THE EFFECTS OF SHY-ANXIOUSNESS AND PERCEPTIONS OF SOCIAL STATUS ON CHILDREN'S SOCIAL DISSATISFACTION

By

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(Under the Direction of A. Michele Lease)

ABSTRACT

This study investigated the degree to which shy-anxiousness is associated with children's social dissatisfaction (i.e., network dissatisfaction, dyadic dissatisfaction, and social agency dissatisfaction), including the degree to which perceived likeability and social agency moderate this relationship. Shy-anxiousness was assessed using a combined teacher and peer nomination variable. Increased shy-anxiousness was hypothesized to be associated with increased network, no significant relationship with dyadic dissatisfaction, and little was known regarding dissatisfaction with agency. Effects of gender and racial status were also investigated. Participants included 341 fourth and fifth grade students who rated their own levels of likability and social power/influence among peers as well as their social dissatisfaction. Results indicated varied significance of shy-anxiousness and interactions in predicting network dissatisfaction, dyadic dissatisfaction, and social agency dissatisfaction. Implications for intervention are discussed, including importance of understanding differences in shy-anxiousness between boys and girls.

INDEX WORDS: Social Self; Shy-Anxious; Perceived Agency; Perceived Likability; Social Dissatisfaction

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TABLE OF CONTENTS

Page

CHAPTER 1

INTRODUCTION

Interacting and developing relationships with peers is an essential element in the lives of children and adolescents with long-term impacts on behavioral and affective well-being (Bukowski et al., 2018). Those who engage in interactions with competence and skill are more likely to form and maintain positive relationships (Rubin et al., 2018). Consequently, those who are socially adept develop interpersonal skills and strategies to help them effectively navigate social, emotional, and academic situations as well as gain important sources of social support (Rubin et al., 2010). Conversely, Rubin and colleagues (2009) suggest these children's socially unskilled, or uninterested, counterparts often experience social isolation, peer rejection, and/or friendlessness, causing them to lack the opportunity for important developmental experiences and increasing their risk for behavioral and social-emotional difficulties. Whereas some of these children act out and are disruptive, others are notable for avoiding or withdrawing from contexts in which social interactions occur (Sette et al., 2022). Coplan and colleagues (2009) noted that socially withdrawn children appear more socially reticent, meaning they spend a significant amount of time observing peers from a distance and are hesitant to join in ongoing interactions. This results in socially withdrawn individuals missing valuable opportunities to develop social competencies and form interpersonal bonds.

Social withdrawal has been used as an overarching term to encompass varying behavioral manifestations and motivations that might lead an individual to withdraw from or avoid social situations (Rubin & Coplan, 2004). Coplan and Rubin (2010) suggest there are two sources of social withdrawal – an external source and an internal source. The external source is

characterized by exclusion from social contexts by peers (i.e., the peer group is the source of the individual's observed social isolation). The internal source can be further broken down into two overarching motivations. The first motivation is a preference for solitude related to an individual being socially disinterested (Asendorf, 1990; Coplan et al., 2004), whereas the second motivation is associated with emotional dysregulation stemming from social fear and anxiety, especially when confronted with novel social situations or unfamiliar peers.

By middle to late childhood, subtypes of social withdrawal can be distinguished by a combination of social approach and social avoidance behaviors, resulting in three main subtypes of social withdrawal – avoidant, unsociable, and shy-anxiousness (Asendorf, 1990). Avoidance is characterized by a combination of low social approach and high social avoidance (i.e., not wanting to interact and actively avoiding interactions). Avoidant children are less prone to initiate social interaction than nonwithdrawn peers, while also actively seeking to avoid bids to interact (e.g., rejecting social requests; Coplan et al., 2015). Coplan further suggested that avoidant individuals are at a higher risk of social-emotional difficulties than unsociable and shy individuals, although there is relatively little known about this subtype of social withdrawal. Of the research that exists, results suggest social avoidance is a maladaptive form of social withdrawal. For instance, Coplan and colleagues (2013) found that socially avoidant elementary age children self-report greater levels of internalizing problems than shy, unsociable, and nonwithdrawn peers. In a similar study of adolescents, Bowker and Raja (2011) investigated associations between subtypes of social withdrawal and social difficulties. They found social avoidance predicted social exclusion and loneliness. The authors hypothesized this relationship might exist due to avoidant peers being perceived as sad and anxious, as well as being accurately perceived as deliberately avoiding social interaction. Finally, by young adulthood, social

avoidance is reportedly associated with increased internalizing problems and relationship difficulties compared to peers that are nonwithdrawn or unsociable (Goossens, 2014). It is worth noting, Goossens' reported social avoidance was not significantly different than shyness.

The next subtype of social withdrawal, unsociable withdrawal, is defined by having low social approach (i.e., does not seek out social interactions) but also low avoidance (i.e., does not avoid social interaction when it occurs). A core characteristic of unsociable children is the preference for solitary activities (Asendorf, 1990). This preference has been demonstrated in research across age groups. For instance, Coplan and colleagues (2004) found that among a group of 246 pre-school aged children, unsociability was significantly and positively associated with expressed preference to play alone. Similarly, a study of 137 kindergarten and first grade students found that unsociable children were less interested in playing or becoming friends with a hypothetical peer than were children that are shy-anxious nonwithdrawn peers (Coplan et al., 2007). Furthermore, Coplan and Weeks (2010) reported that unsociable children, aged six to eight, were rated as socially withdrawn by teachers but did not rate themselves as more lonely than their more sociable peers. Taken together, these results indicate that unsociable children, while withdrawn, demonstrate a preference for solitude.

Another characteristic of unsociable children is their appropriate capability of socially engaging when required to do so (Asendorf, 1993). Research indicates that unsociable children do not differ from their peers in social abilities, including verbal conversation with peers (Asendorf & Meier, 1993) and social-cognitive skills (Harris et al., 1997). Further, Bowker and Raja (2011) suggested that unsociable children engage socially at a minimally acceptable level to avoid negative long-term effects of social withdrawal. This is evidenced by research indicating unsociable children have sufficient abilities to maintain friendships (Coplan et al., 2013). It is

worth noting that unsociability is comparably benign to other forms of social withdrawal and is not associated with social-emotional and other adjustment difficulties (Coplan & Weeks, 2010). In a study of six- to eight-year-old children, Coplan and Weeks found that unsociable children did not differ from nonwithdrawn peers on parent and teacher ratings of internalizing problems, self-reported loneliness, or school avoidance. Additionally, unsociable children were found to have more positive views on school than nonwithdrawn counterparts. However, there are social concerns related to unsociability. For instance, Coplan and colleagues (2007) found unsociable peers were perceived as less attractive playmates *and* were less liked than shy and nonwithdrawn peers. This suggests that despite unsociable children reporting little to no social-emotional concerns (such as low ratings of loneliness), they have some circumscribed social problems.

The final subtype of social withdrawal is related to shy-anxiousness. Shy-anxiousness is characterized by having high approach and high avoidance (i.e., craving but avoiding social interactions, predominately due to fear or anxiety; Bowker & Raja, 2011; Rubin et al., 2018). Conceptualizing shy-anxiousness, avoidance, and withdrawal due to social fear or anxiety coincides with the notion that social withdrawal is the behavioral manifestation of social anxiety (Kingery et al., 2010). As a result, the terms shy-anxiousness and social withdrawal are often used interchangeably in literature (Rubin et al., 2006) to refer to social avoidance due to social phobia or anxiety, whereas unsociability is best described as the preference for solitude (Coplan et al., 2004). Moreover, children who are shy-anxious tend to demonstrate high levels of behavioral inhibition, characterized by a persistent fear, unease, and avoidance of novel social situations (Coplan et al., 2018). Behavioral inhibition, in turn, contributes to difficulties in acquisition of necessary social competencies as well as deficits in social performance. Such deficits are largely due to children that are shy-anxious being unable, or unwilling, to

competently enact social strategies to achieve social goals, even when they have the requisite knowledge to do so (Schmidt & Buss, 2010; Wichmann et al., 2004). Although not all children that are shy-anxious exhibit actual skill deficits, they tend to have behavioral difficulties that negatively impact peer interactions. Research suggests children that are shy-anxious tend to have objective deficits in social skills, such as deficits in verbal communication (Rubin et al., 2006), impaired social problem- solving skills, and unassertive responses to conflict (Stewart & Rubin, 1995).

Social withdrawal motivated by fear and anxiety (i.e., shy-anxious withdrawal) is associated with significantly negative social, emotional, and behavioral outcomes throughout development (Coplan & Weeks, 2010), emphasizing the importance of better understanding shy-anxious children. Shy-anxious withdrawal is believed to develop as a result of both biological and environmental factors. Behavioral inhibition is a temperamental trait that explains biological underpinnings of shyness and anxious withdrawal, including the stability of shy-anxious withdrawal across childhood (Coplan & Rubin, 2010). Social behavioral inhibition is characterized as an inborn bias (Kagan, 1997) to persistent fear, wariness, and avoidance of novel contexts (Coplan et al., 2018). Furthermore, Degnan and Fox (2007) posit that behaviorally inhibited children possess a physiological profile remarkable for increased social hypervigilance and anxious reactivity, potentially contributing to higher rates of social anxiety observed among behaviorally inhibited children.

Along with temperament, there are environmental factors that impact the development of shy-anxious withdrawal. One notable factor is parenting style, including the quality of the parent-child relationship (Rubin et al., 2018). For instance, a longitudinal study of 283 students from grades five to eight found three pathways for development of anxious withdrawal (Booth-

LaForce et al., 2012). First, the researchers identified low-stable development, characterized by low ratings of anxious withdrawal in fifth grade that remained low through either grade. Second, the high-decreasing group was characterized by high ratings of anxious withdrawal in fifth grade that decreased through grade eight. Third, the high-increasing group was noted to have high scores in fifth grade that increased through eighth grade; they had the highest scores of anxious withdrawal at the final time point among all study participants. Membership in the high-increasing group was significantly and negatively correlated with time spent with their mother (i.e., participants anxious-withdrawal increased with less time spent with their mother). Further, increasing anxious-withdrawal ratings were associated with increased parental control (i.e., less individual autonomy) and peer exclusion. Furthermore, the authors found membership in the high-decreasing group was significantly and positively associated with free time spent with their mother, even in the presence of peer exclusion. The authors hypothesized this relationship might result from time spent with mother serving as a substitute for peer connectedness.

The interaction between temperament and environmental factors have been demonstrated to play a role in the development of social withdrawal. A study by Lorenzo et al. (2021) examined this interaction in a longitudinal study of 291 participants from four months old to fifteen years old. Participants were screened as infants for negative and positive reactivity in novel situations and subsequently grouped into high, moderate, and low levels of behavioral inhibition. Additional check-ins occurred at ages three, four, nine, twelve, and fifteen years old. The researchers found that for the high behavioral inhibition group overly supportive parenting predicted higher levels of social anxiety at nine years old than did dismissive parenting. Lorenzo hypothesized that these findings reflect that overly supportive parenting reinforces anxious behaviors by reducing the opportunities for the child to learn to navigate stressful situations (e.g.,

Rubin et al., 2002). However, this group also demonstrated a significantly greater decline in social anxiety between ages nine and fifteen when compared to dismissive parenting (i.e., social anxiety was the most stable between ages nine and fifteen for those noted to demonstrate behavioral inhibition as an infant *and* having parents that demonstrate a dismissive parenting style). Lorenzo suggested this decline in anxiety for those receiving supportive parenting might be explained by having a strong support system to manage social anxieties as independence from parents increases with age. An alternative explanation presented by the authors suggests a 'sweet spot' for supportive parenting -- too much support might interfere with children's social autonomy.

In childhood, shy-anxious withdrawal is associated with a range of social functioning difficulties by early adolescence (Rubin, Coplan, & Bowker, 2009). Concerning social functioning, a study of 55 kindergarten, second, and fourth grade students observed during dyadic interactions indicated socially withdrawn children (operationalized as anxious-withdrawal) engaged in fewer problem-solving strategies and assertive behaviors, and they were less successful in attaining social goals than their non-withdrawn peers (Stewart & Rubin; 1995). Further, Martin and Lease (2022) identified seven latent class profiles among their sample of 797 fourth and fifth graders using a measure of teacher-reported temperament. Two of the profiles were characterized by social inhibition and fear, with one also elevated on negative emotionality and distractibility. Children fitting those two profiles were reported by peers as the least socially influential among all temperamental profiles and as having the lowest social status. Further, children with increased shy-anxious characteristics are associated with decreased friendship quality (Kingery et al., 2010), greater peer victimization, and increased exclusion from social settings (Coplan et al., 2014). Taken together, it is clear social withdrawal, particularly linked

with social anxiety and fear, leads to pervasive social functioning concerns throughout childhood and early adolescence, emphasizing the importance of understanding its developmental origins.

As with social concerns, shy-anxious behavioral traits are associated with emotional adjustment difficulties by late childhood (Rubin, Coplan, & Bowker, 2009). For instance, shyness is a strong predictor of and risk factor for social anxiety (e.g., Perez-Edgar & Fox, 2005; Rapee & Spence, 2004). Specifically, work by Prior and colleagues (2000) with a large, longitudinal community sample (i.e., 1,710 participants assessed every 18 months for ten collection periods) found childhood shyness to be significantly and positively associated with anxiety problems in adolescence. Shy-anxious withdrawal is also associated with higher rates of adolescent depression (Wichmann, Coplan, & Daniels, 2004; Morgan, Shaw, & Forbes, 2015) and increased self-reports of loneliness (Boivin, Hymel, & Bukowski, 1995).

Additionally, gender serves as an important moderating factor in the link between shyness and social anxiety for both social functioning and emotional adjustment concerns. Specifically, a study of 119 ten- to sixteen-year-old students found shyness to be more strongly associated with symptoms of social anxiety for females than for males (Tsui, Lahat, & Schmidt, 2017). Tsui and colleagues also reported that girls with clinically significant ratings of social anxiety, as self-reported on the Screen for Child Anxiety Related Disorders, were more likely to be rated as shy by parents than boys with clinically significant ratings on the same measure. Another study, consisting of 770 high school aged students, demonstrated a stronger association between social anxiety and shyness in girls than in boys (Hayward et al., 2008). Another study investigating the relationship between shyness and gender demonstrated that shy males tend to enter romantic relationships at older ages than less shy male peers, although this result did not hold true for shy females (Caspi et al., 1988).

Children that are shy-anxious tend to have distorted perceptions of peers and social situations, which might contribute to their social-emotional and behavioral difficulties. For instance, children that are shy-anxious are noted to be socially hypervigilant (Morgan et al., 2015). Social hypervigilance among children that are shy-anxious contributes to a positive illusory bias for detecting social threats (i.e., an over-detection of social threats) when compared to non-shy peers (LoBue & Perez-Edgar, 2014). Additionally, children that are shy-anxious typically demonstrate a high degree of rejection sensitivity and a negative self-regard (Rubin et al., 2009). Rejection sensitivity describes a tendency to have increased concern or worry about the potential of rejection (Bayer et al., 2021) and to readily perceive experiences of possible rejection (Downey & Feldman, 1996). Rubin (2009) suggests a negative feedback loop, or self-fulfilling prophecy, exists for inhibited children with high rejection sensitivity. That is, inhibited children who expect rejection withdraw from social situations, thus increasing perceptions of rejection.

Beyond distortions in perceptions of peer interactions and social contexts, children that are shy, especially those with symptoms of social anxiety and behavioral inhibition, tend to demonstrate distorted perceptions of the self. Researchers generally agree that children that are shy-anxious demonstrate negative perceptions regarding their social self competencies (Cartwright-Hatton et al. 2003). Even when children that are shy-anxious demonstrate actual deficits in social functioning, they tend to perceive their functioning as worse than it actually is (Spence et al. 1999). Conversely, research indicates that not all children that are shy-anxious demonstrate actual social skill deficits despite perceiving their own behaviors as deficient in interactions with peers (Cartwright-Hatton et al., 2005). For example, a study of children that are shy-anxious, aged eight to eleven years, were reported as perceiving their friendships as lower in

quality than the other member of the dyad perceived the same friendship (Fordham & Stevenson-Hinde, 1999). Fordham and Stevenson-Hide further noted that childhood shyness does not enhance, nor preclude, the chances of forming high-quality friendships. Moreover, several studies indicate children that are shy-anxious demonstrate negative self-perceptions of likability (Klein et al., 2018; Baartmans et al., 2019). Studies by Klein et al. and Baartman et al. focused specifically on children that are socially anxious, rather than children that present as shy-anxious; however, the broad measure of social anxiety used in both studies assessed internal and external behavioral traits, including items assessing shyness, inhibition, and withdrawal around familiar and unfamiliar peers, as well as assessing social fear and worries (La Greca & Stone, 1993). Notably, viewing themselves as less likable than other peers was found to be a common cognitive distortion across both studies, with Klein et al., indicating they were as liked as non-anxious peers and Baartmans et al., reporting this population was more well liked than non-anxious peers.

In all, research indicates shy-anxious behavior is associated with a range of social-emotional and behavioral difficulties. Further, evidence suggests shy-anxious children display distorted thinking about their own competencies and the way they are viewed by their peers. Given the importance of social interactions and relationships in defining an individual's social self, it might be expected that this population's developing sense of who they are as a social being is hindered. Beyond research indicating shy-anxious children display distorted perceptions of their own social desirability among peers (e.g., Klein et al., 2018; Baartmans et al., 2019), relatively little is known about other developing aspects of the social self for these children.

CHAPTER 2

LITERATURE REVIEW

The study of dyadic and group interactions with peers is fundamental for understanding children's social and behavioral development (Santos & Vaughn, 2018) and psychological well-being (Bukowski et al., 2018). These interactions provide opportunities for individuals to develop social skills and competencies (Howe & Leach, 2018; Laursen & Adams, 2018) and to develop a sense of who they are as a social being (i.e., the social self). As defined by Bukowski and Raufelder (2018), the social self refers to the way an individual perceives, experiences, and understands their features, roles, and functioning within a social context. The social self, in turn, plays a critical role in the production of social behavior. Specifically, children with a positive view of their social self tend to engage in behaviors that support their social self perception and, conversely, those with a negative perception tend to engage in behaviors that confirm those negative perceptions (Harter, 2012).

Theorists assert that the social self develops through social comparisons with peers during varied types of social interactions (Hegtvedt & Johnson, 2018). Individuals evaluate themselves from the point-of-view of others, creating ideas about their own functioning and ability, through a process known as reflected appraisals (Cooley, 1902; as cited in Hegtvedt & Johnson, 2018). In turn, reflected appraisals influence social functioning, including patterns of peer affiliation and susceptibility to influence (Bukowski & Raufelder, 2018), demonstrating the bidirectional effect of the social self and social functioning. Given the central role of peer interactions in the development of the social self, the social self is an area of concern for socially

withdrawn children, especially those who tend to withdraw from social interaction with peers due to social fear and anxiety (Coplan et al., 2009). Researchers generally agree children who are shy-anxious exhibit negative perceptions of their social abilities, tend to report deficits in their social skills, and view themselves with a negative self-regard (e.g., Spence et al., 1999; Cartwright-Hatton et al. 2003; Wichmann et al., 2004; Rubin et al., 2009). By early adolescence, their relative social isolation is highly visible and salient, especially given the importance of group membership and participation in dyadic friendships (Berndt, 1979).

As the social landscape begins to shift as they approach adolescence, children are presented with widening social circles and larger peer groups, organized by social status hierarchies (Adler & Adler, 1998), which places them in unfamiliar situations with novel social task demands. Social status is a comparative social rank of individuals or groups in terms of esteem and respect, which shapes how others view potential value (i.e., what you have to offer) an individual adds to a dyadic interaction or a group dynamic (Ridgeway, 2019). Further, social status is a multidimensional construct (Lease et al., 2002) that shapes personal experiences, including the way individuals treat and are treated by others (Mattan et al., 2017).

As social hierarchies take a more central role in structuring peer groups during late childhood, various dimensions of status ascend in significance. H.S. Sullivan's Interpersonal Theory of Psychiatry addresses these shifts in social priorities (1953; as cited in LaFontana et al., 2009). Specifically, this theory posits priorities for engaging in peer relationships shift at different developmental stages from early childhood to adolescence to satisfy interpersonal needs (i.e., need to belong, enable social comparisons, develop empathy, etc.). As a result of these shifting priorities, Sullivan theorizes the importance of successfully navigating different types of social interactions, with shifts from coordinating dyadic interactions and attaining friendships in

pre-adolescence, to gaining popularity or social dominance in mid to late adolescence, to establishing intimate relationships in late and post-adolescence. LaFontana and colleagues suggest the importance of social status peeks in early adolescence and declines in importance by late adolescence. Furthermore, in a study of 865 participants ages ten to sixteen, results indicated this age group is more prone to peer influence, suggesting increased attention to peers' status and social position within the peer group (Steinberg & Silverberg, 1986). Taken together, these studies underscore the importance of social status in late childhood and early adolescence.

Taking a multidimensional approach to assessing social status aids in encompassing the changing priorities placed on status throughout childhood and adolescence. Specifically, research has suggested dimensions that might be of importance to social status include position and connectedness within the peer group, social dominance (e.g., social power and influence, control of material and social resources), and likability (Lease et al., 2020; Lee et al., 2022). A study by Lease and colleagues (2002) clustered 487 fourth to sixth grade students on peer-reported likability, perceived popularity, and social dominance (defined as social power and influence). The cluster analysis identified three high status groups, with social power and influence being rated highly in each high cluster, and three low status groups, with social dominance being low in one group. The three high status clusters were differentiated by their social characteristics. The first group was noted to be socially central and perceived by peers as the most cool, influential, and admired members of the peer group. The second group was found to have a prosocial profile and positively valenced social reputation. The final group's characteristics included increased coercive social strategies, including increased relational aggression, yet were also perceived as 'cool' and admired by peers. Conversely, the low status group reported to have low social power and influence were noted to display a mixture of disruptive and internalizing behaviors.

Concerning likability, research by Sandstrom and Cillessen (2006) demonstrates that highly liked peers, nominated via peer report (i.e., liked most), demonstrate decreased relational aggression by the end of elementary school and decreased disruptive behavior by the end of middle school compared to less liked peers. Moreover, they note that likability serves as a protective factor against internalizing problems (i.e., anxiety and depression) for girls. Additionally, Lease and colleagues (2002) state that disliked peers do not possess the offsetting valued characteristics (e.g., popular, athletic, attractive) of their popular/powerful peers. Results from these studies indicate the importance of social power and influence and likability on social functioning and overall social development. I now turn to an in depth examination of likability and social power/influence, in turn.

Likability

The positive valence associated with social desirability (e.g., being liked by peers) serves as an important facet in the development of the social self. Likability, or sociometric popularity, refers to being widely well-liked and accepted within the peer group (i.e., who do you like most; Cillessen & Bukowski, 2018). Well-liked adolescents display many positive behaviors, including engagement in social or communal goals, the ability to empathize with others (Ferguson & Ryan, 2018), demonstration of prosociality (e.g. cooperation, sociability, and kindness), high academic achievement (Cillessen & Bellmore, 2011; Cillessen and van den Berg 2012), and demonstration of the ability to make appropriate social adjustments (Beck et al., 1983). Further, well-liked individuals are frequently preferred over other students as activity partners, academic helpers, and possible friends (Ryan & Shin, 2018). Generally, research has found that individuals rated high in likability feel more social contentment and have better social and behavioral outcomes, including fewer adjustment problems, lower levels of overt and relational aggression, and, in

girls, decreased internalizing symptoms (Sandstrom & Cillessen, 2006). However, research by Ferguson and Ryan (2019) indicates a curvilinear trend exists, indicating that individuals with moderate levels of likability are more socially satisfied and have a better concept of the self than those at the low or high ends of the distribution. The authors hypothesize this trend is related to the social processes associated with being well-liked. Specifically, more well-liked individuals readily identify preferences and trends within the peer group (Allen et al., 2014). As a result, Ferguson and Ryan suggests these individuals tend to alter their behaviors to maintain well-liked status, inherently making their social functioning less satisfying. Conversely, lower likability is associated with difficulty making social adjustments in response to social feedback or social norms due to lack of social skills or lack of social motivation (Beck et al., 1983). A low level of likability is also associated with other aspects of social dysfunction, including distorted cognitions and biases as well as poor emotional expression and regulation (Bierman & Wargo, 1995).

Research on the acceptance and likability of children that are shy and/or anxiously withdrawn has demonstrated mixed results. In a sample of 586 children, ranging from age seven to 13, children that are socially anxious were found to underestimate their level of likability among peers (e.g., perceived themselves to be less liked than peers reported them to be; Baartmans et al., 2019). Moreover, Baartmans and colleagues found children rated highly in social anxiety were found to be *more* well liked (i.e., receive more "most liked" nominations) than non-withdrawn peers. Similarly, a sample of students with anxious-withdrawn characteristics aged 12 to 19 self-reported low levels of likability but were reported by peers to be as liked (via "liked most" nominations) as non-withdrawn peers (Klein et al., 2018). Overall, these studies suggest children that are shy-anxious tend to have cognitive distortions regarding

how well liked they are by peers (i.e., underestimate their likeability). These studies are also consistent with Lease et al.'s (2002) results indicating a low status cluster identified in their sample characterized by high levels of anxious-withdrawal had average levels of peer-reported likability. However, Barrow et al., (2011) assessed likability using a four-item Likert scale ("I like them", "I want to be their friend", "I would like to meet them", and "I would like to play a game with them"). They found that social reticence and anxiety in children, as reported by peers, was negatively correlated with peer likability when compared to peers without observed social anxiety.

Social Power and Influence

Another important facet to an individual's developing sense of self is related to feelings of social agency. Social agency refers to the intrinsic feeling that one is in control of their social actions and outcomes, granting them the ability to influence the outside world (Aytemur & Levita, 2020; Li et al., 2019). Agency can be effectively examined by assessing the interrelated constructs of social power and influence. Ridgeway (2019) details the relatedness of these two constructs by noting social power affords the powerful member of a group or dyad greater ability to influence peers. Further, Ridgeway indicates social power is derived from control over social resources, including anything material or cultural that is valued within the social context. Similarly, Keltner et al., (2003) operationalized power as one's ability to modify the state of another, by means of withholding resources or via punishment. Socially powerful and influential children possess more social resources and social competencies than less powerful peers and are more likely to make use of coercive social strategies (Laursen et al., 2012. A disequilibrium in the division of resources between members of a dyad or between groups presents a power differential, increasing the capacity of influence for the more powerful peer (Laursen, 2018).

Concerning influence, Fiske (2018) conceptualized peer influence as changes in beliefs, attitudes, or behavior brought about by interpersonal interactions. Conceptually, peer influence implies behavioral change resulting from the actions of a peer. Importantly, influence does not imply a positive or negative change, simply that any change occurs (Laursen, 2018). 'Peer influence' often has a negative connotation; however, studies have demonstrated positive behavioral effects resulting from peer influence. For instance, reading achievement among second and third graders is positively correlated with reading achievement of their peers, hypothesized by the researchers to result from peer influence on help-seeking behaviors (Cooc & Kim, 2016). Conversely, there are also negative outcomes resulting from peer influence, such as deviancy training, a process by which individuals are rewarded for acts of deviance through positive reinforcement (e.g., praise, attention, laughter; Dishion et al., 1996).

Perceived sense of agency is likely a problematic aspect of their developing social self for children with increased shy-anxious characteristics. In general, children that are shy-anxious have been noted to exhibit social insecurities and lack social competencies (Schwartz et al., 1998). Furthermore, shy-anxiousness is associated with unassertive, submissive behaviors in social settings (e.g., Coplan et al., 2018), suggesting a low sense of agency in social situations with peers. Consistently, in a recent study with 360 fourth and fifth grade children, shy-anxious children were reported by their peers as having lower levels of social power and influence than their less shy-anxious peers; furthermore, shy-anxious children appear to be acutely aware of their inability to influence peers, as indicated by their low levels of self-reported influence and power (Oberholzer, 2022). Individuals who demonstrate low levels of social power and influence demonstrate behavioral difficulties, including difficulty standing up to peers, increased

conformity to peers (Laursen, 2018), and susceptibility to engaging in undesirable social behaviors (Laursen et al., 2012).

Current Study

Taken together, research suggests children with shy-anxious characteristics demonstrate deficiencies in their social functioning that appears to impact multiple aspects of the developing social self (i.e., social desirability and social agency). Research has demonstrated that the reflected appraisals of children that are shy-anxious are problematic, including low ratings of social agency (Martin et al., 2020) and inaccurate ratings of likability (e.g., Baartmans et al., 2019). However, more research has been conducted on perceived likability than perceived agency.

In the current study, I address three research questions examining the link between children that are shy-anxious and perceptions of their own likability and social power/influence and their dissatisfaction with their network relationships, dyadic relationships, and their social agency. First, I examined the relation between shy-anxious withdrawal (i.e., composite of teacher-rated shyness and peer-reported anxious withdrawal) and children's self-reported dissatisfaction with their peer interactions at the network and dyadic (e.g., friendship) levels and with their social agency when interacting with peers (*Question 1*). I expected to find shy-anxious ratings significantly predict dissatisfaction with network, but not dyadic, peer relations. Research has demonstrated that children displaying characteristics of social anxiety report increased loneliness within larger peer groups (e.g., Danneel et al., 2020), whereas research on dyadic relationships suggests that social anxiety does not directly predict poor ratings of friendship quality (Rodebaugh et al., 2015), suggesting children that are shy-anxious might not be dissatisfied with their dyadic relationships. Concerning social power and influence, children that

are shy-anxious have demonstrated negatively valanced perceptions of their social agency (Oberholzer, 2022); however, little is known regarding their satisfaction with their degree of social power and influence among peers.

Second, I examined whether self-perceptions of likeability and social agency are predictive of social dissatisfaction (i.e., network, dyadic, and agency dissatisfaction). That is, I examine the degree to which these aspects of social self relate to their assessment of their own interpersonal relations beyond what is predicted by shy-anxious characteristics (Question 2). I expect to find that negatively valenced self-perceptions of likability will be a significant predictor of social dissatisfaction across networks, dyads, and perceived agency. The predictive power of perceived agency on social dissatisfaction is of particular interest in the current study. Theorists suggest this is an important aspect of social functioning and the developing social self (e.g., Fiske, 2018); however, research is limited on the outcomes of low perceived agency. Concerning perceived likability, research has indicated that children between the ages of three and six that report low perceived social acceptance experience increased social dissatisfaction and peer exclusion (Coplan et al., 2004; Coplan et al., 2007). Additionally, in a study of 418 sixth and seventh grade participants, Gorman and colleagues (2011) found that low levels of likability, as rated by peers, was associated with self reports of social dissatisfaction.

The third, and primary, research question investigates the degree to which perceived liklability and agency moderate the relationships between shy-anxiousness and dissatisfaction with network relations, dyadic relations, and social agency (Question 3). As previously discussed, the research on shy-anxiousness and likability is mixed, whereas the research is limited when considering self-perceived social power and influence. However, there is evidence suggesting negative associations between dimensions of social status and shy-anxiousness (e.g.,

Lease et al., 2002; Klein et al., 2018), suggesting it is possible that shy-anxiousness predicts social dissatisfaction across networks, dyads, and social agency. Further, prior research has not simultaneously examined self-reports of these dimensions − reflecting a more holistic social self. These facets of the social self are likely related, but it is unclear if each is uniquely predictive of shy-anxious children′s assessment of their interpersonal relations and whether each contributes uniquely to their social dissatisfaction.

For all three questions, I examine the potential moderating role of gender and racial status in the peer group. Per Doey and colleagues (2014), the interaction between shy-anxiousness and gender is often not specifically explored, with most studies only reporting main effects. However, some research on gender differences and shy-anxiousness indicates gender serves as a moderating factor in predictions of social-emotional adjustment. Based on a systematic literature review, Doey et al., (2014) concluded shyness is a more socially acceptable behavior trait for females compared to same-aged male peers. However, shyness is also associated with more significant symptoms of social anxiety for anxiety for females than for males (Tsui, Lahat, & Schmidt, 2017), indicating the complex gender differences associated with shy-anxious characteristics. Concerning racial difference in the peer group, little is known about children's perceptions of their own social status and internalizing concerns. One study on racial differences among fifth-grade students found higher peer-perceptions of likability for members of the larger in-group (i.e., those within the majority race of a classroom) than members of the smaller out-group (i.e., members of the minority race in a classroom), and perceptions of likability of the outgroup increased as number of outgroup members increased (Jackson et al., 2006). A similar pattern might hold for perceived social power and influence.

CHAPTER 3

METHODS

Participants

Participants from the current study included students from 19 fourth and fifth grade classrooms, spanning six elementary schools in rural school districts within the southeastern portion of the United States. The sample contains 54.3% female participants. Concerning race and ethnicity, the sample is 59.3% White and 37.5% Black, with 3.2% reporting a racial/ethnic background that was American Indian or Alaska Native, Asian, Hispanic or Latino, or Native Hawaiian or Other Pacific Islander. The racial makeup of the schools were either predominately Black or predominately White, with 78.9% of participants identifying as members of the majority race within their school. Finally, the sample is comprised of 36.7% fourth grade and 63.3% fifth grade students. The demographic information for the participants is presented in Table 1. Permission to collect data in the included classrooms was obtained from school superintendents, building principals, and classroom teachers. Active consent for participation was obtained from parents prior to data collection. Lastly, assent was obtained from each student participant prior to administering questionnaires. Across the sample, parental consent was obtained for 89% of students, with participation rates ranging from 83% to 100% across classrooms. All students with parental consent agreed to participate. All questionnaire items, data collection procedures, and consent procedures were submitted to, and approved by, the University of Georgia's Institutional Review Board. Data was collected in the late spring of the school year.

Procedure

This study utilized teacher-, peer-, and self-report measures. Classroom teachers and student participants were administered questionnaires in their classrooms by two members of the research team. The first member of the research team read the items aloud to the participants and a second researched assist individual participants with questions. Of the original sample (N=360), analyses were conducted with data from 341 participants. 19 participants were removed due to questionnaires with incomplete or missing data. Of the missing data, nine participants were missing self-reported likability and agency and 10 were missing ratings of social dissatisfaction.

Table 1
Demographic Information (n = 341)

Variable	N	%
Gender		
Boys	156	45.7
Girls	185	54.3
Race		
White	202	59.3
Black	128	37.5
Other	11	3.2
Racial Status		
In Majority	269	78.9
In Minority	72	21.1
Grade		
Fourth	125	36.7
Fifth	216	63.3

Measures

Teacher- and Peer-Reported Shy-Anxiousness

Shy-anxiousness was assessed using a combination of teacher- and peer-report. Classroom teachers completed a shortened version of the Inventory of Children's Individual Differences (ICID; Halverson et al., 2003) for each of their participating students. The 50-item

questionnaire, which assesses specific temperament/personality traits, has been shown to retain the reliability and validity of the original ICID (Deal et al., 2005). Student participants were rated on a 7-point Likert scale, ranging from "Much less than the average child or not at all" to "Much more than the average child". The ICID-S consists of 15 individual subscales, each made up of three to four individual items. The subscale of interest for this study is the "*Shy*" subscale, which includes items related to behavioral inhibition, shyness and social withdrawal (items include: "is withdrawn", "slow to warm up to new people or situations", "easily adjusts to new situations"). The *Shy* subscale was modified for the current study. Specifically, one item was dropped ("difficulty making friends") and another item ("is shy") was added in its place. In the current study, the coefficient alpha of the modified *Shy* subscale demonstrated adequate internal consistency (i.e., $\alpha = .73$).

Additionally, a peer perspective on anxious-withdrawal was assessed via peer nominations. Peer nominations were made using a roster of peers and limited to three nominations per item (Coie et al., 1982) within the participant's classroom (i.e., the reference group; Cillessen & Bukowski, 2018). Students were asked to nominate peers who are *anxious-withdrawn* (i.e., "This person looks like he or she wants to play with others or join in on a game but seems afraid or shy"; Gazelle & Ladd, 2003). A proportion score was calculated based on the number of nominations received and the number of possible nominators (see Hodges & Perry, 1999). Peer-reported anxious-withdrawal and teacher-reported shyness were combined to create a composite measure of shy-anxiousness. Each measure was first standardized (mean = 0, std = 1) by classroom to produce scores for students relative to their same-class peers.

Self-Report of Social Status

To assess participants' perceptions of their own likability, they answered the question "How well-liked are you among the kids in your class?" using a 5-point Likert Scale ranging from "Not at all" to "Very Much". The subsequent scores were standardized (mean = 0, std = 1) within classroom level to obtain a score relative to their same-gender peers, consistent with the construction of the peer-report measure. Participants' perceptions of social power and influence was assessed by having participants respond to the statement "How powerful and influential are you among the students in your class?" using a 5-point Likert Scale. The scale ranged from "Not at all" to "Very Much". The subsequent scores were standardized (mean = 0, std = 1) within classroom and gender, following the procedure of the other self- and peer-report measures.

Self-Reported Social Dissatisfaction

To assess social-emotional adjustment, participants completed a modified version of the Peer Network and Dyadic Loneliness Scale (PNDLS; Hoza, Bukowksi & Beery, 2000). The original measure is a 16-item scale assessing loneliness or dissatisfaction with relationships at the dyadic and network levels. For the current study, a modification of the PNDLS was used (Kwon & Lease, 2007). Specifically, two cross-loading items were dropped from the original scale, which resulted in two seven-item subscales for network and dyadic dissatisfaction, and a third subscale, assessing satisfaction of social agency, was administered (Kwon & Lease, 2007). Dissatisfaction with perceived social power and influence, or perceived agency, was assessed with seven items. Participants were presented with pairs of contrasting sentences (e.g., "For some kids, it is important that kids wait for them to decide what to play" vs. "For other kids, it is not all that important that kids wait for them to decide what to play"). They were asked to first circle the sentence that better described them and to then indicate if the chosen response was

"Sort of true for me" or "really true for me." The responses were scored on a 4-point scale, with higher scores indicating increased social dissatisfaction. The network dissatisfaction, dyadic dissatisfaction, and social agency dissatisfaction scales had adequate Cronbach α values of .82, .83, and .76, respectively.

CHAPTER 4

RESULTS

Overview of Analysis

A series of regressions were conducted to determine (1) the degree to which shy-anxiousness predicted network, dyadic, and social agency dissatisfaction, (2) the degree to which perceived likability and perceived agency predicted additional variance in social dissatisfaction, after accounting for shy-anxiousness, and (3) the degree to which perceived likability and perceived agency moderate the relationship between shy-anxiousness and network, dyadic, and social agency dissatisfaction. Hierarchical mixed model regressions were utilized that included random intercepts nested within classes to account for clustered errors. We conducted the analysis with Restricted Maximum Likelihood (REML) estimation for producing cluster bias-corrected estimates and reducing error deflation for the fixed effects estimate (Luke, 2017; Raudenbush & Bryk, 2002). Data analyses were performed using IBM SPSS Statistics Software 29.0.

Intercorrelations Among Study Variables

All variables of interest were grand mean centered and assessed for skewness and kurtosis. Dyadic dissatisfaction and shy-anxiousness variables were found to be moderately skewed, with a skewness statistic of 1.03 and 1.35, respectively. Overall, based on the sample size of the present study, skewness, kurtosis, and normality were not considered problematic (Ghasemi & Zahediasl, 2012; Field, 2018). However, given the significant kurtosis of the shy-anxious variable, with a leptokurtic kurtosis statistic of 3.48, it was windsorized to a value of 3

standard deviations. This decreased the skewness statistic of shy-anxious to .91 and the kurtosis statistic to 1.28. Next, descriptive statistics were calculated (Table 2).

Table 2

Descriptive Statistics for the Participants (n=341)

Variable	Mean	SD	Minimum	Maximum	*n*
Girls					
Shy-Anxious	.17	1.58	-2.92	4.63	185
Perceived Likability	-.11	1.11	-2.75	1.25	185
Perceived Agency	-.15	1.22	-1.72	2.28	185
Network Dissatisfaction	.13	0.84	-0.96	2.04	185
Dyadic Dissatisfaction	-.03	0.75	-0.72	2.28	185
Social Agency Dissatisfaction	.05	0.69	-1.33	1.67	185
Boys					
Shy-Anxious	-.29	1.26	-2.97	4.63	156
Perceived Likability	.12	1.05	-2.75	1.25	156
Perceived Agency	.09	1.27	-1.72	2.28	156
Network Dissatisfaction	-.10	0.70	-.96	2.04	156
Dyadic Dissatisfaction	.06	0.73	-.72	2.28	156
Social Agency Dissatisfaction	-.09	0.73	-1.33	1.67	156

The correlations among study variables are contained in Table 3, with correlations among girls above the diagonal and boys below the diagonal. For girls, but not boys, shy-anxiousness was significantly and negatively correlated with perceived likability and perceived agency. Boys and girls evidenced similar, significantly positive correlations between their degree of shy-anxiousness and their dissatisfaction with network relations and social agency. Interestingly, the correlation between shy-anxiousness and dyadic dissatisfaction was not significant for either boys or girls. Boys and girls demonstrated negative and significant correlations between perceived agency and network and agentic dissatisfaction, whereas the negative correlation between perceived agency and dyadic dissatisfaction was small, but significant, only for girls. Network, dyadic, and social agency dissatisfaction were all positively and moderately to strongly correlated.

Table 3

Correlations between Shy-Anxiousness, Perceived Likability, Perceived Agency, Network Dissatisfaction, and Dyadic Dissatisfaction

	1	2	3	4	5	6
1. Shy-Anxious	-	-.21**	-.23**	.19*	.03	.23**
2. Perceived Likability	-.11	-	.37**	-.41**	-.36**	-.41**
3. Perceived Agency	-.08	.32**	-	-.19**	-.15*	-.32**
4. Network Dissatisfaction	.17*	-.35**	-.21**	-	.62**	.62**
5. Dyadic Dissatisfaction	.08	-.30**	-.05	.74**	-	.43**
6. Agentic Dissatisfaction	.21**	-.40**	-.41**	.58**	.43**	-

Note: Correlation among girls above the line, correlation among boys below the line.
**p < .05. **p < .01*

Hierarchical Mixed Model Analyses

We examined the degree to which perceived likability and perceived agency moderate the relationship between shy-anxiousness and network, dyadic, and social agency dissatisfaction while accounting for the effects of gender and racial status. Gender and racial status were dummy coded as 0/1 variables (0 = boys; 0 = participant race matches majority race of school).

Perceived Likability. The first three regression models model included perceived likability in addition to shy-anxiousness as predictors of the three types of social dissatisfaction. In the first of these, network dissatisfaction was the outcome variable (Table 4). In the first step, gender and racial status, were the predictors. Boys reported lower network dissatisfaction than did girls (d = -.29, t = -2.67, p < .01). Shy-anxiousness was added at step two. Participants with higher degrees of shy-anxiousness reported more network dissatisfaction (d = .13, t = 3.57, p < .01). Next, the addition of perceived likability predicted lower levels network dissatisfaction (d = -.33, t = -7.22, p < .01) even after shy-anxiousness was accounted for. None of the two-way interactions were significant, but at the final step the three-way interaction between gender, shy-anxiousness, and perceived likeability was significant. A graph of the three-way interaction can

be seen in Figure 1. The slopes were analyzed for significant differences between all subgroups ($b_{Girls/HighLikability}$ = -.01, $b_{Girls/HLowLikability}$ = 0.14, $b_{Boys/HighLikability}$ = 0.14, $b_{Boys/LowLikability}$ = .00). The only significant difference in slopes existed between boys with high perceived likability and boys with low perceived likability (t = 2.26, p = .02). Contrary to expectations, the three-way interaction indicated that the significant changes in ratings of network dissatisfaction occurred as shy-anxiousness increased for boys with *high* levels of perceived likability and girls with *low* levels of perceived likability, whereas boys with *low* levels of perceived likability and girls with *high* levels perceived likability remained relatively stable with changes in shy-anxiousness. For boys and girls, however, low perceived likability appears to be associated with increased network dissatisfaction compared to higher levels of perceived likability. There were no significant classroom effects within this model.

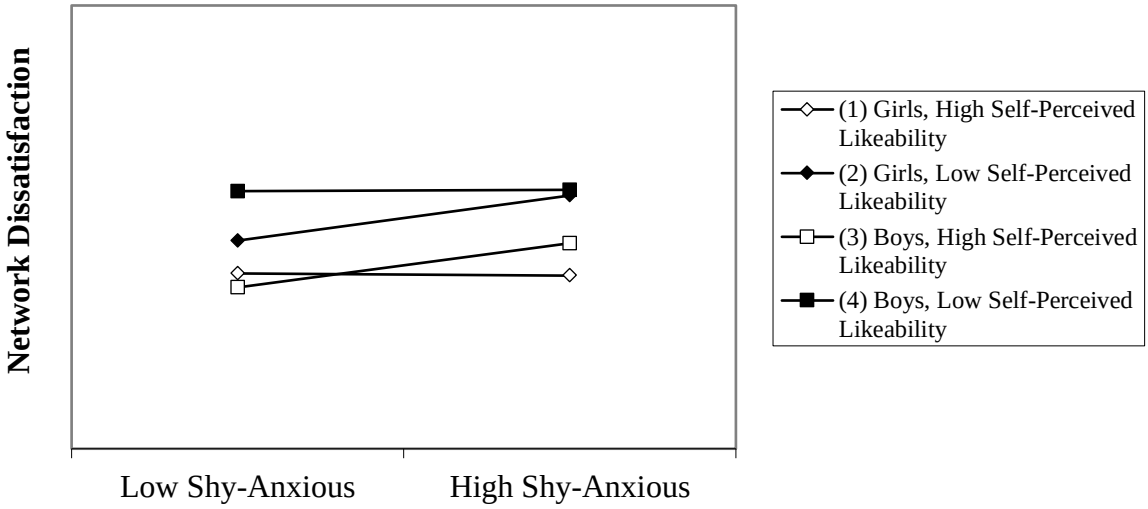
Table 4

Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived likability, nested within classrooms, on self-reported network dissatisfaction (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	.19	.10	.24	1.81	169.78	.07
Boys	-.23	.09	-.29	-2.67	334.83	<.01
Majority Racial Status	-.07	.10	-.09	-.64	336.35	.52
Step 2:						
Shy-Anxious	.10	.03	.13	3.57	321.28	<.01
Step 3:						
Perceived Likability	-.26	.04	-.33	-7.28	332.93	<.01
Step 4:						
Shy-Anxious*Gender	.01	.06	.01	.24	332.79	.81
Gender*Likability	.09	.08	.11	1.15	332.41	.25
Shy-Anxious*Likability	.02	.02	.03	.84	332.56	.40
Step 5:						
Gender*Shy-Anxious*Likability	-.13	.05	-.16	-2.74	330.28	<.01
Random effects	**Variance**	***p***				
Class	.01	.46				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Network Dissatisfaction (0.79).*

Figure 1
Interaction between gender, shy-anxiousness, and perceived likability in predicting network dissatisfaction at +/-1 SD.



In the second regression model that included perceived likability, dyadic dissatisfaction was the outcome variable (see Table 5). In contrast to the first model with network dissatisfaction as the dependent variable, gender and shy-anxiousness were not significant predictors of dyadic dissatisfaction at each of their respective steps. However, perceived likeability (d = -.31, t = -6.55, $p < .01$) negatively and significantly predicted dyadic dissatisfaction. That is, as perceived likability increases, dyadic dissatisfaction decreases. Otherwise, no significant interactions between were found between gender, shy-anxiousness, and perceived likability at subsequent steps. Additionally, a significant classroom effect was found in this regression model (p = .04), indicating statistically significant variation in predicting dyadic dissatisfaction between classrooms. This significant parameter suggests differing social dynamics across classrooms.

Table 5

Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived likability, nested within classrooms, on self-reported dyadic dissatisfaction (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	-.03	.11	-.04	-.31	90.23	.76
Boys	.11	.08	.15	1.42	326.44	.16
Majority Racial Status	.04	.10	.05	.37	333.89	.71
Step 2:						
Shy-Anxious	.03	.03	.04	.97	320.45	.33
Step 3:						
Perceived Likability	-.23	.03	-.31	-6.55	326.64	<.01
Step 4:						
Shy-Anxious*Gender	.06	.05	.08	1.11	324.82	.27
Gender*Likability	.04	.07	.05	.62	329.09	.54
Shy-Anxious*Likability	-.01	.02	-.01	-.14	325.72	.89
Step 5:						
Gender*Shy-Anxious*Likability	-.06	.05	-.08	-1.41	322.78	.16
Random effects	**Variance**	***p***				
Class	.06	.04				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Dyadic Dissatisfaction (0.74).*

The third and final model including perceived likability as a predictor investigated dissatisfaction with power and agency in the peer network (Table 6). The results demonstrate that shy-anxiousness positively and significantly predicted agentic dissatisfaction (d = .15, t = -4.26, p < .01). That is, as shy-anxiousness increased so did dissatisfaction with social power and influence. This result was not moderated by gender (step 4). At step three, perceived likability was a significant and negative predictor of agentic dissatisfaction, after accounting for levels of shy-anxiousness (d = -.35, t = -7.65, p < .01). This suggests that as perceived likability increased,

dissatisfaction with power and influence decreased (i.e., the more one perceived being liked by peers, the more satisfied they are with their social agency). Gender was not a significant predictor of social agency dissatisfaction (step one) nor did it moderate the relation between the other predictors and social agency dissatisfaction.

Table 6

Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived likability, nested within classrooms, on self-reported dissatisfaction with social agency (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	.06	.09	.08	.60	191.94	.55
Boys	-.13	.08	-.18	-1.73	336.80	.08
Majority Racial Status	-.01	.09	-.01	-.11	333.65	.91
Step 2:						
Shy-Anxious	.11	.03	.15	4.26	322.58	<.01
Step 3:						
Perceived Likability	-.25	.03	-.35	-7.65	332.61	<.01
Step 4:						
Shy-Anxious*Gender	.02	.05	.03	.47	332.11	.64
Gender*Likability	-.03	.07	-.04	-.45	332.94	.65
Shy-Anxious*Likability	.02	.02	.03	.76	331.98	.45
Step 5:						
Gender*Shy-Anxious*Likability	-.06	.04	-.08	-1.53	329.62	.13
Random effects	**Variance**	***p***				
Class	.01	.32				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Network Dissatisfaction (0.71).*

Perceived Agency. The first two steps the remaining models are the same as the first two steps of the preceding models and the remaining models will focus on steps 3 through 5 in the

final models. The fourth model utilized perceived agency and shy-anxiousness as predictors of network dissatisfaction (see Table 7). At step three, perceived agency was a significant predictor of network dissatisfaction (d = -.14, t = -3.31, p < .01), even after accounting for levels of shy-anxiousness. That is, those with lower perceived agency reported more network dissatisfaction. Interestingly, perceived agency had a smaller effect size in predicting network dissatisfaction than did perceived likability. Contrary to perceived likability predicting network dissatisfaction, there were no significant interactions found in step 4 or step 5.

Table 7

Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived agency, nested within classrooms, on self-reported network dissatisfaction (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	.19	.10	.24	1.81	169.78	.07
Boys	-.23	.09	-.29	-2.67	334.83	<.01
Majority Racial Status	-.07	.10	-.09	-.64	336.35	.52
Step 2:						
Shy-Anxious	.10	.03	.13	3.57	320.68	<.01
Step 3:						
Perceived Agency	-.11	.03	-.14	-3.31	334.83	<.01
Step 4:						
Shy-Anxious*Gender	-.01	.06	-.01	-.04	332.97	.97
Gender*Agency	<.01	.07	.01	<.01	331.53	.99
Shy-Anxious*Agency	.02	.03	.03	.66	332.96	.51
Step 5:						
Gender*Shy-Anxious*Agency	-.06	.05	-.08	-1.30	330.28	.20
Random effects	**Variance**	***p***				
Class	.01	.47				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Network Dissatisfaction (0.79).*

The fifth model utilized perceived agency and shy-anxiousness and predictors of dyadic dissatisfaction (see Table 8). In step 3, perceived agency (d = -.11, t = -2.35, p = .02) negatively and significantly predicted dyadic dissatisfaction, indicating that as perceived agency increases, dyadic dissatisfaction decreases. Lastly, no significant interactions between were found between gender, shy-anxiousness, and social status across steps 4 and 5.

Table 8

Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived agency, nested within classrooms, on self-reported dyadic dissatisfaction (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	-.03	.11	-.04	-.31	90.23	.76
Boys	.11	.08	.15	1.42	326.44	.16
Majority Racial Status	.04	.10	.05	.37	333.89	.71
Step 2:						
Shy-Anxious	.03	.03	.04	.97	320.45	.33
Step 3:						
Perceived Agency	-.08	.03	-.11	-2.35	333.32	.02
Step 4:						
Shy-Anxious*Gender	.06	.06	.08	.97	324.86	.33
Gender*Agency	.05	.06	.07	.80	327.98	.42
Shy-Anxious*Agency	-.01	.02	-.01	-.07	327.13	.94
Step 5:						
Gender*Shy-Anxious*Agency	-.03	.05	-.04	-.72	322.32	.47
Random effects	**Variance**	***p***				
Class	.07	.04				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Dyadic Dissatisfaction (0.74).*

The sixth and final model examined dissatisfaction with power and agency in the peer network using shy-anxiousness and perceived social agency (Table 10). In step 3, perceived

agency was a significant predictor of agentic dissatisfaction, after accounting for levels of shy-anxiousness. In step 4, gender was not a significant interaction term in predicting dissatisfaction with social agency with shy-anxiousness and perceived agency in the model. However, one significant interaction was observed. That is, the interaction between shy-anxiousness and perceived agency was significant (d = .07, t = 2.18, p = .03), indicating perceived agency moderates the relation between shy-anxiousness and dissatisfaction with one's own social agency in the peer network. The slope parameter (b) of the interaction graph (see Figure 2) suggests that those with high perceived agency had a steeper slope compared those with low perceived agency (b_{HighA} = 0.143, b_{LowA} = 0.027). Further analysis demonstrated a significant difference between the slopes of those with higher perceived agency than those with low perceived agency (t = 2.19, p = .03).

Table 9

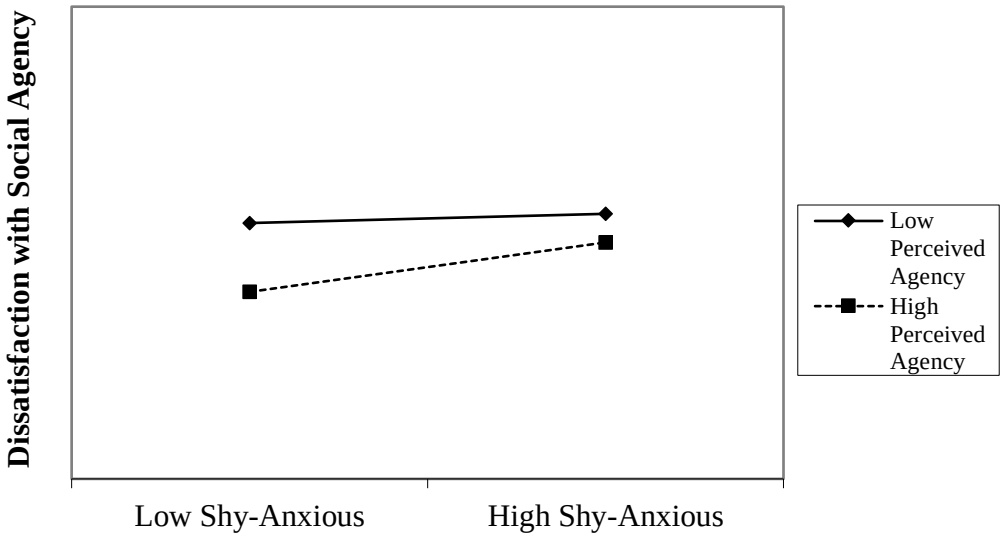
Linear mixed model estimates for gender, racial status, shy-anxiousness, and perceived agency, nested within classrooms, on self-reported dissatisfaction with social agency (N = 341)

Fixed effects	***b***	**SE**	**Effect size (*d*)**	***t***	***df***	***p***
Step 1:						
Intercept	.06	.09	.08	.60	191.94	.55
Boys	-.13	.08	-.18	-1.73	336.80	.08
Majority Racial Status	-.01	.09	-.01	-.11	333.65	.91
Step 2:						
Shy-Anxious	.11	.03	.15	4.26	322.58	<.01
Step 3:						
Perceived Agency	-.19	.03	-.27	-6.60	336.00	<.01
Step 4:						
Shy-Anxious*Gender	.02	.05	.03	.40	330.30	.69
Gender*Agency	-.06	.06	-.08	-1.01	322.74	.31
Shy-Anxious*Agency	.05	.02	.07	2.18	331.91	.03
Step 5:						
Gender*Shy-Anxious*Agency	-.01	.04	-.01	-.32	331.98	.75
Random effects	**Variance**	***p***				
Class	<.01	.98				

*Note: Effect size is calculated by dividing the coefficient (**b**) by the standard deviation of Network Dissatisfaction (0.71).*

Figure 2

Interaction between shy-anxiousness and perceived agency in the prediction of dissatisfaction with social agency at +/-1 SD.



CHAPTER 5

DISCUSSION

General Discussion

The purpose of the current study was to investigate the degree to which shy-anxiousness is associated with children's social dissatisfaction with their network and dyadic peer relations and their social power and influence (i.e., social agency) in the peer group. I was particularly interested in the degree to which perceived likeability and social agency moderate the relation between shy-anxiousness and social dissatisfaction. Research indicates that children who present as shy-anxious have deficits in functioning and tend to view themselves with a negative self-regard (e.g., Spence et al., 1999; Cartwright-Hatton et al. 2003; Wichmann et al., 2004; Rubin et al., 2009). Moreover, increasingly negative self-perceptions are associated with heightened loneliness and social dissatisfaction (Coplan et al., 2004), suggesting increased difficulties for social outcomes of children with shy-anxious characteristics. We extend our understanding of the relationship between shy-anxiousness and social dissatisfaction by exploring social dissatisfaction through the developing perceptions of social status.

The first goal of the study was to determine the relationship between shy-anxiousness, as assessed by teachers and peers, and children's self-reported dissatisfaction with their network relationships, dyadic relationships, and their social power and influence (i.e., social agency). Results indicate that shy-anxiousness was significantly and positive associated with network dissatisfaction. That is, as shy-anxiousness increases individuals feel increased dissatisfaction with their network-level relationships and interactions. This finding is largely consistent with previous research indicating that children who experience increased social anxiety and

withdrawal perceive less acceptance and report increased loneliness in larger peer networks than children that are less behaviorally inhibited (e.g., Greco & Morris, 2005; Danneel et al., 2020). The relationship between shy-anxiousness and dyadic dissatisfaction was similarly aligned with our original hypothesis. Namely, there was no significant relationship found between shy-anxiousness and dissatisfaction with dyadic relationships. This finding is consistent with previous research noting that characteristics of social anxiety and social withdrawal are not significant predictors of friendship quality (Rodebaugh et al., 2015), indicating that children exhibiting shy-anxious characteristics do not differ from their non-shy-anxious peers with regard to dyadic relationships, including friendships. Interestingly, there was a significant classroom effect found in this relationship, suggesting that the classroom environment plays a substantial role in influencing dyadic relationships. Variations in classroom dynamics are made up of the individual characteristics of the children, children's interdependent day-to-day interactions, expectations and emotions children direct towards each other, and the patterns and features of interactions present within the entire group (Rubin et al., 2006). These levels of classroom dynamics are intertwined and have a significant effect on how children view their social standing. Lastly, results indicate that as shy-anxiousness increases so does dissatisfaction with feelings of power and influence within one's social context. This finding suggests that children that are shy-anxious are dissatisfied with their self- and peer-perceived lack of social agency (Oberholzer, 2022) in their school-based peer groups.

The second goal was to examine the relationship between self-perceptions of social status (i.e., perceived likability and perceived agency) and self-reports of network, dyadic, and social agency dissatisfaction. We hypothesized that perceptions of likability and agency would significantly predict dissatisfaction with networks and dyadic relationships and one's own social

agency among peers. Commensurate with this expectation, perceived likability and perceived agency were found to significantly and negatively predict dissatisfaction in all three areas of social functioning. Taken together, the results indicate that as perceptions of one's own social desirability and social agency become increasingly negative, dissatisfaction with one's social functioning increases. Concerning perceived likability, there was a similar strength of the relationship (i.e., effect size) across all measures of social outcomes. This suggests that perceptions of how well liked an individual perceives themselves to be similarly affects their satisfaction with their relationships at network and dyadic levels as well as their satisfaction with their social power and influence with peers (i.e., agency). Perceived agency had a decreased strength in the relationship to network and dyadic dissatisfaction, compared to perceived likability, and a similar effect size when predicting dissatisfaction with social agency.

The final, and primary, goal of the study was to determine if perceptions of likeability and social agency moderate the relation between shy-anxiousness and social dissatisfaction. It is possible that negative self-perceptions exacerbate the social dissatisfaction of children who are shy-anxious, or that shy-anxiousness predicts social dissatisfaction only when children perceive their social desirability and agency negatively. However, perceived likability and agency only moderated the relationship between shy-anxiousness and social dissatisfaction in two cases. First, perceived agency moderated the relationship between shy-anxiousness and dissatisfaction with social agency. Second, perceived likability moderated the relationship between shy-anxiousness and network dissatisfaction, but this was further qualified by gender. That is, network dissatisfaction increased as shy-anxiousness increased for boys with *high* levels of perceived likability and girls with *low* levels of perceived likability.

Taken together, these results demonstrate the importance of considering gender when examining network dissatisfaction. One possible explanation for the differences in perceived likability impacting network dissatisfaction across gender might be differences in societal acceptance of shy-anxious behaviors across gender. Research indicates that behaviors associated with shy-anxiousness, such as unassertive and submissive behaviors (e.g., Coplan et al., 2018), are more socially accepted for girls than boys (Doey et al., 2014). These differences might lead to boys that are shy-anxious experiencing a disconnect between their social expectations and actual behavior as they aim to be well-liked. Conversely, girls who perceive themselves to be less liked might be more susceptible to peer influence (e.g., Brown & Larson, 2009), which might exacerbate their feelings of dissatisfaction with their network relationships. Gender differences were found in other areas as well. First, correlational analyses found that shy-anxiousness was significantly and negatively correlated with perceived likability and agency for girls but not for boys. Second, gender differences were found to be present in network dissatisfaction, but this relationship was not present for dissatisfaction with agency or dyadic relationships, suggesting decreased gender differences present in these areas of social functioning. Understanding gender differences in the social self plays a significant role in the determination of appropriate social-emotional interventions for boys and girls experiencing social dissatisfaction, especially with their social network. That is, boys with high perceived likability experience greater changes in network dissatisfaction with increased shy-anxiousness than those with low perceived likability, whereas girls experience greater changes in network dissatisfaction with low perceived likability as shy-anxiousness increases.

The findings of the current study extend the literature on shy-anxiousness by examining the complex dynamics between shy-anxiousness and the developing perception of social self,

namely, developing perceptions of social status (i.e., likability and agency). There were consistencies with previous research as well as novel findings aimed at furthering the understanding of children with shy-anxious characteristics and their social outcomes. First, shy-anxiousness was positively correlated with network and dyadic dissatisfaction but did not serve as a significant predictor of dyadic dissatisfaction. This finding is largely commensurate with previous research (e.g., Greco & Morris, 2005; Rodebaugh et al., 2015), however this study extended into dissatisfaction with social agency and indicated that shy-anxiousness is, similarly, positively correlated with dissatisfied feelings of control of their social actions and outcomes. The unassertive, reticent, and timid behaviors, as well as the tendency to more easily conform to peers, indicates that these individuals have less social agency than non-shy-anxious peers (Schwartz et al., 1998; Coplan et al., 2018), and current findings indicate this lack of agency is undesirable for children who present as shy-anxious, especially for girls compared to boys.

Limitations and Future Directions

The current study extends the literature on perceived agency by examining the impact of perceived social agency on shy-anxious children's developing social self and utilizes a unique measure of dissatisfaction with social agency as an additional aspect of social functioning. However, the study contains several limitations. A key limitation is measurement of self-perceived social power and influence. Whereas shy-anxiousness was measured using multiple raters (i.e., teachers and peers) and social dissatisfaction was measured utilizing an empirically supported scale, perceived likability and agency were calculated from single Likert items. Current research supporting the use of single-item Likert questionnaires has found that it can be an acceptable measure for accurately identifying anxiety in women 18 years and older (Davey et al., 2007) and evaluating self-esteem in undergraduates (Robins et al., 2001). However, a single

Likert item scale potentially limits the insight to the feelings and self-perceptions of the participants.

Despite limitations, the current study possesses strengths that support the importance of the findings. The current study utilizes multiple reporters (i.e., teachers and peers) to assess the differing dimensions of shy-anxiousness and to garner a better understanding of children displaying those characteristics. Additionally, the current study utilizes self-reports to gain insight on internalizing notions of social dissatisfaction as well as self-perceptions of social status to further understanding of how developing perceptions relate to social functioning among children. This allows for the extension of the literature on self-perceptions of desirability (e.g., Baartmans et al., 2019) and agency (Martin et al., 2020) into greater understandings of social outcomes resulting in negative self-perceptions. Another strength of the study is the investigation of gender differences in shy-anxiousness and self-perceptions. Per Doey et al., 2014, gender differences are often overlooked in studies examining shyness or behavioral withdrawal. In the current study, correlation analyses suggest that shy-anxiousness is significantly correlated with perceived likability and agency for girls but not for boys, stressing the continued need to expand research. Lastly, future studies might benefit from a larger range of participant ages to examine changes in importance of self-perceptions over time. Research by Burgess and colleagues (1999) indicates that children as young as kindergarten begin developing self-perceptions of their social standing and it would provide interesting context, as well as information regarding social-emotional intervention, to develop a greater understanding of how self-perceptions impact social outcomes across a wider rage range. Additionally, follow-up studies with a greater emphasis on cultural impact on self-perceptions and social outcomes would provide similarly useful information in determining appropriate interventions aimed at improving social satisfaction.

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