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Social Withdrawal Subtypes during Early Adolescence in India

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Abstract The overarching goal of this study was to examine the associations between three social withdrawal subtypes (shyness, unsociability, avoidance), peer isolation, peer difficulties (victimization, rejection, exclusion, low acceptance), and loneliness in India during early adolescence. Participants were 194 adolescents in Surat, India (*M* age=13.35 years). Peer nominations of peer relations and socioemotional behaviors were gathered, along with self-reports of reasons for being alone and loneliness. Preliminary evidence of validity for the self-report measure of withdrawal subtypes and isolation was found, and factor analyses indicated that shyness, unsociability, and avoidance represent related, but distinct forms of withdrawal that are distinct from isolation. Shyness and avoidance were uniquely associated with loneliness and exclusion, but unsociability was not. The association between avoidance and loneliness was mediated by exclusion. Findings suggest that social withdrawal may be best conceptualized as a multifaceted construct during childhood and adolescence, in Western and non-Western societies.

Keywords Social withdrawal · Shyness · Isolation · Peers · Loneliness · Unsociability · Avoidance

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One of the most commonly studied individual risk factors in developmental psychopathology research is social withdrawal (Rubin et al. 2009). Social withdrawal during childhood and early adolescence is linked to a myriad of emotional and interpersonal adjustment difficulties, including the development and stability of internalizing problems (i.e., anxiety, loneliness; Gazelle and Rudolph 2004; Rubin et al. 1995) and peer difficulties (i.e., rejection, victimization, exclusion, lack of peer acceptance; Boivin et al. 1995; Oh et al. 2008). It is also well-established that problematic peer relations, especially exclusion, help to explain the strong linkages between social withdrawal and internalizing difficulties (e.g., Boivin et al. 1995; Gazelle and Ladd 2003).

Most researchers conceptualize social withdrawal as emanating from fear or social anxiety (e.g., Gazelle and Rudolph 2004). However, recent theory and research suggest that the general construct of social withdrawal comprises many forms with different underlying causes or motivations that vary in psychosocial risk (Coplan and Armer 2007). The limited work on different forms of withdrawal has focused nearly exclusively on withdrawal subtypes during early and middle childhood, in Western societies (e.g., Coplan et al. 2004), and thus very little is known about the nature of withdrawal during early adolescence (10–14 years), and in non-Western societies. In the current research, we examine the distinctiveness and correlates of withdrawal subtypes during early adolescence in India, and whether problematic peer relations mediate the associations between different subtypes and loneliness. Additional knowledge about the nature of social withdrawal during early adolescence and in non-Western societies may provide clues to both the etiology and treatment of behavioral problems and internalizing difficulties.

Social Withdrawal Subtypes and Psychosocial Difficulties

Several terms are used to label withdrawal that emanates from social fear and anxiety, including shyness or shyness-sensitivity (Chen et al. 2004), anxious-withdrawal (Oh et al. 2008), and anxious-solitude (Gazelle and Ladd 2003). In the present study, we adopted the most commonly used term, shyness. Approach and avoidance models of social withdrawal suggest that Shy children and adolescents rarely interact with peers because they are psychologically conflicted by strong social approach and avoidance motivations (Asendorpf 1990, 1993). They desire to interact with their peers, but are too anxious and socially fearful to do so.

According to approach and avoidance models, there also exists a second type of social withdrawal known as unsociability (or social disinterest in studies of young children; Coplan et al. 2004) and a third type that is referred to as avoidance (Coplan et al. 2006). Unsociable individuals are withdrawn because they lack strong social approach and avoidance motivations. They rarely make social initiations because, while they do not mind being with others, they also do not mind being alone. In contrast, Avoidant individuals lack strong approach motivations but have strong avoidance motivations. They actively avoid their peers and seek out opportunities for solitude, with few signs of ambivalence. In these three cases, of course, it is the shy, unsociable, and avoidant individual who initiates the withdrawal and is responsible for the solitude (in this sense, their solitude is self-imposed or internally-motivated). Other individuals may spend time in solitude and away from peers because they are actively isolated by peers, but these individuals are not considered withdrawn (in this sense, their solitude is externally-imposed; Rubin 1982).

Researchers posit that the severity of the risk associated with withdrawal depends on the underlying motivation (Coplan and Armer 2007). But, withdrawal due to unsociability and avoidance has rarely been studied. Results from the limited research indicate that Unsociable children do not report internalizing difficulties, nor are they judged by parents and teachers to be psychologically stressed or socially unskilled (Coplan and Weeks 2010; Coplan et al. 2004). In contrast, Shy children display visible signs of social anxiety and are often verbally reticent (e.g., Spangler and Gazelle 2009). Unsociable children appear to experience more exclusion and victimization than average children, but less than Shy children (Coplan and Weeks 2010). Finally, results from one study suggest that relative to Shy, Unsociable and Sociable youth, Avoidant children and young adolescents report greater psychological stress and depressed and negative affect (Coplan et al. 2006).

These recent findings have led to suggestions that withdrawal due to avoidance and shyness may represent stronger risk factors for maladaption than withdrawal due to unsociability (Coplan and Armer 2007). However, there is a lack of research comparing the psychosocial correlates of withdrawal subtypes, and the existing research on withdrawal subtypes has suffered from a number of other limitations. Since most researchers focus on withdrawal subtypes during early and middle childhood, it is unclear whether distinct withdrawal subtypes exist during early adolescence, and if they do, whether they are similarly associated with the aforementioned psychological and peer relations correlates. Early adolescence is marked by an increase in the uses of privacy, as well as a greater ability and need to be alone (Bowker et al. 2010). Spending time alone comes to be viewed more positively and as more voluntary as children transition into early adolescence (Gavinski-Molina et al. 2003), and many researchers theorize about the possible positive benefits of self-imposed solitude during adolescence (i.e., time to be creative; Larson 1997). Therefore, some of Shy, Unsociable, and Avoidant children's peer difficulties may diminish with age. Yet, other investigators speculate that withdrawal may pose greater risk during adolescence due to the increased importance of interacting with peers during this developmental period and that it may not be meaningful to distinguish between different forms of withdrawal during adolescence because the costs of all forms may increase with age (Asendorpf 1990).

The only two studies that examined shyness, unsociability, and avoidance with an adolescent sample were limited by a wide age range (6–14 years; Coplan et al. 2006) and the retrospective nature of the data (Kim et al. 2008). Two additional shortcomings are that: (a) neither study examined the different forms of withdrawal in relation to problematic peer relations, such as exclusion, which have been strongly linked to shyness (e.g., Rubin et al. 1995), or (b) tested whether peer difficulties mediate the associations between withdrawal subtypes and psychological outcomes. Research shows that the effects of shy behavior on psychological well-being are mediated by peer difficulties during childhood (e.g., Boivin et al. 1995; Gazelle and Ladd 2003). That is, shy behavior leads to problematic peer relations, which in turn, leads to psychological difficulties. Thus, one reasonable yet unexplored hypothesis is that peer difficulties may represent the mechanism by which different forms of social withdrawal impact adolescents' psychological adjustment.

A final point to consider: Previous studies have focused nearly exclusively on withdrawal subtypes in Western societies that are relatively individualistic in nature (i.e., United States, Canada; e.g., Coplan et al. 2004), and have not considered withdrawal subtypes in non-Western, more

collectivistic societies. The importance of the distinction between Western and non-Western societies lies in the fact that individualistic and collectivistic societies tend to differ in cultural values, differences which influence how individuals respond to social behaviors and the correlates of behaviors in these cultural contexts (Chen et al. 2008). Any type of withdrawal may be judged by peers as atypical in Western societies because solitary behavior contrasts sharply with cultural expectations for social initiative and social interactions (Rubin et al. 2009). Yet, some withdrawn children, such as those who are Shy, may fare better in non-Western societies because their behaviors may be judged as contrasting less sharply with collectivistic cultural norms and values (i.e., group harmony, cohesiveness; Chen et al. 2008). For instance, Shy children in China do not report loneliness and do not experience problematic peer relations like they do in the United States and Canada (Chen et al. 2004). Similar findings have emerged in a study from Indonesia (Eisenberg et al. 2001), which may also be characterized as collectivistic.

In the only study to examine shyness and unsociability in a non-Western culture (Kim et al. 2008), shyness and unsociability during middle adolescence were found to be less strongly related to negative adjustment during early adulthood in South Korea than in Australia. Unsociability was not *uniquely* associated with any index of adjustment. The authors hypothesize that showing low social interest in Korea may not be problematic for adolescents as long as they continue to be in "good harmony" with their peers (Kim et al. 2008; p. 560). Thus, some evidence suggests that shyness and unsociability may carry less risk in non-Western than Western societies. However, as noted previously, Kim et al. (2008) collected retrospective accounts of unsociability, shyness and peer isolation, which raises the possibility of retrospective recall bias in their study.

The Present Study

The present study sought to address the limitations of previous research by examining the distinctiveness and correlates of different forms of withdrawal in a large early adolescent sample of Indian youth. While all such generalizations have significant limitations, at a societal level, India has recently been investigated as exemplary of a culture with a blend of collectivistic and individualistic behaviors and intentions (Sinha et al. 2001, 2002). Traditional Indian values stress interdependence among family members, hierarchy in social systems, and *dharma* (or the performance of one's duty), and such collectivistic goals as maintaining social order, social cohesiveness, and interpersonal harmony are the primary concerns and socialization goals (Kapadia and Miller 2005). However, in more recent years, many Indians are also likely to engage in individualistic behaviors to serve collectivistic intentions, especially in affluent areas where individuals are not as dependent on others for need fulfillment (Sinha et al. 2002). For instance, an individual may purse individual and personal preferences, such as those associated with dating and marriage, if they also accommodate or at least do not conflict with the needs and interests of family and friends. Few Indians report that they engage in individualistic behaviors with individualistic intentions (Sinha et al. 2001, 2002). Thus, the tendency toward individualism appears to be expressed within a collectivistic framework. To our knowledge, there exists only one study of withdrawal in India that focused on shyness during early and middle childhood (Prakash and Coplan 2007); relative to Aggressive and typical children, Shy children reported greater loneliness and were more likely to be rejected.

On the basis of previous research in Western and non-Western societies (e.g., Chen et al. 2004; Prakash and Coplan 2007), the following hypotheses were developed. First, given evidence that withdrawal subtypes can be reliably distinguished during childhood and in a retrospective study of withdrawal during adolescence (Kim et al. 2008), we predicted that shyness, unsociability, and avoidance would emerge as distinct forms of withdrawal. Most investigators use parent-, teacher-, and/or peer-reports to assess withdrawal subtypes (e.g., Coplan et al. 2004; Spangler and Gazelle 2009). However, these reports may not be accurate since they require inferences about different reasons for withdrawal to be made from behavior. Internal states and desires may be best assessed by self-report measures, especially during adolescence when self-report measures are more valid indicators of internalizing problems than reports by parents, teachers, and clinicians (Kazdin 1986). Because no existing measures of withdrawal assess shyness, unsociability, and avoidance, we modified one of the most commonly used parent- and teacher-report measures of unsociability and shyness, the *Child Social Preference Scale* (CSPS; Coplan et al. 2004) to be a self-report measure. Items descriptive of avoidance (e.g., "I try to avoid others") and isolation (e.g., "I want to play with others but often they don't want to play with me") were added to determine whether the three internally-motivated forms of withdrawal would be distinguished from externally-imposed solitude or peer isolation. Consistent with prior research (e.g., Coplan et al. 2006), we predicted that particularly strong associations between self-reports of avoidance and peer-reports of sadness, and between self-reports of shyness and peer-reports of shyness, nervousness, and verbal reticence would be found and thus provide preliminary evidence of convergent validity for the revised self-report withdrawal measure.

To investigate risks associated with different forms of withdrawal, we focused on those psychosocial correlates most commonly studied in relation to shyness in cross-cultural research: victimization, rejection, exclusion, low peer acceptance, and loneliness (e.g., Chen et al. 2004; Prakash and Coplan 2007). Drawing from past research (Coplan and Weeks 2010; Kim et al. 2008), all subtypes were expected to be associated with some peer difficulty, and shyness and avoidance were expected to be associated with loneliness. But, because avoidance may be viewed as most strongly contrasting with the overarching collectivistic framework in India relative to shyness and unsociability, we expected especially strong links between avoidance and the outcomes. However, consistent with the findings from Kim et al. (2008), we predicted that, in India: (1) the associations between shyness and the outcomes would be only small to moderate in magnitude; and (2) no unique associations between unsociability and the outcomes would be evinced.

To better understand the processes by which withdrawn behavior lead to psychological difficulties, mediation analyses were performed to test the hypothesis that negative peer difficulties help to explain the strong links between adolescent shyness and internalizing problems in India, like they do in the United States and Canada during childhood (e.g., Boivin et al. 1995). But, due to the dearth of research on unsociability and avoidance, no specific hypotheses were offered on whether peer difficulties would also mediate the links between these forms of withdrawal and loneliness. Finally, because there is some evidence that girls are more shy than boys during middle and late childhood in India (Prakash and Coplan 2007), but that shyness and unsociability are more strongly associated with psychosocial difficulties for boys than girls, at least in the United States and Canada (Coplan and Weeks 2010; Coplan et al. 2004; Spangler and Gazelle 2009), sex differences were explored in all analyses.

Method

Participants

Participants were 194 adolescents (100 boys; *M* age= 13.35 years, *SD*=1.09) in the eighth grade from one private, co-educational secondary school in Surat, India for whom both written parental permission and child assent were received. Surat is located in the Western part of India in the state of Gujarat, and is the eighth largest city in India with a population of approximately 5 million. According to the most recent census data (2001), approximately 75% of the adult population is literate in Surat, which is substantially higher than India's national average (65%). English is the medium of instruction for the participating school. All eighth grade students were recruited for participation in this study; 88% of all potential participants agreed to participate. The majority of adolescents reported that they spoke Hindi at home (53%) with a sizable minority (36%) reporting that Gujarati was the primary language spoken in their homes. Other primary languages spoken at home included: Bengali (1%), English (4%), Marathi (1%), Oriya (1%), Punjabi (1%), Sindi (1%), and Telugu (2%). Ninety percent reported that Hindu was their religion with 7% reporting Jain, 1% as Christian, 1% as Muslim, and 1% as Parsi. Ninety-nine percent (n=193) of participants indicated that their parents were married and that they lived with both of their biological parents. Due to the costs of attending a private school, the families that attend this school are primarily middle-to-upper-class.

Procedures

During the fall semester, participants completed questionnaires in group-format in their classrooms. All questionnaires were in English, and each session lasted approximately 1 h. Participants were told that their answers were confidential and that they could choose to stop completing their questionnaires at any time. Non-participating adolescents remained in their classrooms, working on class work.

Measures

Social withdrawal subtypes and peer isolation (Coplan et al. 2004) Participants completed the 19-item revised version of the *Child Social Preference Scale (CSPS)*. Participants indicated how much they were like each statement on a 5 point scale (1 = Not at all to 5 = A lot). For the present study, the original *CSPS* items were rephrased so that the parent- and teacher-report items became self-report items (e.g., "My child will turn down social initiations from other children because he/she is 'shy'" was revised to read "Sometimes I turn down chances to hang out with other kids because I feel too shy"). In addition, four items descriptive of avoidance (e.g., "When given the choice, I always choose to play by myself because I don't like playing with others") and four items descriptive of peer isolation (e.g., "I'd like to hang out with other kids but I'm often excluded") were added. Results from exploratory factor analyses are reported below, along with reliability indices and results from convergent validity analyses.

Socioemotional behaviors and peer relations (Wojslawowicz Bowker et al. 2006) To assess socioemotional behaviors previously linked to withdrawal subtypes (Coplan et al. 2006), participants were asked to write the names for three

same-sex and three other-sex peers in their grade and school for the following items: (1) shyness: "Somebody who is very shy"; (2) depressed/sad affect: "A person who is often sad"; (3) anxious affect: "Someone who gets nervous about participating in group discussions"; and (4) verbal reticence: "A person who hardly ever starts up a conversation." Because of the multiple-informant nature of peer nominations, single-item peer nomination assessments are considered reliable (Coie et al. 1990). Participants also nominated three same-sex and other-sex peers for items assessing exclusion (3-items; i.e., "Someone who is often left out"), victimization (4-items; i.e., "Someone who is hit or kicked by other kids"), peer acceptance ("Someone you like to be with the most"), and peer rejection ("Someone you would rather not be with"). Although the wording for the assessment of peer rejection is slightly different from other studies (see Rubin et al. 2006), similar wording has been used elsewhere (e.g., "don't like to hang out with"; Graham and Juvonen 2002), and consistent with theory on peer rejection, "rather not be with" reflects the desire to stay away from another person. Only nominations for participating adolescents were considered, and all items were proportionalized and standardized across the entire grade. Reliability analyses revealed that the mean exclusion (α=0.77) and victimization subscales (α=0.77) were internally consistent. Peer nomination measures are a widely used method to assess peer relations and social behaviors in North American and also in non-Western societies, including India (Khatri and Kupersmidt 2003; Prakash and Coplan 2007).

Loneliness (Asher et al. 1984) This self-report measure consists of 16 items measuring feelings of loneliness (e.g., "I feel alone") and social dissatisfaction (e.g., "It's hard for me to make friends"). Mean scores were calculated with higher scores indicating greater loneliness (α=0.86).

Overview of Data Analyses

To analyze the psychometric properties of the revised CSPS (CSPS-R), exploratory factor analyses using principal-axis factoring with oblique rotation (due to the anticipation of factor intercorrelations; Preacher and MacCallum 2003) were conducted. Reliability analyses were performed, and the correlations among the subscales and between the subscales and peer-reports of socioemotional behaviors (shyness, depressed and anxious affect, verbal reticence) were examined for validity purposes. A MANOVA with adolescent sex as the independent variable and the CSPS-R scales as the dependent variables was conducted to test for possible sex differences. Next, to test the associations between each withdrawal subtype and the indices of psychosocial adjustment (rejection, acceptance, exclusion, victimization, loneliness), zero-order correlations were computed. Hotelling's *t*-tests for dependent correlations tested for significant differences in the strength of the correlations across subtype.

Five hierarchical linear regression models were next run to test the unique associations between the CSPS-R shyness, avoidance, and unsociability scales and each index of adjustment. In each of these models, adolescent sex and shyness, avoidance, and unsociability were entered at step 1, and the two-way interaction terms with sex were entered at step 2. All variables were centered prior to the formation of the interaction terms (Aiken and West 1991). Finally, following procedures outlined by Baron and Kenny (1986), mediation analyses were performed to determine whether peer relations mediate the associations between the CSPS-R withdrawal scales and loneliness. Researchers have noted limitations of the Baron and Kenny method (i.e., low power, the lack of a direct test of indirect effects; MacKinnon et al. 2002). Therefore, as suggested by Preacher and Hayes (2004), the significance of indirect effects were tested with available SPSS syntax that uses the bootstrapping method (www.davidakenny.net).

All predictor and outcome variables were positively skewed (with the exception of unsociability). To correct for the skew, natural log transformations were applied. Analyses were performed with the untransformed and transformed data, and because the results were very similar, results with untransformed are presented herein. Religion and language spoken at home were tested as demographic covariates. However, these variables were dropped from analyses when they were not found to be significantly associated with the study variables. Descriptive statistics for key study variables are presented in Table 2.

Results

Examining the Factor Structure and Psychometric Properties of the Child Social Preference Scale-Revised

All 19 CSPS-R items were subjected to an exploratory factor analyses using principal-axis factoring with oblique (promax) rotation. The scree plot (Cattell 1966) suggested that a four-factor solution was most appropriate. Prior to the formation of the factor scales, two shyness items ("I often watch other kids hanging out, but I don't approach them;" "I rarely ask anyone to hang out with me") and one item descriptive of avoidance ("I try to avoid other kids.") were dropped because they failed to load any of the four factors. An additional item, "I'm just as happy to be by myself as with other kids," was also excluded because it loaded highly (>0.30) with both avoidance (−0.41) and unsociability (0.41) items.

After dropping these four items, principal-axis factoring with oblique (promax) rotation yielded four factors, which we refer to as isolation (4-items; α=0.84), unsociability (4-items; α=0.67), avoidance (3-items; α=0.67), and shyness (4-items; α=0.65). These four factors accounted for 59.67% of the total variance (see Table 1 for final pattern loadings and the Appendix for the items). The isolation factor accounted for 29.23% of the total variance (eigenvalue=4.38), the unsociability factor accounted for 13.93% of the total variance (eigenvalue=2.09), the avoidance factor accounted for 8.55% of the total variance (eigenvalue=1.28), and the shyness factor accounted for 7.96% of the total variance (eigenvalue=1.19). There were no cross-loadings higher than 0.31 for the 15 items, and factor loadings ranged from 0.38 to 0.88. Factor correlations based on the promax rotation ranged from 0.22 (isolation and avoidance) to 0.57 (isolation and shyness).

Table 2 presents correlations between the CSPS-R subscales and peer-reports of affect, behavior, and verbal reticence. The correlations revealed a pattern which was, by and large, consistent with results of previous research, and provide validity for the CSPS-R. For instance, peer-reports of shyness and verbal reticence were significantly associated with CSPS-R shyness scale, but not the avoidance or unsociability scales. Peer-reports of depressed affect were correlated with the CSPS-R avoidance scale, but not the unsociability and shyness scales. The CSPS-R isolation scale was not significantly correlated with any of the peer nominations items. Results from the MANOVA with the CSPS-R scales as the dependent variables revealed a significant multivariate sex effect for unsociability only, $F(1)=6.16$, $p=0.01$, $\eta^2=0.03$, with girls ($M=2.71$, $SD=0.86$) reporting greater unsociability relative to boys ($M=2.40$, $SD=0.88$).

Examining Zero-Order and Unique Associations Between Withdrawal Subtypes and Peer and Psychological Adjustment

As seen in Table 2, bivariate correlations revealed that the CSPS-R withdrawal scales were positively correlated with exclusion. The shyness and unsociability scales (but not avoidance) were correlated with victimization whereas only the shyness scale was correlated with acceptance (in the negative direction). All withdrawal scales were associated with loneliness. Hotelling's *t*-tests indicated that the shyness scale was more strongly associated with loneliness than were the avoidance ($t=3.03$, $p=0.003$) and unsociability scales ($t=3.52$, $p=0.006$) but there were no significant differences in the strength of the associations between the withdrawal subtypes and the peer variables. Also evident in Table 2 are the low to moderate associations between the peer-report peer relations variables, supporting suggestions that they represent related, but distinct types of peer relations experiences (Rubin et al. 2006).

Regression analyses testing the unique associations between the CSPS-R withdrawal subscales and adjustment outcomes revealed that the avoidance and shyness scales were uniquely associated with exclusion and loneliness. The avoidance and shyness scales were not uniquely associated with acceptance, rejection, or victimization, and there were no unique associations between the unsociability scale and the adjustment outcomes. See Table 3. For ease of communication, all non-significant interactions with sex are not presented.

Table 1 Results of principal axis factor analyses of the child social preference scale-revised

Items (abbreviated)	Factor			
	Isolation	Unsociability	Avoidance	Shyness
Want to play but don't want to play with me	**0.88**	−0.06	0.08	−0.04
Wish to spend more time, but they don't let me	**0.77**	−0.03	−0.01	−0.01
Kids don't want me to hang out	**0.74**	−0.01	−0.02	0.01
Would like to hang with kids, but excluded	**0.69**	0.02	−0.11	0.01
Like spending time alone more than with others	−0.15	**0.75**	−0.01	−0.01
Don't like being with others and prefer being alone	0.14	**0.64**	0.05	−0.14
Don't mind spending time alone	−0.10	**0.59**	−0.15	0.03
Don't have a strong need to be with other kids	0.11	**0.47**	−0.07	0.07
Happiest when playing with other kids (reversed)	−0.03	−0.18	**0.80**	0.04
Prefer to play with kids than alone (reversed)	−0.07	0.06	**0.69**	−0.11
Choose to play alone because don't like others	0.14	0.31	**0.38**	0.08
Desire to be with other kids, but nervous	−0.13	−0.04	−0.01	**0.73**
Turn down chances to hang out because shy	0.10	−0.05	−0.02	**0.60**
Stand near other kids playing, without joining in	0.06	0.15	0.19	**0.46**
Like to play with others, but nervous to	0.17	0.05	−0.19	**0.38**

Factor analyses were calculated using principal axis factor analysis with promax/oblique rotation. Primary loadings are in boldface

Examining Peer Relations as Mediators of the Association Between Withdrawal Subtypes and Loneliness

Given that avoidance was independently associated with exclusion and loneliness, and exclusion was significantly related to loneliness, the conditions were filled statistically to test whether exclusion mediates the relation between avoidance and loneliness (Baron and Kenny 1986). Results from mediation analyses are depicted visually in Fig. 1. After controlling for sex and the other withdrawal subtypes at step 1 (Step 1: $\Delta R^2=0.25$, $p=0.001$, $f^2=0.56$), avoidance was a significant predictor at step 2 (Step 2: $\Delta R^2=0.02$, $p=0.02$, $f^2=0.03$), but the beta weight of avoidance was no longer significant after the exclusion variable was entered into the model at step 3 (Step 3: $\Delta R^2=0.05$, $p=0.001$, $f^2=0.05$). This provided evidence of complete mediation. Post-hoc analyses using the bootstrapping method indicated that exclusion was a significant mediator ($B=0.04$, 95% confidence interval = 0.004 to 0.10). Since shyness was independently associated with loneliness and exclusion, and loneliness and exclusion were related, exclusion was tested as a possible mediator of the associations between shyness and loneliness. However, no evidence of mediation was found. Although unsociability was not uniquely associated with any of the peer measures, exploratory mediation analyses were performed, but there was no evidence of mediation revealed. Output is available from the first author by request.

Discussion

Knowledge about what it is like to be socially withdrawn during childhood and adolescence is largely based on findings from studies of shyness (e.g., Crozier 1995; Rubin et al. 1995). However, there is growing interest in approach and avoidance models of withdrawal suggesting that shyness reflects only one reason that individuals might be withdrawn and that different reasons or underlying motivations for withdrawal may be differentially related to maladjustment (Coplan and Armer 2007). To date, most efforts to study motivations for withdrawal have focused on children in the United States and Canada. Therefore, the overarching goal of this study was to evaluate the meaningfulness of distinguishing between three forms of social withdrawal believed to reflect varying combinations of approach and avoidance motivations (shyness, unsociability, avoidance) in a sample of young adolescents in India.

In the present study, shyness, unsociability, and avoidance emerged as related but distinct reasons for withdrawal. These three factors showed some correspondence with the emotional and behavioral characteristics associated with these different types of withdrawal that are emerging in the research literature (e.g., Coplan et al. 2006; Spangler and Gazelle 2009), providing preliminary evidence of convergent validity for the revised version of the *Child Social Preference Scale* (Coplan et al. 2004). In addition, our data indicating that shyness and avoidance were uniquely associated with loneliness and exclusion, but unsociability was not, support the hypothesis that the severity of the risk associated with withdrawing from peers depends on the underlying motivation. Combining our results with those from earlier studies (Coplan et al. 2004; Coplan and Weeks 2010; Kim et al. 2008) leads us to argue that social withdrawal may be best conceptualized as a multifaceted construct during childhood and adolescence, in both Western and non-Western societies.

The present study provides the strongest evidence to date that there are many "faces" of social withdrawal and solitude during early adolescence (Rubin 1982). Tests of the factor structure of the CSPS-R revealed distinctions between externally-imposed peer isolation and internally-motivated (shyness, avoidance, unsociability) withdrawal. Correlations between shyness, unsociability, and avoidance with self-reports of isolation and peer-reports of peer difficulties were only small to moderate in magnitude. These findings are consistent with those found in South Korea and Australia with retrospective data of withdrawal during middle adolescence (Kim et al. 2008), and further bolster arguments that while some adolescents spend time alone because they are actively excluded by their others, many others remove themselves from peers because of their internal desires or states (e.g., desires to be alone; Coplan and Armer 2007).

Results from this present study also clarify the psychosocial risks associated with different forms of social withdrawal during early adolescence. The three withdrawal subtypes were all significantly associated with loneliness and at least one type of peer difficulty, clearly demonstrating that removing oneself from peers, for whatever reason, is associated with some adjustment difficulty during early adolescence. Shyness has been previously associated with peer difficulties and loneliness during childhood and adolescence in Western and non-Western societies (Prakash and Coplan 2007; Rubin et al. 1995), but an important contribution of the present study was the finding that the associations between shyness and the outcome variables were only small to moderate in size (and shyness and peer rejection were not significantly related). These results add to a growing literature indicating that shyness is associated with less severity of impairments in collectivistic-oriented than individualistic-oriented societies (e.g., shyness and peer preference: China: $r=-0.04$, $p>0.05$; Canada: $r=-0.31$, $p<0.001$; Chen et al. 2004), most likely because shyness is judged by peers as less deviant in more collectivistic societies (Chen et al. 2008; Kim et al. 2008).

Table 2 Descriptive statistics and zero-order intercorrelations among study variables

	CSPS-R scales				Socioemotional behaviors				Adjustment outcomes				
	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Shyness		0.33**	0.16*	0.56**	0.20**	0.04	0.20**	0.19*	−0.03	−0.16*	0.29**	0.14*	0.49**
2. Unsociability			0.30**	0.35**	0.10	0.05	0.26**	0.10	−0.02	−0.09	0.26**	0.17*	0.23**
3. Avoidance				0.19*	0.11	0.20**	0.23**	0.11	0.06	−0.02	0.27**	0.11	0.24**
4. Isolation					−0.04	0.00	0.05	−0.06	−0.04	−0.23**	0.30**	0.23**	0.56**
5. Shyness-P						0.24**	0.60**	0.76**	−0.13	−0.05	0.28**	0.00	0.16*
6. Sad affect							0.28**	0.24**	0.28**	0.10	0.38**	0.23**	0.08
7. Nervous affect								0.53**	−0.03	−0.08	0.37**	0.13	0.14*
8. Verbal reticence									0.01	−0.03	0.30**	0.03	0.17*
9. Rejection										0.22**	0.27**	0.55**	0.03
10. Acceptance											−0.19*	0.15*	−0.19*
11. Exclusion												0.48**	0.39**
12. Victimization													0.25**
13. Loneliness													
M	2. 2.02	2.55	1.94	2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98
SD	0.98	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.71
Range	1.00–5.00	1.00–5.00	1.00–5.00	1.00–5.00	−0.65–6.56	−0.68–5.38	−0.73–5.18	−0.54–6.44	−0.69–6.02	−1.10–4.45	−0.70–3.33	−0.71–3.52	1.00–4.31

Shyness-P refers to peer nominations for “Someone who is shy”; Degrees of freedom for correlations = 193. *$p<0.05$. **$p<0.001$

Table 3 Summary of hierarchical regression analyses for withdrawal subtypes predicting peer difficulties and loneliness

Outcome, Predictors	*B*	*SE B*	*β*	*F, Δ F*	R^2	f^2
Model 1: Exclusion				(4, 189)=8.30, p=0.001	0.15	0.18
Sex	0.02	0.12	0.01			
Shyness	0.20	0.07	0.22**			
Unsociability	0.13	0.08	0.12			
Avoidance	0.21	0.07	0.20**			
Model 2: Victimization				(4, 189)=2.71, p=0.03	0.05	0.05
Sex	−0.19	0.11	−0.12			
Shyness	0.08	0.06	0.10			
Unsociability	0.13	0.07	0.14			
Avoidance	0.05	0.07	0.05			
Model 3: Rejection				(4, 189)=0.66, p=0.62	0.01	0.01
Sex	0.17	0.15	0.09			
Shyness	−0.04	0.08	−0.04			
Unsociability	−0.06	0.09	−0.05			
Avoidance	0.09	0.09	0.08			
Model 4: Acceptance				(4, 189)=1.74, p=0.14	0.04	0.04
Sex	0.19	0.15	0.10			
Shyness	−0.16	0.08	−0.15			
Unsociability	−0.07	0.09	−0.06			
Avoidance	0.03	0.09	0.02			
Model 5: Loneliness				(4, 189)=17.91, p=0.001	0.29	0.41
Sex	−0.12	0.09	−0.09			
Shyness	0.33	0.05	0.46**			
Unsociability	0.03	0.05	0.04			
Avoidance	0.13	0.05	0.16*			

Sex coded as 0 = boys, 1 = girls

** p<0.001. * p<0.05

Based on the results of previous studies conducted in the United States and Canada (e.g., Boivin et al. 1995), we expected that negative peer relations experiences would mediate the association between shyness and loneliness, but such findings did not emerge. Interestingly, Chen et al. (2004) found that peer preference mediated the association between shyness-sensitivity and loneliness during middle childhood in Canada, but not in Brazil, Italy, or China. Loneliness involves an awareness of deficiencies in one's relationships and longing for union with others (Asher and Paquette 2003). However, there is an important distinction between peer relationships at the group (e.g., rejection, popularity) and dyadic (e.g., friendships, romantic relationships) levels of social complexity (Rubin et al. 2006). It is possible that many adolescents in societies that tend to be more collectivistic than individualistic (such as China, India, Brazil) place less importance on positive group-level peer relations than those in individualistic societies, but more importance on dyadic peer relationships (Chen et al. 2004). If this is the case, other close dyadic relationships to consider may be sibling or parent–child relationships, both of which are argued to be more important and influential in the lives of many India youth than peer relationships (Verma and Saraswathi 2002). Future researchers should, therefore, examine different types of dyadic relationships as possible mediators of the association between shyness and loneliness in India and other more collectivistic societies. Additional knowledge about mediating variables in Western and non-Western societies could improve often ineffective intervention efforts with shy and socially anxious children and adolescents (Rubin et al. 2009), and make them more culturally sensitive (Kress et al. 2005).

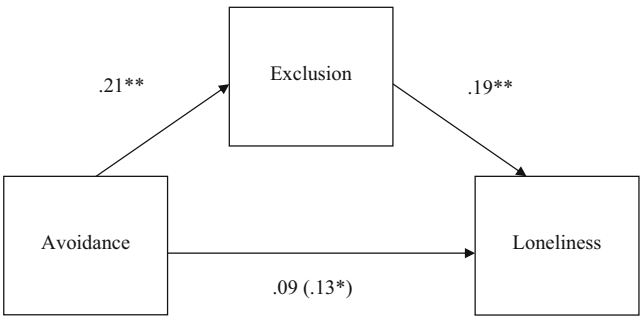

Fig. 1 Path diagram of the effects of avoidance on peer exclusion and loneliness. Path weights are standardized regression coefficients. Coefficients in parentheses are directed effects after accounting for peer exclusion. * p<0.05, ** p<0.001

Although previous researchers found that avoidance is associated with psychological difficulties (e.g., depressive symptoms; Coplan et al. 2006), our study is the first to

demonstrate that avoidance is uniquely associated with peer exclusion. Avoidant adolescents may be actively left out by peers because they are perceived as sad and anxious, and because their withdrawal is interpreted accurately as deliberate attempts to avoid social interaction. Avoidant adolescents may be especially likely to be left out in India since such behavior may be viewed as unfriendly and unpleasant, and also as contrasting sharply with primary cultural expectations for group harmony and cohesiveness. The finding that the association between avoidance and loneliness was mediated by peer exclusion is novel and may at first seem counterintuitive. Why would peer exclusion (which refers to being left out by peers) explain the loneliness of many adolescents who report that they actively isolate themselves from their peers because they prefer to be alone? Given that many of our avoidance items referred to *choosing* to be alone ("When given the choice, I always choose to play by myself because I don't like playing with others"), we speculate that many avoidant adolescents may feel psychologically stressed when it is their peers that are the cause of their solitude (and their choice to withdrawal is eliminated). A related possibility is that some avoidant tendencies develop from long histories of peer exclusion and other peer difficulties (Coplan and Armer 2007). Previous research indicates that some children remove themselves from their peers as a way to cope with negative peer relations (Eisenberg et al. 1998); such coping strategies may evolve into strong avoidance motivations. This study is the first to examine peer relations in relation to avoidance and loneliness, and while the finding is intriguing, it should be interpreted with caution. Additional studies with samples from both Western and non-Western societies will be needed to replicate our results and advance a more thorough understanding of the linkages between avoidance, peer difficulties and loneliness.

Finally, our results confirm the findings of other studies suggesting that unsociability is a relatively "benign" form of social withdrawal (e.g., Coplan et al. 2004). However, our results extend earlier findings by demonstrating that unsociability continues to be less risky relative to shyness, and also avoidance, after children transition into early adolescence. Previous researchers speculated that the costs of unsociability may increase with age, due to cumulative effects of being away from peers, and missing important social and emotional learning opportunities (Rubin et al. 2009). While it may be the case that Unsociable individuals do not make many social initiations to their peers (Coplan et al. 2004), it is likely that they do not turn down social invitations. Therefore, Unsociable children and adolescents may achieve "just enough" peer interaction to avoid many of the negative concomitants of social isolation and solitude. It may also be that unsociable behavior during adolescence is becoming increasingly common (and as a result, more tolerated) due to adolescents' increased engagement with media (e.g., video games, music), which is often solitary in nature. Of course, it is also plausible that the risk associated with unsociability during adolescence is less in non-Western societies than Western societies since Kim et al. (2008) found that unsociability was not uniquely associated with any indicators of adjustment in South Korea (but the same was not found in Australia). Kim et al. (2008) hypothesized that unsociability may not be detrimental to adjustment during adolescence in more collectivistic-oriented societies if the low social interest does not interfere with group harmony, and that avoidance motivations may be most at odds with cultural goals in such societies. Consistent with their results and hypotheses, we found that in India, all associations between unsociability and adjustment were rendered nonsignificant after controlling for shyness and avoidance.

Several additional future research directions, along with study limitations are important to consider. First, the present study was cross-sectional in nature, limiting our ability to make causal inferences and to establish the direction of effects. Although our mediation analyses were guided by previous longitudinal research (e.g., Boivin et al. 1995; Gazelle and Ladd 2003), it is certainly possible that peer difficulties lead to certain types of withdrawal, which in turn, leads to loneliness. Thus, longitudinal studies will be necessary to more appropriately test mediation, and to better understand the etiology of different forms of withdrawal. Second, the study sample consisted of grade 8 students from Surat, India, who, although representative of the Surat region in India, may not be representative of other regions in India. Our sample was also relatively small, which may have prevented the detection of some interaction effects with adolescent sex. It is also not clear why girls in our study reported more unsociability than boys. Because only a small number of adolescents in our study would be considered highly Shy, Unsociable, or Avoidant if an 'extreme groups approach' were adopted (e.g., Coplan and Weeks 2010), the small sample size may have also attenuated some of the associations between the withdrawal subtypes and the outcomes. Replication of our findings with larger samples from other regions of India will be required before strong conclusions about the prevalence and severity of risk associated with the different forms of withdrawal for adolescent boys and girls in India can be made. On a related note: Due to the primary importance of traditional collectivistic goals and values in India, we interpreted our analyses primarily through this framework. However, future investigators should assess collectivistic and individualistic cultural norms and values to test whether the unique *blend* of collectivism and individualism in India (and presumed within-culture variability in these values) impacts the experience of being socially withdrawn.

Third, we found some preliminary evidence of convergent validity for the CSPS-R, but the reliability of the factors was somewhat low. New items, along with the elimination of the double-barreled items on the CSPS-R (e.g., "Sometimes I turn down chances to hang out with other kids because I feel too shy"), may be necessary to improve the internal validity of the scales. Additional psychometric work on this measure is clearly needed, including evidence of test-retest stability and divergent validity. Furthermore, because our study was limited by its use of self-report measures for withdrawal subtypes and loneliness, multiple informants in future research will be important to address concerns about shared method variance.

A further limitation is that we only assessed peer relations and loneliness as adjustment correlates of the different forms of withdrawal. Yet, social withdrawal is a symptom of a variety of personality and affective disorders in adolescents and adults (APA 1994). We propose that avoidant preferences during adolescence may be a risk factor for avoidant personality disorder during adulthood, which is characterized by "a pervasive pattern of social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluate, beginning in early adulthood and present in a variety of contexts…" (APA 1994, p. 721). Thus, future work should include assessments of forms of psychopathology with known associations to social withdrawal to better understand variations in the severity of risks associated with avoidance, shyness, and unsociability. Finally, given the theorized potential benefits of certain types of self-imposed solitude during adolescence (i.e., reading, engaging in other hobbies; Rubin et al. 2009), and evidence that withdrawing from peers can protect adolescents from adverse peer experiences (i.e., victimization; Eisenberg et al. 1998), it may also be fruitful to investigate possible positive correlates of different forms of social withdrawal during adolescence.

In conclusion, the present study provides important new evidence that social withdrawal is a multifaceted construct beyond the childhood years and in non-Western societies. Consistent with research in Western and non-Western societies, findings clearly indicate that unsociability continues to be a relatively benign form of withdrawal as children transition into early adolescence. Findings highlight the importance of peer exclusion to understanding the loneliness associated with avoidance, and provide additional evidence that shyness may be associated with less impairment in non-Western than Western societies. Taken together, results from this study strongly suggest that studying adolescent social withdrawal using a multifaceted framework may reveal additional information about when and why withdrawal is most detrimental to adjustment.

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Appendix

Child Social Preference Scale-Revised

Peer isolation items

I want to play with others but often they don't want to play with me.

I wish I could spend more time with other kids, but they don't let me.

I'd like to hang out with other kids, but I'm often excluded.

Sometimes kids don't want me to hang out with them.

Unsociability items

I don't really mind spending time alone.

I like spending time alone more than I like spending time with other kids.

I don't really like being with other kids and prefer being alone.

I don't have a strong need to be with other kids.

Avoidance items

I am the happiest when I am playing with other kids. (reversed)

When given the choice, I prefer to play with other kids than to play alone. (reversed)

When given the choice, I always choose to play by myself because I don't like playing with others.

Shyness items

Although I desire to be with other kids, I feel nervous about interacting with them.

Sometimes I turn down chances to hang out with other kids because I feel too shy.

I stand near where other kids are playing, without joining in.

I'd like to play with other kids, but I'm sometimes nervous to.

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