development, 68*, 139–143. doi:10.2307/1131931.

Kagan, J., Reznick, J. S., & Snidman, N. (1988). The physiology and psychology of behavioral inhibition in children. *Annual Progress in Child Psychiatry & Child Development, 102–127*.

Kagan, J., Snidman, N., & Arcus, D. (1993). On the temperamental categories of inhibited and uninhibited children. In K. H. Rubin & J. B. Asendorpf (Eds.), *Social withdrawal, inhibition, and shyness in childhood* (pp. 19–28). Hillsdale, NJ: Lawrence Erlbaum Associates.

Kendall, P. C., Hedtke, K. A., & Aschenbrand, S. G. (2006). Anxiety disorders. In D. A. Wolfe & E. J. Mash (Eds.), *Behavioral and emotional disorders in adolescents: Nature, assessment, and treatment* (pp. 259–299). New York, NY: Guilford Publications.

Kerr, M., Lambert, W. W., & Bem, D. J. (1996). Life course sequelae of childhood shyness in Sweden: Comparison with the United States. *Developmental Psychology, 32*, 1100–1105. doi:10.1037/0012-1649.32.6.1100.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602. doi:10.1001/archpsyc.62.6.593.

Kienbaum, J., Volland, C., & Ulich, D. (2001). Sympathy in the context of mother-child and teacher-child relationships. *International Journal of Behavioral Development, 25*, 302–309. doi:10.1080/01650250143000076.

Kim, J., Rapee, R. M., Oh, K. J., & Moon, H.-S. (2008). Retrospective report of social withdrawal during adolescence and current maladjustment in young adulthood: Cross-cultural comparisons between Australian and South Korean students. *Journal of Adolescence, 31*, 543–563. doi:10.1016/j.adolescence.2007.10.011.

Kimmel, M. S. (2004). *The Gendered Society* (2nd ed.). New York, NY: Oxford University Press.

Kingsbury, M. K., & Coplan, R. J. (2012). Mothers' gender-role attitudes and their responses to young children's hypothetical display of shy and aggressive behaviors. *Sex Roles, 66*, 506–517. doi:10.1007/s11199-012-0120-z.

Kingsbury, M., Coplan, R. J., & Rose-Krasnor, L. (2012). Shy, but getting by? An examination of the complex links between shyness, coping, and socio-emotional functioning in childhood. Paper presented at the biennial meetings of the International Society for the Study of Behavioral Development in Edmonton, AB.

Ladd, G. W., Kochenderfer-Ladd, B., Eggum, N. D., Kochel, K. P., & McConnell, E. M. (2011). Characterizing and comparing the friendships of anxious-solitary and unsociable preadolescents. *Child Development, 82*, 1434–1453. doi:10.1111/j.1467-8624.2011.01632.x.

Lazarus, P. J. (1982). Incidence of shyness in elementary-school age children. *Psychological Reports, 51*, 904–906. doi:10.2466/pr0.1982.51.3.904.

Lease, A. M., Kennedy, C. A., & Axelrod, J. L. (2002). Children's social constructions of popularity. *Social Development, 11*, 87–109. doi:10.1111/1467-9507.00188.

Lemerise, E. A. (1997). Patterns of peer acceptance, social status, and social reputation in mixed-age preschool and primary classrooms. *Merrill-Palmer Quarterly, 43*, 199–218. doi:10.1037/0022-0663.90.3.506.

Liu, R. X., Tein, J. Y., & Zhao, Z. (2004). Coping strategies and behavioral-emotional problems among Chinese adolescents. *Psychiatry Research, 126*, 275–285. doi:10.1016/j.psychres.2004.02.006.

Matthews, J. S., Ponitz, C. C., & Morrison, F. J. (2009). Early gender differences in self-regulation and academic achievement. *Journal of Educational Psychology, 101*, 689–704. doi:10.1037/a0014240.

McCabe, L. A., Cunnington, M., & Brooks-Gunn, J. (2004). The development of self-regulation in young children: Individual characteristics and environmental contexts. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 340–356). New York, NY: Guilford Press.

McDermott, J. M., Perez-Edgar, K., Henderson, H. A., Pine, D. S., & Fox, N. A. (2009). A history of childhood behavioral inhibition and enhanced response monitoring in adolescence are linked to clinical anxiety. *Biological Psychiatry, 65*, 445–448. doi:10.1016/j.biopsych.2008.10.043.

Mian, N. D., Wainwright, L., Briggs-Gowan, M. J., & Carter, A. S. (2011). An ecological risk model for early childhood anxiety: The importance of early child symptoms and temperament. *Journal of Abnormal Child Psychology, 39*, 501–512. doi:10.1007/s10802-010-9476-0.

Miers, A. C., Blote, A. W., & Westenberg, P. M. (2010). Peer perceptions of social skills in socially anxious and nonanxious adolescents. *Journal of Abnormal Child Psychology, 38*, 33–41. doi:10.1007/s10802-009-9345-x.

Morison, P., & Masten, A. S. (1991). Peer reputation in middle childhood as a predictor of adaptation in adolescence: A seven-year follow-up. *Child Development, 62*, 991–1007. doi:10.2307/1131148.

Mullen, M., Snidman, N., & Kagan, J. (1993). Free-play behavior in inhibited and uninhibited children. *Infant Behavior & Development, 16*, 383–389. doi:10.1016/0163-6383%2893%2980043-8.

Muris, P., van Brakel, A. M. L., Arntz, A., & Schouten, E. (2011). Behavioral inhibition as a risk factor for the development of childhood anxiety disorders. *Journal of Child and Family Studies, 20*, 157–170. doi:10.1007/s10826-010-9365-8.

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. doi:10.1016/j.ecresq.2005.04.007.

Perren, S., & Alsaker, F. D. (2006). Social behavior and peer relationships of victims, bully-victims, and bullies in kindergarten. *Journal of Child Psychology and Psychiatry, 47*, 45–57. doi:10.1111/j.1469-7610.2005.01445.x.

Prinstein, M. J., Borelli, J. L., Cheah, C. S., Simon, V. A., & Aikins, J. W. (2005). Adolescent girls' interpersonal vulnerability to depressive symptoms: A longitudinal examination of reassurance-seeking and peer relationships. *Journal of Abnormal Psychology, 114*, 676–688. doi:10.1037/0021-843X.114.4.676.

Pronk, R. E., & Zimmer-Gembeck, M. J. (2010). It's "mean", but what does it mean to adolescents? Relational aggression described by victims, aggressors, and their peers. *Journal of Adolescent Research, 25*, 175–204. doi:10.1177/0743558409350504.

Ranta, K., Kaltiala-Heino, R., Koivisto, A.-M., Tuomisto, M. T., Pelkonen, M., & Marttunen, M. (2007). Age and gender differences in social anxiety symptoms during adolescence: The Social Phobia Inventory (SPIN) as a measure. *Psychiatry Research, 153*, 261–270. doi:10.1016/j.psychres.2006.12.006.

Rapee, R. M., & Coplan, R. J. (2010). Conceptual relations between anxiety disorder and fearful temperament. *New Directions for Child and Adolescent Development, 127*, 17–31. doi:10.1002/cd.260.

Renn, J. A., & Calvert, S. L. (1993). The relation between gender schemas and adults' recall of stereotyped and counterstereotyped televised information. *Sex Roles, 28*, 449–459. doi:10.1177/1075547009357779.

Rimm-Kaufman, S. E., & Kagan, J. (2005). Infant predictors of kindergarten behavior: The contribution of inhibited and uninhibited temperament types. *Behavioral Disorders, 30*, 331–347.

Rowe, D. C., & Plomin, R. (1977). Temperament in early childhood. *Journal of Personality Assessment, 41*, 150–156. doi:10.1207/s15327752jpa4102_5.

Rubin, K. H., & Coplan, R. J. (2004). Paying attention to and not neglecting social withdrawal and social isolation. *Merrill-Palmer Quarterly, 50*, 506–534. doi:10.1353/mpq.2004.0036.

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

Rubin, K. H., Bukowski, W., & Parker, J. (2006a). Peer interactions, relationships, and groups. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology (6th edition): Social, emotional, and personality development* (pp. 571–645). New York: Wiley.

Rubin, K. H., Wojslawowicz, J. C., Rose-Krasnor, L., Booth-LaForce, C., & Burgess, K. B. (2006b). The best friendships of shy/withdrawn children: Prevalence, stability, and relationship quality. *Journal of Abnormal Child Psychology, 34*, 143–157. doi:10.1007/s10802-005-9017-4.

Rubin, K. H., Coplan, R. J., & Bowker, J. (2009). Social withdrawal in childhood. *Annual Review of Psychology, 60*, 141–171. doi:10.1146/annurev.psych.60.110707.163642.

Ruble, D. N., Balaban, T., & Cooper, J. (1981). Gender constancy and the effects of sex-typed televised toy commercials. *Child Development, 52*, 667–673. doi:10.2307/1129188.

Saberi, M., & D'Souza, L. (2009). Comparison of shyness between adolescents in India and Iran: A developmental perspective of age and gender. *Journal of Psychosocial Research, 4*, 121–130.

Sadker, M., & Sadker, D. (1994). *Failing at fairness: How America's schools cheat girls*. New York: Simon & Schuster.

Sandberg, A., & Pramling-Samuelsson, I. (2005). An interview study of gender differences in preschool teachers' attitudes toward children's play. *Early Childhood Education Journal, 32*, 297–305. doi:10.1007/s10643-005-4400-x.

Scarpa, A., Raine, A., Venables, P. H., & Mednick, S. A. (1995). The stability of inhibited/uninhibited temperament from ages 3 to 11 years in Mauritian children. *Journal of Abnormal Child Psychology, 23*, 607–618. doi:10.1007/BF01447665.

Schmidt, L. A., Fox, N. A., Rubin, K. H., Sternberg, E. M., Gold, P. W., Smith, C. C., & Schulkin, J. (1997). Behavioral and neuroendocrine responses in shy children. *Developmental Psychobiology, 30*, 127–140. doi:10.1002/%28SICI%291098-2302%28199703%2930:2%3C127::AID-DEV4%3E3.0.CO;2-S.

Schmidt, L. A., Polak, C. P., & Spooner, A. L. (2005). Biological and environmental contributions to childhood shyness: A diathesis-stress model. In W. R. Crozier & L. E. Alden (Eds.), *The essential handbook of social anxiety for clinicians* (pp. 33–55). United Kingdom: John Wiley & Sons.

Schmidt, L. A., Fox, N. A., Perez-Edgar, K., & Hamer, D. H. (2009). Linking gene, brain, and behavior: DRD4, frontal asymmetry, and temperament. *Psychological Science, 20*, 831–837. doi:10.1111/j.1467-9280.2009.02374.x.

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 & Adolescent Psychiatry, 38*, 1008–1015. doi:10.1097/00004583-199908000-00017.

Simpson, A. E., & Stevenson-Hinde, J. (1985). Temperamental characteristics of three- to four-year-old boys and girls and child-family interactions. *Journal of Child Psychology and Psychiatry, 26*, 43–53. doi:10.1111/j.1469-7610.1985.tb01627.x.

Smetana, J. (1986). Preschool children's conceptions of sex-role transgressions. *Child Development, 57*, 862–871. doi:10.2307/1130363.

Smith, A. K., Rhee, S. H., Corley, R. P., Friedman, N. P., Hewitt, J. K., & Robinson, J. L. (2012). The magnitude of genetic and environmental influences on parental and observational measures of behavioral inhibition and shyness in toddlerhood. *Behavioral Genetics, 42*, 764–777. doi:10.1007/s10519-012-9551-0.

Spangler, T., & Gazelle, H. (2009). Anxious solitude, unsociability, and peer exclusion in middle childhood: A multitrait-multimethod matrix. *Social Development, 18*, 833–856. doi:10.1111/sode.2009.18.issue-410.1111/j.1467-9507.2008.00517.x.

Spangler, G., & Schieche, M. (1998). Emotional and adrenocortical responses of infants to the Strange Situation: The differential function of emotional expression. *International Journal of Behavioral Development, 22*, 681–706. doi:10.1080/016502598384126.

Stevenson-Hinde, J., & Glover, A. (1996). Shy girls and boys: A new look. *Journal of Child Psychology and Psychiatry, 37*, 181–187. doi:10.1111/j.1469-7610.1996.tb01389.x.

Stipek, D., & Miles, S. (2008). Effects of aggression on achievement: Does conflict with the teacher make it worse? *Child Development, 79*, 1721–1735. doi:10.1111/j.1467-8624.2008.01221.x.

Theall-Honey, L. A., & Schmidt, L. A. (2006). Do temperamentally shy children process emotion differently than nonshy children? Behavioral, psychophysiological, and gender differences in reticent preschoolers. *Developmental Psychobiology, 48*, 187–196. doi:10.1002/dev.20133.

Thijs, J. T., Koomen, H. M. Y., de Jong, P. F., van der Leij, A., & van Leeuwen, M. G. P. (2004). Internalizing behaviors among kindergarten children: Measuring dimensions of social withdrawal with a checklist. *Journal of Clinical Child and Adolescent Psychology, 33*, 802–812. doi:10.1207/s15374424jccp3304_15.

Thijs, J. T., Koomen, H. M. Y., & van der Leij, A. (2006). Teachers' self-reported pedagogical practices toward socially inhibited, hyperactive, and average children. *Psychology in the Schools, 43*, 635–651. doi:10.1002/pits.20171.

Thompson, T. L., & Zerbinos, E. (1997). Television cartoons: Do children notice it's a boys' world? *Sex Roles, 37*, 415–432. doi:10.1007/s11199-006-9128-6.

Tsai, J. L., Louie, J. Y., Chen, E. E., & Uchida, Y. (2007). Learning what feelings to desire: Socialization of ideal affect through children's storybooks. *Personality and Social Psychology Bulletin, 33*, 17–30. doi:10.1177/0146167206292749.

Vervoort, L., Wolters, L. H., Hogendoorn, S. M., Prins, P. J. M., de Haan, E., Nauta, M. H., & Boer, F. (2010). Automatic evaluations in clinically anxious and nonanxious children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 39*, 481–491. doi:10.1080/15374416.2010.486316.

White, L. K., McDermott, J. M., Degnan, K. A., Henderson, H. A., & Fox, N. A. (2011). Behavioral inhibition and anxiety: The moderating roles of inhibitory control and attention shifting. *Journal of Abnormal Child Psychology, 39*, 735–747. doi:10.1007/s10802-011-9490-x.

Williams, J. E., & Best, D. L. (1990). *Sex and psyche: Gender and self viewed cross-culturally*. Newbury Park, CA: Sage.

Williams, L. R., Fox, N. A., Lejuez, C. W., Reynolds, E. K., Henderson, H. A., Perez-Edgar, K. E., ... Pine, D. S. (2010). Early temperament, propensity for risk-taking and adolescent substance-related problems: A prospective multi-method investigation. *Addictive Behaviors, 35*, 1148–1151. doi:10.1016/j.addbeh.2010.07.005.

Wittchen, H. U., & Fehm, L. (2003). Epidemiology and natural course of social fears and social phobia. *Acta Psychiatrica Scandinavica, 108*, 4–18. doi:10.1034/j.1600-0447.108.s417.1.x.

Younger, A. J., & Boyko, K. A. (1987). Aggression and withdrawal as social schemas underlying children's peer perceptions. *Child Development, 58*, 1094–1100. doi:10.2307/1130549.