Profiles of Social Withdrawal in Late Childhood:

Associations with Academic Engagement and Achievement

by

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ABSTRACT

The primary goals of this study were to empirically identify subgroups of socially withdrawn youth in late childhood using latent profile analysis and to examine profiles of students' scholastic adjustment. Further, comparisons of the academic functioning for different subtypes of withdrawn children, with particular emphasis on socially disinterested and socially avoidant youth, were made. Participants were 358 fifth grade children. Results indicated that theoretical subtypes of socially withdrawn youth emerge among fifth grade students (i.e., shy, socially disinterested, socially avoidant, and nonwithdrawn). Additionally, associations among subtype membership and various indices of academic engagement and achievement demonstrated unique academic profiles depending on subgroup classification. In particular, youth who were identified as socially avoidant were at greatest risk for academic difficulties compared to their peers. Findings also emerged for socially disinterested youth indicating some degree of academic maladjustment associated with a preference for solitude. These findings have implications for students exhibiting different forms of social withdrawal for their academic functioning in later childhood.

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Introduction

Childhood social withdrawal has been the focus of a growing body of research over the past three decades (e.g., Caspi, Elder, & Bem, 1988; Cheek & Buss, 1981; Harrist, Zaia, Bates, Dodge, & Pettit, 1997; Rubin & Asendorpf, 1993; Rubin, Coplan, & Bowker, 2009). Much of this attention stems from a long history of theory and research demonstrating that a lack of social interaction may place youth at increased risk for maladjustment in childhood and adolescence. For instance, social withdrawal is associated, both concurrently and predictively, with loneliness, depression, and peer rejection and victimization (Boivin, Hymel, & Bukowski, 1995; Gazelle & Ladd, 2003; Gazelle & Rudolph, 2004). In addition to internalizing and peer relationship difficulties, social withdrawal is also related to problems in the academic domain, such as school avoidance, negative teacher-child relationships, and poorer academic achievement (Coplan, Arbeau, & Armer, 2008; Crozier, 1995; Gazelle & Ladd, 2003).

Although the correlates and consequences of social withdrawal are well documented, contemporary research acknowledges the considerable heterogeneity among socially withdrawn children. Theoretical explanations for differing types of withdrawal based on individuals' social approach and social avoidance motivations suggest value in empirically delineating subtypes of solitary behavior. That is, recent theory and research suggest that the broad construct of social withdrawal comprises multiple forms that have different underlying motivations explaining children's choices to play alone. These are thought to be important distinctions because emerging evidence suggests that differences in the causal

mechanisms responsible for children's withdrawal are associated with heterogeneous outcomes, such that the severity and type of risk for social and academic difficulties may vary as a result of these different causes of withdrawal (Coplan & Armer, 2007). Accordingly, there has been a push to elucidate subgroups of socially withdrawn youth and their respective adjustment profiles in order to improve conceptual clarity and target intervention efforts more carefully.

A Taxonomy of Internally Motivated Solitude

The term social withdrawal is used to broadly characterize a child who isolates him or herself from the peer group, as opposed to being actively isolated or excluded by others (Rubin, 1982; Rubin & Asendorpf, 1993). Thus, the source of social withdrawal is internal. Asendorpf (1990, 1993) posited a theoretical framework for distinguishing among social motivations underlying this internally motivated withdrawal that established the foundation for empirical study of childhood social withdrawal. In this two-by-two typology, there are two main dimensions underlying withdrawn behavior – the approach tendency and the avoidance tendency – that account for why children would choose to refrain from peer contact. According to this approach-avoidance model, there are three subtypes of socially withdrawn groups that are identified, with the fourth and final group comprising sociable, or nonwithdrawn, children.

The three subtypes of social withdrawal that are identified in this model each represent groups of children who remove themselves from opportunities for social interaction, but for different "reasons". Children who are high on both social approach and social avoidance tendencies (i.e., an approach-avoidance

conflict) exhibit a fear or wariness of social interaction. This subtype has been labeled shyness (Asendorpf, 1990) or anxious solitude (Gazelle & Ladd, 2003) because even though these children desire social contact, they are too anxious to engage in peer interaction. This social fearfulness is contrasted by a second subtype of social withdrawal, labeled unsociable (Asendorpf, 1993) or socially disinterested[1] (Coplan, Prakash, O'Neil, & Armer, 2004). Children who exhibit low social approach and low avoidance motivations are characterized by this nonfearful *preference* for solitude, rather than the presence of social fear. Although these children do not initiate many social contacts because they are content to play alone, they are also assumed to not be strongly averse to peer interaction if provided an appealing opportunity (Coplan & Weeks, 2010; Rubin, Coplan, Bowker, & Menzer, 2011). Finally, Asendorpf (1993) identified another group of socially withdrawn children who are characterized by the combination of low social approach and high social avoidance motivations. That is, these socially avoidant children demonstrate a preference for solitude accompanied by a desire to avoid social contact.

Shyness is the most commonly discussed and studied subtype of social withdrawal. The deleterious effects of shy/anxious behavior have been extensively investigated and are thus well documented in the literature; however, much less is known about children who engage in behavioral solitude because they prefer to play alone. Among the limited research, there appear to be mixed results regarding unsociable children's social, emotional, and academic well-

[1] Note: The terms unsociable and socially disinterested will be used interchangeably throughout this document.

being. Social avoidance has also been minimally considered in the literature despite the speculation that these children would be particularly at risk for maladjustment (Asendorpf, 1990). It is unclear whether these children would exhibit characteristics consistent with shy youth given their high avoidance tendencies, or be buffered by some of these negative effects given that they also demonstrate low approach motivations similar to socially disinterested youth. Alternatively, it is possible that these children are at greatest risk, per Asendorpf's (1990) speculation, particularly as they age because their social motivations are consistent with a cumulative risk profile. That is, not only are these children thought to approach peers less often than nonwithdrawn children, but they also actively avoid social interactions similar to shy/anxious children. Unfortunately, the implications of these types of social withdrawal are not well understood.

Social Disinterest in Childhood

Most of what is known about socially withdrawn youth is largely based on studies of children whose behavioral solitude is motivated by social anxiety or fear. Considerably less attention has been paid to unsociability as a distinct subtype of social withdrawal in childhood and adolescence. Further, the existing, albeit limited, research examining unsociability focuses on young children's socioemotional wellbeing. Accordingly, little is known about how social disinterest affects children in later elementary years and beyond, as well as whether this behavioral propensity leads to difficulties in other domains of children's lives, including school adjustment.

Most findings to date have indicated that socially disinterested children, as compared to their shy counterparts, report fewer peer relationship difficulties and internalizing problems (Coplan et al., 2004), and are not judged by parents and teachers to experience psychological distress or be socially unskilled (Asendorpf & Meier, 1993; Harrist et al., 1997). Because unsociable children are thought to be able to engage peers without anxiety, it has been assumed to be relatively benign in childhood (Coplan et al., 2004; Coplan, Girardi, Findlay, & Frohlick, 2007; Harrist et al., 1997). For example, Asendorpf and Meier (1993) found that unsociable youth, when compared to sociable (i.e., nonwithdrawn) children, did not significantly differ in the degree to which they were vocal when engaging others. Based on these findings, Asendorpf and Meier (1993) concluded that although unsociable children prefer solitude to peer interaction, their social skills are not impaired when conversing with others. Similarly, Harrist et al. (1997) concluded that, among the kindergarteners who were observed to engage frequently in solitary activities, the unsociable group was otherwise undifferentiated from the nonwithdrawn group in terms of their social and social-cognitive adjustment. Based on these findings, it has been assumed that unsociable children are less at risk for maladjustment than their shy counterparts.

Social Avoidance in Childhood

Socially avoidant children are characterized by the combination of low social approach and high social avoidance motivations. As previously mentioned, this subtype of social withdrawal represents an understudied group in the literature. Although Asendorpf (1990, 1993) theoretically identified this group of

children decades ago, they have only recently begun to be included in empirical explorations of socially withdrawn subtypes. The most thorough coverage of this subtype to date has been by Coplan, Rose-Krasnor, Weeks, and Kingsbury (2012), who empirically identified a distinct group of children exhibiting high scores on both shyness and unsociablility. These investigators concluded that, compared to all other groups, socially avoidant children demonstrated the highest socioemotional risk profiles. In particular, they found that these children reported the highest levels of social anxiety and depressive symptoms, the most negative attributional style, and among the highest level of negative affect and lowest positive affect. These findings are consistent with Asendorpf's (1990) hypothesis that these children would be at heightened risk for maladjustment, as well as Coplan and Armer's (2007) speculation that this behavior may indicate preliminary depressive symptoms in childhood.

Implications of Low Social Approach Motivations

When considering the various implications of socially withdrawn behavior, it is important to think about the mechanisms connecting a lack of social interaction with poor adjustment. One of the main reasons shy children have received so much investigative attention is the general understanding that individuals with underlying anxiety problems are at risk for a broad array of difficulties (Gazelle & Rudolph, 2004). Although this is true, it is reasonable to expect that children – anxious or otherwise – who abstain from peer interaction may be adversely affected given the established importance of peer relationships for children's adjustment (e.g., Ladd, 2005). Later childhood and adolescence

marks a time in which peers become an increasingly important part of children's lives and the unique benefits of peer interaction for children's social, emotional, cognitive, and moral development have been well established (Ladd, 2005; Rubin, Bukowski, & Parker, 2006). Accordingly, the later childhood years in particular may represent an increasingly distressing period for all socially withdrawn children, regardless of the social motivations that underlie their withdrawn behavior.

It has been argued that children who have low approach tendencies are particularly vulnerable to developing diminished social proficiencies because their dispositions may preclude the experiences necessary to practice coping and interaction skills, or undermine positive social experiences (Derryberry & Rotherbart, 1997). That is, it may be the case that an inclination toward solitude, regardless of the reason, discourages relationship development, thereby affecting children's ability to fit in and develop positive ties with their classmates (Ladd & Burgess, 1999). Recent findings are beginning to corroborate this rationale and challenge the assumption that unsociability poses no risk for youth. Accordingly, the developmental consequences for children who avoid the company of their peers due to a preference for solitude is beginning to be explored more fully.

Coplan and colleagues (2004) were among the first to report that unsociability may not be as harmless as it had previously been assumed. In particular, these authors found that social disinterest, even as young as in preschool-aged children, was associated with peer exclusion. Similarly, Ladd, Kochenderfer-Ladd, Eggum, Kochel, and McConnell (2011) found that among

fifth graders, unsociable youth were excluded from peer activities and less accepted among their classmates than were their nonwithdrawn peers. Although unsociable children in this study were reported to exhibit better adjustment than their shy counterparts, they evidenced greater peer difficulties than nonwithdrawn children. It is possible that despite being 'better off' than shy children are, unsociable youth may still be at greater risk for maladjustment than are nonwithdrawn children, and thus deserve greater investigative attention. In fact, Coplan et al. (2007) reported that unsociable children, as described in hypothetical vignettes, were rated as less appealing playmates among kindergarteners and first-graders, and liked less than nonwithdrawn *and* shy children. Children viewed the socially withdrawn behaviors of the unsociable child as more intentional than the shy peer, highlighting a reduced desire for peer interaction. These authors speculated that peers may be 'put off' by children who rarely invite others to play. That is, unsociable children may be perceived by classmates as less approachable, which in turn, may lead to increases in peer difficulties over time.

It has recently been argued that unsociability may become progressively problematic (e.g., increasingly associated with peer difficulties and maladjustment) as children age given that repeated displays of nonsocial behavior in peer contexts would become stronger violations of social norms at this age (Rubin & Asendorpf, 1993). Young children tend to spend more time playing alone or engaged in parallel play (Coplan, Gavinski-Molina, Lagacé-Séguin, & Wichmann, 2001; Ladd & Burgess, 1999), so a preference for solitude may go

unnoticed. As children get older, however, increases in peer interaction become more normative. Empirical evidence has suggested that withdrawn behavior becomes more recognizable and salient as children get older and their social-cognitive skills develop (Rubin, et al., 2006). Consequently, peers may increasingly view this behavior as socially inappropriate and deviant, which may ultimately lead to peer adversity (Coplan & Weeks, 2010; Rubin et al., 2011). Previous research has demonstrated that children punish or ignore non-normative social behavior and positively reinforce those behaviors accepted as culturally appropriate and competent (Dishion, McCord, & Poulin, 1999). Even young children as early as the preschool years are able to distinguish among different underlying motivations for withdrawn subtypes, eliciting negative feelings and exclusion from peers (Coplan et al., 2004, 2007). Therefore, there are consequences for a lack of peer interaction, regardless of the underlying motivation for the withdrawal. Thus, as children age and the developmental norms move toward greater socially interactive behavior in the elementary school years and beyond, unsociable children, despite their relative disinterest in peers, may experience increased peer and psychological difficulties that parallel shy and, theoretically, socially avoidant youth.

Academic Profiles of Socially Disinterested and Avoidant Youth

Although little is known about how social withdrawal, and unsociability and social avoidance in particular, affects youth's academic adjustment, it is possible that these children may, in addition to social costs, begin to experience academic challenges as well. Given the established link between children's peer

experiences and their scholastic adjustment, it is reasonable to also expect academic costs for socially disinterested and avoidant youth. In particular, unsociable children's behavior seems to be perceived poorly by classmates, making them more susceptible to exclusion and lower rates of acceptance among their peers. Similarly, socially avoidant youth may behave similarly to shy children, who have been shown to demonstrate a lack of social and academic competencies.

Both theory and evidence suggest that peer acceptance is related to children's academic lives at school. Youth who are not accepted among their classmates tend to do less well academically than more popular children (Ladd, Herald-Brown, & Reiser, 2008; Parker & Asher, 1987; Wentzel & Asher, 1995). One reason we may expect a relation between sociometric status and children's academic adjustment is that being accepted or rejected by classmates might differentially influence children's desire to participate in learning activities, thereby affecting their aspirations to achieve academically. More specifically, peers appear to play a critical role in the orientations (i.e., behavioral, emotional, and cognitive) that children develop toward school, and these developments may ultimately influence the ways children participate and learn within the school environment. These underlying processes that link peer relationships and students' achievement appear to have both a direct (e.g., modeling academic skills, facilitating intellectual advances) and indirect (e.g., underlying social and emotional factors) impact on students' performance in school.

Further, schools and classrooms are social places where students are surrounded by peers and interact, or at least are expected to interact, with classmates throughout the day. Connell and Wellborn (1991) argue that a sense of relatedness contributes to the adoption of goals defined by social groups and institutions. Conversely, a lack of relatedness or disaffection is characterized by a dismissal of such goals. Engagement in the learning environment is presumed to create ties to an institution and influence students' willingness to do the work (Fredricks, Blumenfeld, & Paris, 2004). To the extent that youth feel more connected to the school context when they experience support, a sense of relatedness should promote engagement, effort, persistence, and participation, and dampen negative emotions, such as anxiety and boredom (Furrer & Skinner, 2003). In contrast, students who feel unconnected to key social partners should find it more challenging to become constructively involved in academic activities, and perhaps more easily become bored and frustrated, as well as disaffected. It would follow, then, that peer difficulties are likely to affect students' emotional or affective attachment to school (i.e., classmates, teachers, and academics). Empirical evidence supports this hypothesis such that feelings of relatedness, a corollary of feelings of acceptance, have been linked to achievement values, effort, engagement, interest in school, and grades (Anderman, 1999; Connell & Wellborn, 1991; Lynch & Cicchetti, 1992; Ryan, Stiller, & Lynch, 1994).

Further, Furrer and Skinner (2003) found that among third through sixth graders, those who reported a higher sense of relatedness showed greater emotional and behavioral engagement in school, which in turn, predicted their

academic performance (from fall to spring of an academic year). A sense of relatedness appears to do more than improve the short-term motivational and psychological state of children in the classroom. Children high in relatedness started the school year with higher scores in engagement than students low in relatedness, but they also improved more over time. Interestingly, children low in relatedness were not simply lower in enthusiasm and persistence in the fall, but they also showed deteriorating engagement over the school year. Again, it appears that youth who have a stronger sense of connection in the classroom are more likely to show enthusiastic participation in school activities and fewer negative emotions, leading to greater opportunities for actual learning and school success. The combination of constructive engagement and higher performance is likely to elicit more support from teachers and peers, which confirms or promotes children's feelings of belonging and connectedness. Thus, it is reasonable to expect that students' social behavior at school might explain peer-related competencies as well as enhanced academic success. Accordingly, to the extent that socially disinterested and avoidant children are not connected to or well liked by their classmates, their academic competencies may be impaired; however, this has not received sufficient empirical scrutiny.

Only two studies to date, to my knowledge, have assessed the academic adjustment of unsociable children in later childhood, and none for socially avoidant youth. A recent investigation conducted by Coplan and Weeks (2010) examined differences in school liking and avoidance among 6- to 8-year old shy, socially disinterested, and nonwithdrawn children. No differences were found

between unsociable and nonwithdrawn youth in terms of feelings of school avoidance. Conversely, Chen, Wang, & Cao (2011) explored the academic profiles of slightly older unsociable children in rural China, and found that among third through fifth graders (mean age of 10 years old), social disinterest was positively associated with teacher-rated learning problems and negatively associated with students' achievement. However, the cultural context in which this study is embedded must be considered when interpreting these findings. The authors warn that unsociability is considered more deviant in rural Chinese culture than shyness, so the emotional climate may contribute to unsociable students' difficulties compared to their shy peers.

Although it has been argued that socially disinterested youth exhibit normative socioemotional adjustment, at least in their early years, the findings are more mixed in terms of their academic adjustment. Unfortunately, there is a dearth of information regarding socially avoidant youth's adjustment. Based on these conflicting perspectives, it is clear that the developmental implications of these subgroups are not well understood, particularly beyond early childhood. Given the importance of peer interaction for children's social, emotional, and cognitive development (Rubin et al., 2006), it is important to better understand the implications of a preference for solitary activities. Unsociability may not be benign as was previously assumed; moreover, it may even become increasingly maladaptive as youth reach later childhood and adolescence. Accordingly, it is my contention that a continued lack of social interaction, for whatever reason,

may impede a child's opportunity to obtain age-appropriate social, social-cognitive, and academic skills.

The Present Study

Existing research on subtypes of social withdrawal suffers from a number of limitations. First, it has focused nearly exclusively on shyness, and as a result, comparatively less is known about socially disinterested or avoidant children's adjustment, and if and how it may differ from shy children. Further, investigations including younger children comprise the majority of existing work. Few studies extend beyond early childhood to explore the developmental consequences of multiple subtypes of social withdrawal as children age. Similarly, almost nothing is known about how these youth fare academically despite the strong link between children's peer relationships and scholastic adjustment. Given the salience of peer experiences for children's adjustment, and how this may have an impact on the academic domain, it is important to determine the extent to which children from various subtypes of social withdrawal exhibit difficulties in an academic context. Additionally, findings have demonstrated that the risk for maladjustment varies depending on the underlying motivations for children's social withdrawal. For example, shy children appear to be at greater risk for socioemotional difficulties than unsociable youth. The potential for students to exhibit scholastic maladjustment may also vary as a function of their subgroup classification. Thus, the current study endeavors to extend previous work on the adjustment profiles of socially withdrawn youth, and corresponding comparisons among subgroups to nonwithdrawn children, by utilizing latent profile analysis (LPA) to (1) identify

discrete subtypes of socially withdrawn youth in fifth grade and (2) examine profiles of their scholastic adjustment.

Are there meaningfully distinct subtypes of socially withdrawn youth in late childhood?

The goal of the first study aim was to determine whether previously identified subtypes of social withdrawal were replicated among fifth grade students. In part, the type and number of distinct groupings identified depends on the analytic strategy used to derive qualitatively different profiles of children's behavior. Common approaches when identifying subgroups of social withdrawal include creation of extreme groups based on standard deviation cutoff scores (e.g., Coplan & Weeks, 2010; Coplan et al., 2012; Ladd et al., 2011) and cluster analysis (Harrist et al., 1997). Despite the utility of these methods, recent advancements in statistical techniques offer greater flexibility and benefits over these other approaches. For example, an alternative method, LPA, appears to overcome some of the criticisms of these other techniques because it is an empirically driven strategy that identifies all viable subtypes that are present in the data, not just those that were prespecified (Bergman, Magnusson, & El-Khouri, 2003; Collins & Lanza, 2010; Nylund, Bellmore, Nishina, & Graham, 2007). Additional benefits of LPA include statistical fit indices that can be used to assess model fit and contribute to the selection of the appropriate number of classes present in the data, as well as a measure of classification quality (e.g., entropy values). These contribute to model evaluation that provides greater confidence in the researcher's substantive interpretations of the latent classes.

Accordingly, within this study aim, methodological shortcomings of previous approaches were addressed by identifying and enumerating subtypes of social withdrawal among fifth-grade students using LPA.

Recent investigations have identified subtypes that approximate Asendorpf's theoretical classifications, albeit through a different approach (i.e., extreme scores) among children in later childhood. Ladd et al. (2011) identified anxious-solitary, unsociable, and nonwithdrawn-comparison groups among fifth grade students, and Coplan et al. (2012) identified shy, unsociable, and socially avoidant groupings among 9-12 year olds. Accordingly, it was expected that previously identified subtypes of social withdrawal (i.e., shy, unsociable, and socially avoidant), as well as a nonwithdrawn-comparison group, would emerge among participants in the current study.

Do children belonging to different socially withdrawn subgroups demonstrate unique academic adjustment profiles?

In an effort to gain a more precise understanding of the various subtypes of social withdrawal during this developmental stage and the extent to which levels of academic engagement and achievement vary as a function of youth's latent class membership, the second aim of the current investigation was to examine profiles of socially withdrawn subtypes and their respective associations with engagement and achievement outcomes.

Engagement is a multidimensional construct including emotional (or affective) and behavioral dimensions (Fredricks et al., 2004). Affective engagement refers to students' emotional attachment to school, such as their

positive and negative reactions to teachers, classmates, and academics. For the purposes of this study, students' level of school liking was assessed as an indicator of their emotional attachment to schooling. Behavioral engagement is thought to include behaviors such as effort and persistence on schoolwork, participation in class activities, and time spent on homework. In the current study, behavioral engagement included various measures of the extent to which children participated in classroom activities. Emotional and behavioral engagement are thought to contribute to students' academic performance, which is typically characterized by objective measures of achievement including scores on standardized achievement tests.

Engagement has been the focus of recent investigations into ways to enhance students' scholastic competence and performance. In large part, it has been shown that this construct is a proximal – and powerful – predictor of children's long-term academic achievement (Skinner, Zimmer-Gembeck, & Connell, 1998), and their eventual completion of school (Connell, Spencer, & Aber, 1994). More importantly, in addition to being a robust predictor, theory and empirical support have also found that engagement is more malleable than achievement itself (e.g., Stout & Christenson, 2009). Collectively, these considerations highlight the utility of focusing on ways to enhance students' engagement as a likely mechanism in improving performance outcomes.

Given the lack of research on socially disinterested and avoidant youth's academic adjustment, specific hypotheses are largely exploratory. However, ample evidence suggests that specific relational processes that stem from a

disconnect from peers may be responsible for adjustment problems in an academic context, such as negative school attitudes, school disengagement, and underachievement (Buhs & Ladd, 2001; Ladd, 1990). Overall, it is thought that children with limited engagement opportunities, as is the case with socially disinterested and avoidant youth, also have limited scholastic resources. The more a child removes themselves from social contact, the fewer opportunities he or she is likely to have for peer interaction, which in turn, preclude them from the benefits of interpersonal resources such as being included in learning activities, peer affirmation and support, and tutoring that tend to facilitate social and scholastic adjustment (Buhs et al., 2001; 2006). Therefore, it is reasonable to expect the emotional climate, characterized by students' sense of relatedness to others, or lack thereof, to adversely affect unsociable and socially avoidant children's attachment to the schooling process, thereby affecting their level of engagement (i.e., school liking; classroom participation) and achievement.

Based on this rationale, it was expected that unsociable and socially avoidant youth would exhibit lower levels of school liking than their nonwithdrawn peers, who are expected to reap the benefits of sociable and cooperative behavior with classmates, and thus feel more emotionally attached to school. However, socially disinterested and avoidant youth were expected to exhibit mixed profiles in terms of behavioral engagement. In particular, it was expected that socially disinterested and avoidant youth would demonstrate similar profiles of responsible/obedient classroom conduct as nonwithdrawn youth, given that social withdrawal is typically characterized by overcontrol, and these

behaviors are generally seen to have minimal interference in other children's learning (Arbeau & Coplan, 2007). That is, these children likely exhibit compliant behaviors that are reinforced by the teacher. Accordingly, these subtypes are not expected to differ much from nonwithdrawn youth.

Alternatively, socially disinterested and avoidant children were expected to deviate from the comparison group in terms of their independent and cooperative participation. In particular, unsociable youth were expected to engage in higher rates of independent participation than the comparison group. Given that these children are thought to prefer to play alone, they are also likely to have a proclivity toward independent work styles in the classroom at higher rates than nonwithdrawn youth. Conversely, it is expected that these youth would evidence lower rates of cooperative participation than the nonwithdrawn comparison group given that they would be less inclined to see value in engaging in social activities in the classroom, and thus less likely to join in these activities with enthusiasm. Finally, it was expected that socially avoidant youth, given their likely underlying anxiety similar to shy children, might evidence greater difficulty in independent and cooperative participation compared to nonwithdrawn children. Shy youth have been found to require more attention from teachers (Coplan & Prakash, 2003) and shy children's quietness may be perceived by teachers as a lack of interest or understanding of the topic (Crozier & Perkins, 2002), which may be similar for socially avoidant youth. Thus, these students were expected to receive lower scores from teachers regarding their independent participation compared to nonwithdrawn youth. Similarly, because of the underlying anxiety that

characterizes shy children appears to impact students' performance due to their fear of evaluation (Crozier & Hostettler, 2003), socially avoidant youth, who are thought to also exhibit some anxious tendencies, were expected to engage in cooperative participation at lower rates than nonwithdrawn peers, who do not suffer from this same performance anxiety. Accordingly, student participation, talkativeness, and social interaction are viewed as important contributors to the attainment of learning objectives and thus may interfere with the learning processes of socially avoidant youth. However, given the dearth of research specifically assessing the adjustment profiles of unsociable and socially avoidant youth in later childhood, the correlates and outcomes of this behavior are still unclear.

Based on the premise that students' emotional and behavioral engagement has important implications for their achievement, I generally expected membership in the socially disinterested and avoidant groups to be associated with diminished achievement compared to nonwithdrawn students. This assertion, however, should be qualified for socially disinterested youth. It is possible that they may be buffered from some of the negative consequences experienced by the other subgroups who are characterized by some degree of anxiety (i.e., shy and socially avoidant youth). For example, they may benefit more if they participated in classroom activities, but not necessarily be at a deficit if they abstain from these experiences given that they prefer independent activities. It is unclear whether this independent orientation positions these students toward academic activities, or how this time is spent, but it is possible that these youth may not be

affected by a lack of peer connection to the same extent as their shy and socially avoidant counterparts.

Method

Participants

The sample for the current study consisted of 358 youth (178 girls; 180 boys; *M* age = 10.21 years). Data for this study were gathered in the fall and spring of children's fifth grade school year as part of a larger longitudinal project conducted in the Midwestern United States. After obtaining parental consent and child assent, assessments were collected in the classroom with at least two research assistants available to read questions aloud and answer any questions. Of the families who were invited, 95% consented to their child's participation.

The sample contained 79.9% European American children, 16.7% African American children, 1.4% Hispanic children, and 1.9% Asian American and other children. The sample also represented youth from families spanning a wide range of socioeconomic backgrounds: 18.2% were lower to middle income ($0 – 20,000), 25.6% were middle income ($21,000 – $40,000), and the remaining 56.2% were upper middle to high income (above $41,000).

Procedure

The data for this study were collected during the fall (September and October) and spring (April and May) of participants' fifth grade school year. Data from participants, peers, and teachers were used. In particular, peer nomination items were administered to assess participants' socially withdrawn behaviors during the fall. Participants answered self-report measures about their level of

school liking. This measure was individually administered to children during the spring semester. Teachers completed measures on children's classroom engagement and participation in the spring. Finally, participants' scores on the Wide Range Achievement Test (WRAT) reading subtest from the spring semester were used as a measure of achievement.

Measures

Peer reports of social withdrawal. Peer nominations methodology was used to obtain data on multiple forms of withdrawn behavior. Classmates' reports of children's socially withdrawn behavior were used because peers have been found to be among the preferred informants of children's behavior at school in terms of the validity of their reports (e.g., Spangler & Gazelle, 2009).

To help peers distinguish among withdrawn behaviors, a "gateway" nomination item was used to identify children who were eligible to be members of the targeted withdrawn subtypes. First, using a roster of classmates' names, participants and their classmates nominated up to three children who "play by themselves the most." Second, for each nominee, nominators were asked to consider the following three questions (which were printed on class rosters) and affirm those items (by circling *yes* rather than *no*) that best described the person they had nominated: (a) Does this kid want to play with other kids but does not because they are too shy or afraid? (b) Does this kid want to play alone instead of playing with other kids? And (c) Does this kid play by himself or herself because other kids do not want to play with him or her? This final item was used to assess exclusion, which is an external cause of children's solitary behavior. Because the

focus of the current study is on internally motivated social withdrawal, the final criterion was not used in the present investigation as an indicator of social withdrawal.

Use of a gateway strategy simplified processing demands of this assessment task – that is, the requirement that children use multiple criteria when generating nominations (e.g., identify classmates that play alone *and* are shy vs. excluded, etc.). Respondents first identified peers who fit a broader, more obvious criterion (e.g., who plays alone?) and then made more discriminating judgments about these same persons (i.e., of those who play alone, who is also shy vs. unsociable vs. excluded)? Thus, children made secondary judgments only about those peers they had first nominated as exemplars of the broader criterion. All peer-nomination scores were standardized within class to represent an individual's score for these behaviors relative to the average score for their classmates, indexing the degree to which participants' withdrawn behavior nominations were higher or lower than the average for their classmates.

School Engagement. Multiple measures were used to assess two types of school engagement – emotional engagement and behavioral engagement.

Emotional engagement. The school liking subscale of the School Liking and Avoidance Questionnaire (SLAQ) was used to measure children's emotional school engagement. SLAQ is a child self-report measure of school engagement composed of 14 items designed to assess participants' school liking and avoidance (adapted from Ladd & Price, 1987; Ladd, 1990). In particular, nine items were designed to index school liking (e.g., "Is school fun?"; "Are you

happy when you're at school?"; α = .901), and were on a 5-point scale ranging from 1 = *almost never* to 5 = *almost always*.

Behavioral engagement. Teacher report subscales of the Teacher Rating of School Adjustment (TRSSA) were used to assess children's level of behavioral school engagement (Birch & Ladd, 1997). The TRSSA is composed of five subscales, three of which are used in the current study. In particular, items from three subscales, responsible/obedient classroom conduct (e.g., "follows teachers' directions"; "uses classroom materials responsibly"; "is easy to manage"; 7 items; α = .896), independent participation (e.g., "seeks challenges"; "works independently"; 4 items; α = .841), and cooperative participation (e.g., "interested in classroom activities"; "participates willingly in classroom activities"; 3 items; α = .845) were used. Teachers rated all questions on a 3-point Likert-type scale: 1= *doesn't apply*, 2= *applies sometimes* and 3= *certainly applies*. These subscales were renamed from their original labels for the current investigation.

Subscale factor structure. It was of interest to determine if the three subscales from the TRSSA represented distinct dimensions of behavioral engagement or if alternative composite score(s) would adequately characterize this form of school engagement. To address this aim, a series of confirmatory factor analyses were conducted. Models were run with the maximum likelihood robust (MLR) estimator, which provides standard errors and chi-square statistics for data with non-normal distributions. Thus, relative fit of models was tested with a scaled chi-square difference test for nested models (Muthén & Muthén, 1998-2011; Satorra & Bentler, 2001). Three criteria were employed to evaluate

model fit – the CFI, the standardized root mean square residual (SRMR), and the root mean square error of approximation (RMSEA). Model comparisons and fit indices are presented in Table 1.

The goal was to determine whether a one, two-, or three-factor model best fit the data. Accordingly, the factor structures of a one-, two-, and three-factor solution were tested and compared. The one factor model included all items from the three subscales in a single dimension, measuring behavioral engagement broadly. The two-factor model combined items from the responsible/obedient classroom conduct and independent participation subscales in one factor and left cooperative participation as a second dimension. Finally, the three-factor model retained the hypothesized structure by separating all three subscales on their own dimensions. Further, two tests of a three-factor structure were conducted, one in which all items were retained and another in which one item (i.e., “enjoys most classroom activities”) was omitted. This item appeared on two subscales of the TRSSA, including the cooperative participation subscale utilized in the current study and another subscale not used. Additionally, this item had the largest residual variances in the CFA models tested. Model fit indices suggested the three-factor solution represented better fit to the data than the one- and two-factor models.

First, the two-factor model was compared to the one-factor model and indicated that the two-factor solution was a better fit to the data. Next, a three-factor model was compared to the two-factor model, and demonstrated improved model fit. Finally, a three-factor model including all items was compared to a

reduced model in which the item described above was omitted. Based on the improved fit indices, it was concluded that three separate dimensions representing responsible/obedient classroom conduct, independent participation, and cooperative participation, omitting one item, best represented the data and, accordingly, three separate composite scores, representing each of the dimensions, were used in the present study to measure behavioral engagement.

Academic achievement. An index of this construct was obtained by individually administering the reading subtest of the *Wide Range Achievement Test* (WRAT; Wilkenson, 1993) to participants during the spring semester of their fifth grade year. Raw scores from this assessment were used. The WRAT possesses adequate psychometric properties and has been validated in national samples (Cronbach's alpha ranges from .69 to .97; Hughes, 1987).

Results

Data Analytic Strategy

Preliminary statistics, including descriptive statistics, correlations among study variables, assessment of missing data, and one-way analyses of variance (ANOVAs) were performed in SPSS 20. All subsequent analyses were conducted in Mplus version 6.1 (Muthén & Muthén, 1998-2011), including the measurement models for the behavioral engagement scores. Next, latent profile analyses were conducted to identify subgroups of children based on their socially withdrawn behavior. Additionally, multinomial logistic regression analyses were conducted in order to explore the effects of group membership on students' academic engagement and achievement. Mean-centered composite scores were used for all

engagement indicators in order to assist with interpretability for the multinomial logistic regression analyses.

Preliminary Statistics

Preliminary analyses were conducted to examine variable distributions, relations among study variables, missing data, and other properties of the data and, overall, were found to conform to the assumptions underlying parametric statistics. Bivariate correlations, descriptive statistics, and missing data for the total sample are presented in Table 2. Although standardized peer reports were used in analyses, the raw scores on the two withdrawn indicators (i.e., shy and unsociable) are presented in Table 2. Missingness on all study variables was less than 1%, with the exception of children's scores for academic achievement. A maximum likelihood robust estimator (MLR) was used for all analyses to treat this missingness and any non-normality present in the data.

There has been some speculation regarding gender differences in children's socially withdrawn behavior, so a series of one-way (sex: males, females) analyses of variance (ANOVAs) were conducted to determine if children differ by sex in the extent to which they were nominated as socially withdrawn by their peers. Results indicated that there were no significant differences between boys and girls in their socially withdrawn behaviors with regards to shyness, F (1, 356) = .001, *ns*, or social disinterest, F (1, 356) = 1.396, *ns*.

Latent Profile Analyses

To address the study's first aim (i.e., to empirically identify socially withdrawn subtypes), LPA, a person-oriented approach that is conceptually

similar to cluster analysis was used to classify youth into withdrawn subtypes (Bergman et al., 2003). This approach identifies subtypes of individuals that exhibit similar patterns of behavior on observed continuous variables representing particular characteristics, and organizes them into two or more meaningful homogeneous groups. Toward this end, a series of models were specified (i.e., 2-, 3-, 4-, 5-, and 6-profile solutions) using the two standardized peer nominations of socially withdrawn behavior (i.e., wants to play with other kids but is too shy/afraid; prefers to play alone) in the fall of their fifth grade year. To investigate the presence of gender differences in the LPA classifications, gender was included as a covariate in the analyses and then compared to models with no covariates. Latent profile classifications and item means indicated that gender did not significantly influence class identification, consistent with the ANOVA results, but was retained as a covariate to allow for the examination of gender differences, should they emerge, in the current study.

Determining model fit. To select among solutions with varying numbers of profiles, several fit indices were examined including the Bayesian Information Criteria (BIC), Adjusted BIC, entropy, and the Lo-Mendell Rubin Likelihood Ratio Test (LMR-LRT). Models with smaller BIC and Adjusted BIC values indicate better fitting solutions. Entropy, a measure of classification quality, ranges between zero and one with values closer to one indicating that individuals were more precisely classified into individual latent classes. A significant *p* value on the LMR-LRT indicates that a model with *k* classes has better fit to the data than a model with *k-1* classes (Lo, Mendall, & Rubin, 2001). Determining the

best-fitting model was based on a combination of statistical indicators of model fit and substantive theory.

LPA models were estimated by testing a two-profile model, as a baseline model, followed by models with additional profiles. Fit indices for LPA models with two to six profiles are presented in Table 3. The two-profile solution identified the majority (i.e., 91% of individuals) of youth in a non-withdrawn grouping and a very small amount (i.e., 9%) of children in a class characterized by high anxiety and unsociability (i.e., socially-avoidant). Compared to the two-profile solution, the three-profile model appeared to have better model fit according to all of the fit indices. The latter model replicated the non-withdrawn (85% of cases) and socially-avoidant classes (2%), as well as identified a shy/anxious group (13%). Estimation of a four-profile model identified the hypothesized subtypes (i.e., non-withdrawn, shy/anxious, socially disinterested, and socially-avoidant). This model appeared to have better fit based on all of the fit indices, with the exception of the LMR-LRT, which indicated that the three-profile model was a more adequate representation of the data. The five- and six-profile solutions, compared to previous models, appeared to have better model fit; however, based on examination of the latent profile means, it appeared as though these models were over-extracting cases from substantively meaningful groupings. That is, the additional profiles were very small (e.g., groups containing four and five cases), which may be an indication of outliers rather than theoretically meaningful differences in the groupings. See Figures 2, 3, and 4 for class means and proportions for the four through six profile solutions.

Understanding the latent classifications. It is important to consider not only the statistical indicators of model fit but also the substantive meaning of each of the classes when interpreting the results of the LPA models. Toward this end, statistical indicators, such as BIC, as well as conditional item probabilities were considered to differentiate among and add substantive meaning when describing the latent profiles. As mentioned, Figures 2, 3, and 4 present the profile proportions for the four-, five-, and six-profile solutions to provide a basis for a substantive interpretation of results. Based on statistical indicators, the six-profile solution was the best fitting model; however, as can be seen in Figure 1, the relative improvement in BIC between the five- and six-class solutions, compared to the four-class model, was minimal comparative to the improvement over models with fewer classes. Further, it did not appear that the five- and six-profile solutions identified meaningful differences in socially withdrawn subtypes compared to the four-profile solution, which is most strongly supported by theory and previous literature. Thus, in order to maintain a more parsimonious model with substantively meaningful profiles of youth, the four-profile solution was selected and used in subsequent analyses. See Figure 2 for a description of classes and proportions of this model.

Associations among Latent Profile Membership and Academic Outcomes

To conduct a test of the study's second aim, I tested whether academic engagement and achievement criteria differed across the latent profiles. In particular, associations between the socially withdrawn groups (i.e., shy/anxious, socially disinterested, socially avoidant, and non-withdrawn) and multiple

indicators of academic adjustment, including emotional and behavioral engagement, as well as achievement, were examined using multinomial logistic regression analysis. A composite score for school liking was used as an indicator of emotional engagement, the three subscales of the TRSSA (i.e., responsible/obedient classroom conduct, independent participation, and cooperative participation) were used as separate indicators of behavioral engagement, and an objective measure of achievement (WRAT- reading) were individually regressed on socially withdrawn group membership. For all analyses, nonwithdrawn children were used as the reference group. The purpose of these analyses was to determine whether membership in a specific subtype of social withdrawal was associated with various indices of academic engagement and achievement.

Results from these analyses indicated that only school liking, cooperative participation, and reading achievement were significantly associated with any of the socially withdrawn subtypes, and are presented in Table 4. In particular, results suggested that socially avoidant youth exhibited poorest adjustment across all engagement/achievement indicators, with the strongest association for cooperative participation, or lack thereof. For a one-unit increase in participation, youth were three times as likely to be classified as nonwithdrawn than socially avoidant. This finding is consistent with hypotheses that socially avoidant youth would engage less frequently in classroom activities than their nonwithdrawn peers. Socially avoidant students were also less likely to like school and perform

well on the reading subtest than nonwithdrawn students, which is also consistent with hypotheses.

Consistent with expectations, and similar to socially avoidant students, socially disinterested youth were also less likely to participate cooperatively in the classroom compared to nonwithdrawn children. Also as expected, socially disinterested and avoidant children did not significantly differ from the nonwithdrawn group in terms of compliant classroom behavior. However, contrary to expectations, socially disinterested youth did not exhibit increased levels of independent participation compared to nonwithdrawn students, nor did socially avoidant youth differ from this group.

Interestingly, no significant effects emerged for shy/anxious youth, who have consistently been shown to experience heightened social and academic problems. According to the results, these youth exhibit academic profiles similar to nonwithdrawn students.

Discussion

Relatively little is known about different subtypes of social withdrawal beyond the early childhood years, particularly within an academic domain. Accordingly, the goals of this study were to determine whether distinct subtypes of social withdrawal emerge among youth in late childhood, and to explore links among these subtypes and academic functioning during this time. Results indicated that there are three distinct subtypes of social withdrawal and each one is differentially associated with particular profiles of school adjustment.

Specifically, discrete groupings of shy, socially disinterested, and socially avoidant youth emerged in the current study.

Consistent with hypotheses, socially disinterested youth exhibited lower levels of cooperative participation than nonwithdrawn children. Given that these youth do not seem particularly motivated to become involved with peers, it is not surprising that they also are less inclined to engage in classroom activities to the same extent as are nonwithdrawn youth. Interestingly, although membership in the social disinterest group was negatively associated with school liking, these children did not significantly differ from nonwithdrawn youth in terms of their emotional engagement. It is possible that many children report higher levels of school liking because of their social relationships at school and that socially disinterested youth are unaffected, in either direction – positively or negatively – by their social standing and thus their emotional attachment to school is more or less neutral. Because the items assessing school liking do not uncover the source (i.e., social or academic) of children's emotional attachment, it is difficult to know what influences children's responses to these items.

Another possibility for this finding may stem from the lack of importance that unsociable children place on peer relationships and may demonstrate rejection *in*sensitivity, protecting them from the otherwise adverse effects of peer difficulties (Coplan & Weeks, 2010). Rejection sensitivity is a social-cognitive bias believed to reflect tendencies toward the expectation of rejection from others. That is, these children are thought to be overly sensitive to the cues of rejection such that they expect rejection from others and overact to possible rejection

experiences (Downey & Feldman, 1996). However, given that unsociable children appear less interested in peers generally, they may be *in*sensitive to instances of peer difficulty that may actually serve a protective function for these youth. Alternatively, Bowker and Raja (2011) speculated that unsociable children may achieve "just enough" social interaction, given that they do not actively avoid it, to promote healthy, or at least sufficient, development and avoid the risks associated with an active avoidance of peer interaction. Similarly, socially disinterested youth did not differ from nonwithdrawn children in terms of their achievement. Again, if these children are less concerned with their social surroundings, they may remain unaffected by the emotional climate that is thought to ultimately have bearing on students' achievement, or they may gain enough social interaction to promote school adjustment.

Overall, it appears that socially disinterested youth fare reasonably well (i.e., exhibit relatively similar academic adjustment profiles as nonwithdrawn youth). However, to the extent that active involvement in classroom activities ultimately contributes to students' academic success, socially disinterested youth could benefit from increasing this type of participation. Future research is needed to study these relations longitudinally to determine if a prolonged reduction in classroom participation undermines these children's academic adjustment, or if socially disinterested youth are indeed buffered by their preference for solitude without underlying anxiety driving that preference.

Interestingly, a socially avoidant group of youth emerged in the current study. This profile is noteworthy because it is an under-represented group in the

social withdrawal literature, although it has been posited that these youth are at higher risk than other withdrawn children. These youth have elevated mean levels on both of the peer nomination items for social withdrawal (i.e., shy/anxious and preference for solitude). As expected, socially avoidant youth demonstrated diminished levels of emotional and behavioral engagement, as well as lower achievement than nonwithdrawn children. Coplan and colleagues (2012) concluded that this subtype may represent an extreme shyness group, putting them at the highest level of risk compared to all other youth. This is consistent with Asendorpf's speculation, as well as results of the current study. Noteworthy, the mean level of anxious solitude for this group of youth is higher than that of the shy group. Similarly, the mean level of their preference for solitude is also higher than the socially disinterested group.

The putative causes of this behavior remain unclear, but this group appears to be particularly susceptible to maladjustment. One possible pathway may be that by the time these children reach fifth grade, they have become so anxious in the presence of peers that they ultimately avoid those interactions to help cope with the anxiety. This is consistent with a transactional model of development suggesting that these children may have initially demonstrated social motivations consistent with shy youth, but over time were less able to manage the associated anxiety so they came to have low approach tendencies as well. Thus, by the time these youth reach late childhood, they are the least likely to engage in peer interaction due to their high social avoidance and low social approach motivations. Given these findings, these youth may benefit from targeted

intervention to help them overcome some of their extreme anxiety in the face of peers and at school. It is clear that these children represent an understudied subgroup among socially withdrawn youth and merit additional attention.

It was surprising that no significant effects emerged for shy youth who have exhibited social and academic maladjustment in previous work (see Rubin, Coplan, & Bowker, 2009 for an overview). One possibility that findings did not emerge for this group in the current study may be the result of prior work not distinguishing between shy and socially avoidant youth. Until recently, a preference for solitude had not been given comparable attention as shyness, so it was not often measured. Accordingly, students who exhibit high levels of anxious solitude, as a single criterion, were likely considered a homogeneous group. Without a second indicator (i.e., social disinterest), it was not possible to delineate multiple subgroups, so all youth who scored high on anxious solitude (e.g., shy and socially avoidant groups) may have previously been considered "shy". Thus, if it is indeed the case that the socially avoidant group comprises youth who represent an extreme shyness group, as suggested by Coplan et al. (2012) and seems to be the case in the current study, then these children may have driven the effects of the larger/combined "shy" groups in previous work. Socially avoidant youth, characterized by a high level of anxious solitude, are at greatest risk for academic difficulty and exhibit the strongest degree of maladjustment. Consequently, effects remain for this group but are no longer found for children who exhibit more mild levels of shyness when separated from socially avoidant youth (i.e., these youth were presenting a confound in the relation between

shyness and academic maladjustment). Future research is needed to determine if this pattern of associations is replicated.

Although the argument was made that all socially withdrawn youth, regardless of subtype membership, would be at an academic disadvantage because of their lack of peer interaction, it is still important to note the distinctions among subgroups. Similar to findings for children's socioemotional adjustment, results from the current study provide preliminary evidence for distinct adjustment profiles for the various subgroups in an academic context. Therefore, even though broader social withdrawal in late childhood is a general risk factor, the specific motivations underlying this withdrawal may provide greater insight into the type of intervention most likely to buffer kids from poorer academic adjustment. Similarly, it appears that socially avoidant youth represent the most extreme risk group, possibly warranting the most immediate and targeted intervention efforts. Thus, the utility in uncovering distinctions among these subgroups remain.

Study Limitations and Future Directions

The findings from the current investigation contribute to the limited research on subtypes of social withdrawal that extend beyond early childhood, an exclusive focus on shyness, and the associations with socioemotional development. Further, the current investigation utilized a multi-informant approach spanning multiple dimensions of students' academic functioning. Despite these strengths, there are some caveats that should be considered. In particular, assumptions were made about motivations driving children's socially withdrawn behavior; however, those motivations were not directly assessed. That

is, the causal mechanisms underlying children's socially withdrawn behavior were not directly measured, but rather were assumed based on peers' perceptions of their behavior. Accordingly, this limits the extent to which firm conclusions can be drawn about the different mechanisms contributing to children's withdrawn behavior.

Similarly, these underlying social motivations may have changed over time, as speculated about socially avoidant youth. For instance, it may be the case that children are anxious in the presence of peers or prefer solitude over peer interaction, or both, by the time these youth reach fifth grade, but it is unclear what the specific direction of effects are in the current investigation. That is, this area of research would benefit from longitudinal studies that capture the various social motivations, withdrawn behavior, and children's overall functioning to better elucidate the underlying mechanisms required to uncover the direction of effects among these variables over time. Consistent with conjecture for socially avoidant youth, it is likely that transactional processes occur over time such that children's initial social withdrawal is exacerbated by negative experiences with peers, which in turn promotes additional, and perhaps even more severe, social withdrawal and corresponding negative perceptions of the self and peer group.

Additional measurement work is needed to further improve future investigations in this area. For example, speculations were posited regarding the possibility that socially disinterested youth exhibited rejection insensitivity. If measured during future investigations, we could gain a clearer sense of the social-cognitive processes that may be mediating the relation between children's social

motivations and behavior and adjustment. More work is needed to uncover the impact of internal (e.g., cognitive and emotional) processes linking specific social behaviors to children's academic adjustment. Similarly, refinements in measures of children's school liking could also create a clearer picture of children's lives at school and corresponding adjustment. In particular, greater specificity in measures revealing the reasons kids do or do not like school (i.e., social, academic) may elucidate some of the processes linked to their engagement and achievement.

Finally, it is important to continue assessing and comparing the shy and socially avoidant groups to determine the similarities and differences between them. This should provide additional clarity into the risks associated with each type that will continue to help refine approaches to intervention with these children.

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Table 1. Goodness-of-Fit Indices for CFA Models

Model	χ^2	*df*	CFI	SRMR	RMSEA (90% CI)
3-Factor (omit item 41)	144.532	74	.961	.039	.052 (.039, .064)
3-Factor (all items)	202.534	87	.945	.041	.061 (.050, .072)
2-Factor	211.898	76	.925	.049	.071 (.059, .082)
1-Factor	264.960	77	.897	.053	.083 (.072, .094)

Table 2. Bivariate correlations, descriptive statistics, and missing data for total sample

	1	2	3	4	5	6	7
1. Withdrawn-Anxious (F)	-						
2. Withdrawn-Unsociable (F)	.590**	-					
3. School Liking (S)	-.046	-.088	-				
4. Responsible Classroom Conduct (S)	.000	-.004	.161**	-			
5. Independent Participation (S)	-.141**	-.124*	.205**	.691**	-		
6. Cooperative Participation (S)	-.155††	-.177††	.204**	.775††	.655††	-	
7. Reading Achievement (S)	-.120*	-.182**	.141*	.239**	.430**	.252**	-
M	0.65	0.61	0.00	-0.04	0.00	0.00	38.30
SD	1.47	1.18	0.89	0.45	0.58	0.48	5.19
Minimum	0.00	0.00	-2.48	-1.68	-1.33	-1.62	24
Maximum	12.00	7.00	1.52	0.32	0.67	0.38	54
N	358	358	356	358	358	358	315
% Missing	0.00	0.00	0.01	0.00	0.00	0.00	12.01

Table 3. Fit Indices for LPA Models with 2-6 Classes in Fall of Fifth Grade

No. of Classes	2	3	4	5	6
Loglikelihood	-689.269	-646.266	-595.547	-562.521	-546.090
BIC	1425.582	1363.099	1285.183	1242.653	1233.313
ABIC	1400.202	1325.029	1234.423	1179.203	1157.174
Entropy	.971	.962	.952	.963	.970
LMR p-value	.027	.038	.23	.007	.052

Note. Gender was included as a covariate in all models.

Table 4. Results of Latent Profile Analysis on Associations between Withdrawn Subtype Membership, Cooperative Participation, School-Liking, and Reading Achievement

	Model 1: Cooperative Participation		Model 2: School-Liking		Model 3: Reading Achievement	
Criteria	*b*	*OR*	*b*	*OR*	*b*	*OR*
Shy	-0.75	0.47	0.00	1	0.04	1.04
Unsociable	-0.83*	0.44	-0.19	0.83	-0.02	0.98
Socially-Avoidant	-1.11**	0.33	-0.62*	0.54	-0.17*	0.84

Note. Nonwithdrawn class was used as the reference group. Gender was included as a covariate in all models. Engagement and achievement criteria analyzed individually. *OR* = odds ratio.

*$p < .05$, **$p < .01$

Figure 1. Plot of BIC Values for the 2 to 6 Class Solutions

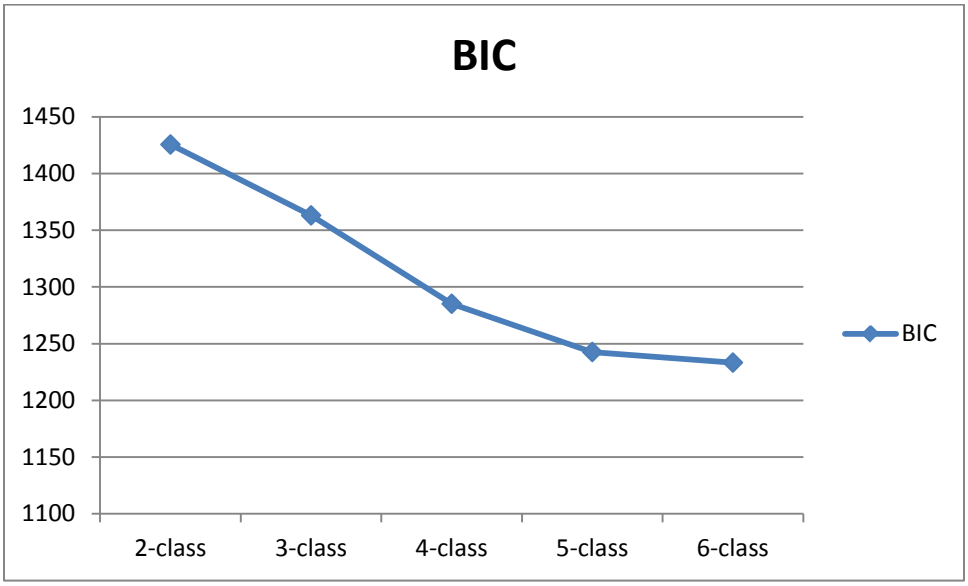

Figure 2. Description of Classes and Proportions for Final Four Profile Model

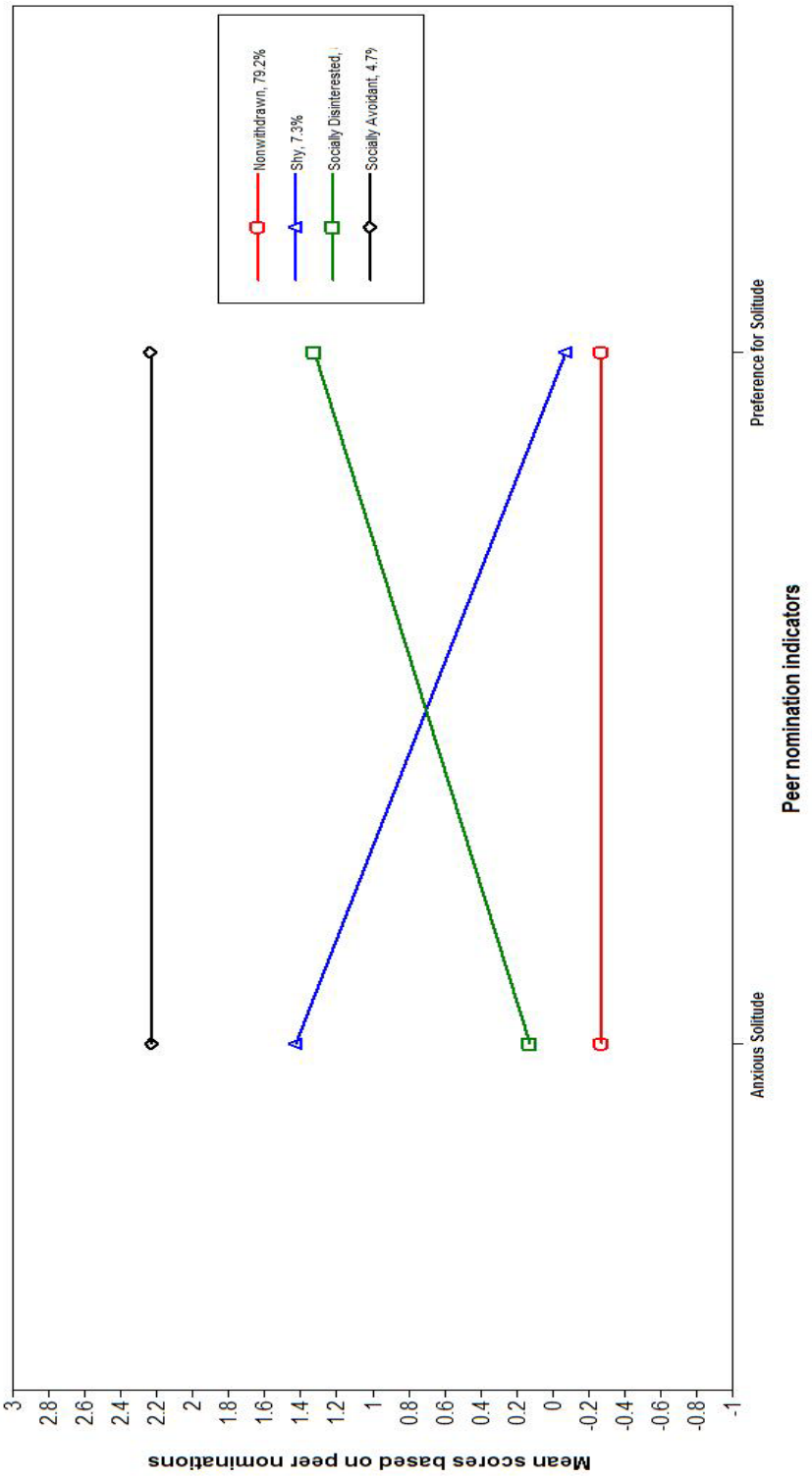

Figure 3. Description of Classes and Proportions for Five Profile Model

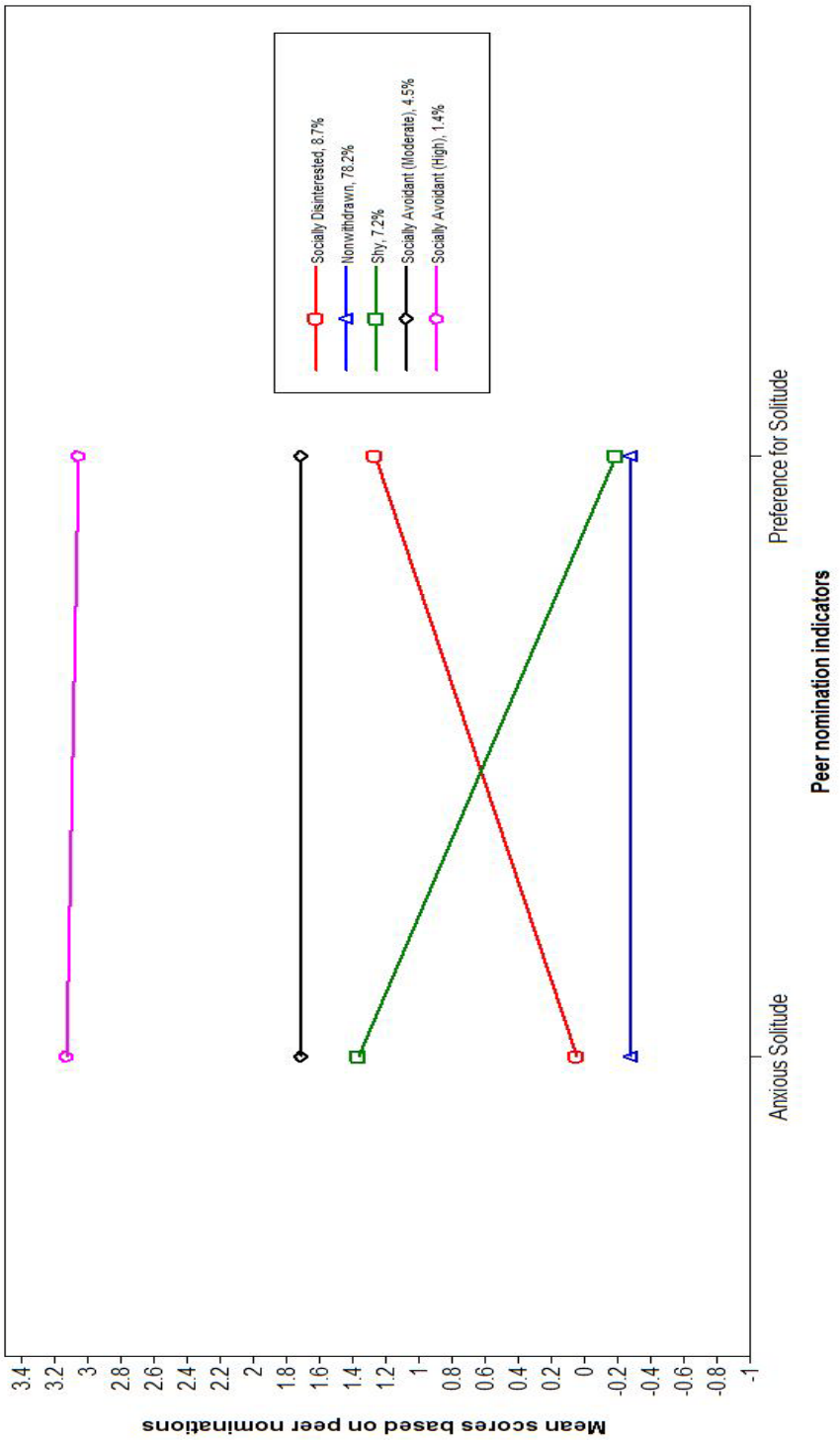

Figure 4. Description of Classes and Proportions for Six Profile Model