

Advanced Methods in Developmental Psychology ~ Spring 2026

DP 6: Shyness

Background reading:

- Chen et al. (2009)
- Handbook chapter 17 (Rubin et al., 2015)

Overview:

The focus of this assignment is to assess gender and age-related differences in shyness in an urban and predominantly-Black sample of children ages 9 to 12.

Here are the measures that we will consider:

- **Perceived Shyness** (peer nominations). Participating students were asked to circle the names of students who were shy (i.e., “These kids are really SHY. These kids act shy around other kids or adults.”). This measure of perceived shyness was a modified adaptation of a peer nomination measure used in prior research (Yang, Chen, & Wang, 2015). Whereas Yang and colleagues (2015) used four items to assess perceived shyness, we used one item.
- **Prosocial Behavior** (peer nominations). Prosocial behavior was measured as the mean of two items ($\alpha = .87$): cooperative (i.e., “These kids COOPERATE. Here are kids who really cooperate—they pitch in, share, and give everyone a turn”) and nice (i.e., “These kids are always willing to do something NICE for somebody else, and are really nice people”). This measure has strong convergent validity with parent- and teacher-reported constructive social skills among elementary school children (Eisenberg et al., 1996).
- **Perceived Popularity**. One item was used to measure each child’s *perceived popularity* among peers (i.e., “These are the most POPULAR kids in my class”; see Rodkin et al., 2000).
- **Likeability**. One item was used to measure children’s *likeability* among peers (i.e., “These are the kids whom I would LIKE MOST to play with”; see Zhang et al., 2018).
- **Gets Along with the Teacher**. One item was used to measure how well each child gets along with the teacher (i.e., “These children GET ALONG WELL WITH THEIR TEACHERS. They like to talk to their teachers, and their teachers enjoy spending time with them.”). This measure has been validated among elementary school students (Hughes & Kwok, 2007).
- **Social demonstration approach goal** (self-report) – Involves striving for positive judgments from others (e.g., being seen as “cool” or “popular”). Personal success is viewed as having a good social reputation and high social status.
- **Social demonstration avoidance goal** (self-report) – Involves avoiding negative judgments from others (e.g., not being seen as a “geek” or a “loser”). Personal success is viewed avoiding a reputation as socially awkward or ineffective.

PART 1 – Hypotheses

A. First, I want you to consider how shyness may operate differently for children of different genders. Refer to the handbook, the article by Chen and colleagues, or other course material you've read this semester. Specifically, I want you to think about how shyness is associated with the other variables listed on the previous page. Identify one pair of variables (e.g., shyness and popularity) that you think will be associated differentially for boys and girls. For example, shyness might be positively associated with popularity for girls but negatively associated with popularity for boys. After discussing various possibilities with your partner, complete the table below.

Question	Your answer	Justification for your answer
Which two variables will you address?	Perceived Shyness and Gets Along with the Teacher	We believe the interaction between these two variables will be considerably different for girls and boys (Chen et al. 2009).
What do you hypothesize will be the nature of the association between these two variables for BOYS? (Strongly negative, weakly negative, zero, weakly positive, strongly positive)	Weakly negative	Chen et al. cites studies that suggest shyness in boys is viewed negatively because there is "greater pressure to become autonomous and socially assertive during socialization."
What do you hypothesize will be the nature of the association between these two variables for GIRLS? (Strongly negative, weakly negative, zero, weakly positive, strongly positive)	Weakly positive	Chen et al. suggests that girls face less social pressure to be seen as dominant, so shyness is viewed as less of a negative trait in girls because it isn't delaying or disrupting their development or socialization in the same way that it delays and disrupts that in boys.

B. Second, I want you to consider how shyness may operate differently for children of ages (grades 3-4 versus grades 5-6). Refer to the handbook, the article by Chen and colleagues, or other course material you've read this semester. Specifically, I want you to think about how shyness is associated with the other variables listed on the previous page. Identify one pair of variables (e.g., shyness and popularity) that you think will be associated differentially for younger kids (grades 3-4) and older kids (grades 5-6). For example, shyness might be positively associated with popularity for younger kids but negatively associated with popularity for older kids. After discussing various possibilities with your partner, complete the table below.

Question	Your answer	Justification for your answer
Which two variables will you address?	Perceived Shyness and Perceived Popularity	Chen et al. states that shy children may have difficulties obtaining social approval and status in US samples.
What do you hypothesize will be the nature of the association between these two variables for YOUNGER KIDS? (Strongly negative, weakly negative, zero, weakly positive, strongly positive)	Strongly positive	Chen et al. states, "Longitudinal research has indicated that shyness in childhood may contribute to later adjustment problems in a variety of areas." If shyness in middle childhood can be linked to adjustment difficulties in adulthood, we can assume there is a significant relationship between shyness, popularity, and age.
What do you hypothesize will be the nature of the association between these two variables for OLDER KIDS? (Strongly negative, weakly negative, zero, weakly positive, strongly positive)	Strongly negative	Hartl et al. found that bistrategic controllers receive significantly higher popularity ratings than prosocial and average controllers. This effect was stronger in older children, and because shyness is incompatible with a bistrategic controller status, we can assume that shy children don't perform as well socially as extroverted children do as they age.

PART 2 – Analysis

- A. Does shyness function differently for children of different genders? You'll address this question by examining the correlation between shyness and the other variable you selected in Part 1 (A).
- Using SPSS, determine the Pearson's bivariate correlation between shyness and the variable you selected in Part 1 (A). Do this for the total sample, for boys separately, and for girls separately. Then complete the upper portion of the table below.

Variable 1 (X₁): Shyness

Variable 2 (X₂): Gets Along with Teacher

	<i>r</i>	<i>n</i>	<i>df</i>	<i>p</i>	95% CI of <i>r</i>
Total sample	.283**	573	571	<.001	[.206, .357]
Boys	.269**	268	266	<.001	[.155, .377]
Girls	.230**	305	303	<.001	[.120, .333]
Test of the difference between two independent correlations (i.e., r_{boys} v. r_{girls})					
	<i>Z</i>	<i>df</i>	<i>p</i>	Conclusion	
Does r_{boys} differ from r_{girls} ?	.494	Not given	0.621	The correlations are not significantly different from one another because $p > .05$	

- Using Kristopher Preacher's online utilities (quantpsy.org), conduct a test of the difference between two correlations to determine if your correlation differs for boys and girls. Complete the lower portion of the table above.

PART 2 – Analysis

- B. Does shyness function differently for younger and older children (i.e., grades 3-4 v. grades 5-6)? You'll address this question by examining the correlation between shyness and the other variable you selected in Part 1 (B).
3. Using SPSS, determine the Pearson's bivariate correlation between shyness and the variable you selected in Part 1 (B). Do this for the total sample, for younger children separately (grades 3-4 combined), and for older children separately (grades 5-6 combined). Then complete the upper portion of the table below.

Variable 1 (X₁): Shyness Variable 2 (X₂): Perceived Popularity

	<i>r</i>	<i>n</i>	<i>df</i>	<i>p</i>	95% CI of <i>r</i>
Total sample	-.186**	630	628	<.001	[-.261, -.110]
Young (grades 3 & 4)	.015	315	313	.788	[-.095, .126]
Old (grades 5 & 6)	-.322**	315	313	<.001	[-.417, -.219]
Test of the difference between two independent correlations (i.e., r_{boys} v. r_{girls})					
	<i>Z</i>	<i>df</i>	<i>p</i>	Conclusion	
Does r_{young} differ from r_{old} ?	4.357	Not given	<.001	Younger children experience less negative social effects of shyness than older children.	

4. Using Kristopher Preacher's online utilities (quantpsy.org), conduct a test of the difference between two correlations to determine if your correlation differs for younger kids and older kids. Complete the lower portion of the table above.

PART 3 – Writing

Introduction

Shyness-sensitivity is one of the major socioemotional characteristics in child development, playing an important role in children's social and psychological adjustment throughout childhood and adolescence. Shyness is described as social wariness and sensitivity (Chen et al., 2009, p. 1504). A shy child's gender does not have a large impact on the way they are perceived, but shy boys are sometimes seen more negatively than shy girls due to gender stereotypes and pressure to become more independent and dominant from a young age (Chen et al., 2009, p. 1502). As they move from early into middle childhood, children perceived as shy by their peers become increasingly less successful in their attempts to meet their social goals (Rubin et al., 2018, p. 330).

In the present study, we are examining the associations between perceived shyness & getting along with teachers, and shyness & perceived popularity. A shy child's relationship with their teacher may vary by gender due to preexisting stereotypes and expectations that vary between boys and girls, even at a young age. We hypothesize that shy girls will get along better with their teachers than shy boys, because it is seen as less of a threat to their development. Due to the fact that many shy children have been found to experience social adjustment difficulties as they age, and are consistently out performed socially by their more aggressive and prosocial peers, perceived shyness is likely to have a strong association with perceived popularity. We hypothesize that younger shy children (in grades 3 & 4) will receive high popularity ratings, while older shy children (in grades 5 & 6) will receive very low popularity ratings.

Methods

A total of 639 students from 5 different schools participated in the study. There were 305 females and 334 males divided between four grades, with 162 students in third grade, 157 students in fourth grade, 148 students in fifth grade, and 172 students in sixth grade. Data was collected during the spring semester via a classroom survey in which participants answered questions about themselves and their classmates. The survey took about 30 minutes to complete and consent was required from both parents and students for participation.

Measures

Perceived Shyness. Participating students were asked to circle the names of students who were shy (i.e., "These kids are really shy. These kids act shy around other kids or adults."). This measure of perceived shyness was a modified adaptation of a peer nomination measure used in prior research (Yang, Chen, & Wang, 2015). Whereas Yang and colleagues (2015) used four items to assess perceived shyness, we used one item.

Gets Along with the Teacher. One item was used to measure how well each child gets along with the teacher (i.e., "These children get along well with their teachers. They like to talk to their teachers, and their teachers enjoy spending time with them."). This measure has been validated among elementary school students (Hughes & Kwok, 2007).

Perceived Popularity. One item was used to measure each child's *perceived popularity* among peers (i.e., "These are the most popular kids in my class"; see Rodkin et al., 2000).

Results

In this section, we will look at the results of the two correlations we ran. We ran a correlation to determine if there is difference between boys and girls in perceived shyness and getting along with teachers. We ran a second correlation to determine if there is a difference between younger and older children in perceived shyness and perceived popularity.

We hypothesized that shy girls would get along better with their teachers than shy boys. A Pearson bivariate correlation coefficient was calculated to evaluate the relationship between perceived shyness and getting along with teachers by gender. There was a strongly positive association between perceived shyness and getting along with teachers for both boys, $r = .269$, $p < .001$, 95% CI [.155, .377], and girls, $r = .230$, $p < .001$, 95% CI [.120, .333]. The correlation between perceived shyness and getting along with teachers did not differ significantly by gender, $z = 0.494$, $p = 0.621$. These results are consistent with our hypothesis for girls, that the association between the two variables would be positive. Our results do not support our hypothesis for boys, as we hypothesized the association between the two variables would be negative for boys and our results show that it is positive for boys as well.

We hypothesized that younger shy children (grades 3 & 4) would receive high popularity ratings, while older shy children (grades 5 & 6) would receive very low popularity ratings. A Pearson bivariate correlation coefficient was calculated to evaluate the relationship between perceived shyness and perceived popularity by age. There was a weakly positive association between perceived shyness and perceived popularity in younger children, $r = .015$, $p = .788$, 95% CI [-.095, .126]. In older children, there was a strongly negative association between perceived shyness and perceived popularity, $r = -.322$, $p < .001$, 95% CI [-.417, -.219]. The perceived shyness by perceived popularity correlation differed significantly by age, $z = 4.357$, $p < .001$. As hypothesized, shy older children received very low popularity ratings. While young shy children did receive much higher popularity ratings than older shy children, the association was only found to be weakly positive.

Discussion

In this study, we looked at the ways in which peoples' perceptions of shy kids are influenced by other aspects of their identity and conversely, the ways in which their shyness is influenced by these identities. We found that a shy child's gender does not have much of an impact on how well they get along with their teachers. However, a shy child's age does have a significant impact on their perceived popularity. We found that when children are younger, shyness is somewhat positively associated with their perceived popularity, but as children age, shyness becomes quite negatively associated with their perceived popularity. These findings suggest that as children get older, no matter their gender, the adults in their life should be aware of how their shyness may be impacting them socially. It may be harder for shy children to make friends and keep as they approach middle school, which can be a hard time for many kids as the social world rapidly expands and adult supervision wanes. In the future, it would be interesting to look at how these findings may or may not hold up through teenagehood. Does gender begin to play a role in the association between perceived shyness and getting along with teachers as children enter middle and high school? Does the role of age stay the same with regards to the association between perceived shyness and perceived popularity, or does it shift as children continue to age? Shyness can influence many aspects of a child's school and social life as well as their overall development. As children get older, they can experience more difficulties with regards to popularity, even if it positively impacts teachers' relationships with students. Overall, shyness can both positively and negatively affect children and it is important that peers and teachers are aware of these influences.