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## Abstract

The present study explored the relations among preservice teacher shyness (shy, average, outgoing) and their responses toward hypothetical children displaying classroom problem behaviors (shy/quiet, exuberant/talkative) in the classroom. Participants were 335 elementary preservice teachers attending a Midwest university in the United States. Preservice teachers completed self-reports of shyness and responded to hypothetical vignettes depicting different classroom behaviors. Among the results, shy preservice teachers reported lower self-efficacy and less tendency to use warm/supportive and social-learning strategies as compared to their more outgoing counterparts. Shy preservice teachers also had lower tendency than average teachers to refer to high-powered strategies when dealing with shy children, but more likely with exuberant children. Results are discussed in terms of the role of personality in teaching.

**Keywords:** shyness, personality, self-efficacy, teacher education, child temperament

## Introduction

Preservice teachers bring schemas (i.e., implicit perceptions) to the classroom as they start their teaching career (Timperley & Robinson, 2001). These schemas have a direct effect on their views of the teacher profession, their attitudes toward students, and ultimately their success in the first years as teachers (Fajet, Bello, Leftwich, Mesler, & Shaver, 2005; Richardson, 2003). Many schemas are implicit and based on personal experiences, professional teaching experiences, and unexamined assumptions (Richardson, 2003). Recently, there is growing interest in the links between teacher personality and aspects of teaching performance (Bastian, McCord, Marks, & Carpenter, 2017; Corcoran & O'Flaherty, 2018; Fisher, Fraser, & Kent, 1998; Jamil, Downer, & Pianta, 2012; Klassen & Tze, 2014; Rushton, Morgan, & Richard, 2007). Teacher personality are postulated to impact the development of their schemas of what

teaching should be like in the classroom and how they perform in general (Bastian et al., 2017; Jamil et al., 2012; Klassen & Tze, 2014; Stuart & Thurlow, 2000). For example, in a sample of early childhood educators, Bullock, Coplan, and Bosacki (2015) reported that openness to experience and extraversion both uniquely predicted classroom management self-efficacy (while controlling for years of teaching experience). Teacher personality such as conscientiousness among beginning teachers was reported to be significantly linked to retention rates, evaluation ratings, and value-added estimates (Bastian et al., 2017). The research linking teacher personality to their attitudes and strategies with the students has been limited (Rimm-Kaufman & Hamre, 2010), and the majority of the studies focused on teachers' extraversion (Jamil et al., 2012; Job, 2004). Teachers are more likely to be higher in extraversion than the general population (Decker & Rimm-Kaufman, 2008), and teachers' extraversion and openness predicted their sense of efficacy working in childcare and preschool classrooms above and beyond their years of experience (Bullock et al., 2015).

However, there has been surprisingly little research with preservice teachers examining the role of their personality in their sense of efficacy, attitudes, and classroom behavior management strategies. The sample in the present study was comprised of *pre-service* teachers (i.e., who were still in the process of completing their formal teacher education program). Due to their relative lack of teaching experiences, it has been suggested that preservice teachers' attitudes and responses in the classroom may be more strongly related to their individual characteristics (e.g., personality traits) (De Jong et al., 2014; Fajet et al., 2005; Richardson, 2003). The understanding of the relationships between preservice teacher personality traits and their attitudes and responses will provide insight into preservice teachers' decision-making processes for related behaviors, which will have practical implication for teacher education programs who prepare preservice teachers to adjust their behaviors and attitudes to deal with the social and emotional realities in the classroom (Bastian et al., 2017). Given the emerging evidence that one aspect of teacher personality, namely *shyness*, play an important role in their perceptions of students (e.g., Kalutskaya, Archbell, Rudasill, & Coplan, 2015), in the present study, we examined the links between preservice teachers' shyness and their reported attitudes (i.e., self-efficacy, warmth/support) and classroom behavior management strategies (i.e., social-learning strategies and high-powered strategies) toward hypothetical children displaying problem behaviors in the classroom (i.e., shy/quiet, exuberant/talkative).

### **Teacher Shyness**

Shyness is a personality trait that comprises feelings of sensitivity, self-consciousness, and anxiety in the face of social encounters (Crozier, 2005, p. 1948). Shy individuals are believed to undergo an approach-avoidance conflict, where their motivation to approach social activities is suppressed by underlying "social fear and anxiety (e.g., high social avoidance motivation)" (Coplan et al., 2004, p. 245). Shyness is a result of interaction between certain aspects of the temperament (e.g., negative affectivity) and environment (e.g., overstimulation) (Aron, Aron, & Davies, 2005). The link between preservice teacher personality and teacher performance remains largely unexamined. To our knowledge, there has only been one study of shyness among teachers. Coplan, Hughes, Bosacki, and Rose-Krasnor (2011) examined the links between teachers' shyness and their strategies and beliefs about children's classroom behaviors (including shyness) in a sample of elementary school teachers. Few significant differences were found among shy, average, and outgoing teachers. However, compared to outgoing teachers, shy teachers appeared to display a greater specific understanding of shy students in their classrooms. Shy teachers also believed shy children as intelligent as other children whereas more outgoing teachers rated shy children as less intelligent.

### **Teacher Self-Efficacy**

In social cognitive theory, Albert Bandura defined self-efficacy beliefs as "people's judgments of their capabilities to organize and execute the courses of academic action required to accomplish academic tasks" (Bandura, 1986, p. 391). Personal efficacy beliefs as part of the personal factors, alongside behavior and environmental events, constitute the three determinants in triadic reciprocal causation that influence one another (Bandura, 1986). In educational field, there is an increased interest on teacher self-efficacy in the past three decades (Klassen & Tze, 2014). Teacher self-efficacy refers to teachers' beliefs about their individual and collective capacity to meet students' needs and reach certain instructional goals even with difficult and disengaged students (Klassen, Tze, Betts, & Gordon, 2011). Teacher self-efficacy beliefs affect their instructional decision-making, teaching practice, and jobs satisfaction (Klassen et al., 2011; Skaalvik & Skaalvik, 2010) and subsequently influence student engagement and achievement (Pajares, 1997). Teachers with higher self-efficacy beliefs are more open to innovative instructional techniques, more acceptable of diversity, and more resilient when working with struggling students instead of referring them special education (Ashton & Webb, 1986; Soodak & Podell, 1993; Tschannen-Moran, Hoy, & Hoy, 1998).

## **Teacher Warmth/Support**

The nature of students' relationship with teachers play a critical role in their social and emotional development as well as academic achievement (Hoy & Weinstein, 2011). Teacher-student relationships characterized by warmth and support is positively associated with students' healthy adjustment to school in the early school years (Birch & Ladd, 1997), students' developmental outcomes (Baker, 2006), students' academic achievement (Baker, 2006; B. K. Hamre & Pianta, 2005; Hughes & Cao, 2018), student engagement in the classroom (Freeman, Anderman, & Jensen, 2007; Hughes & Cao, 2018), and positive classroom climate (Hoy & Weinstein, 2011) which are essential components in positive academic adjustment for students (Hamre & Pianta, 2005). On the contrary, negative relationships characterized by student-teacher conflict are linked to students' poor classroom behaviors and academic performance (Birch & Ladd, 1997; Hamre & Pianta, 2001; Hoy & Weinstein, 2011). Teacher warmth and support plays an critical role for students with behavioral and temperamental risk. For example, Arbeau et al. (2010) reported that shy first grade students benefit substantially from teacher warmth and support in terms of their socio-emotional adjustment in the classroom. That is close student-teacher relationship functions as a positive moderator (i.e., buffering process) of shy children's adjustment in school. In another study with first grade children (Arbeau et al., 2010), teacher-child relationships with warmth and support was related to positive socio-emotional adjustment and conflictual teacher-child relationship was associated with social-emotional difficulties over the course of one year. However, a recent study reported that children who reported higher levels of shyness were less likely to have close relationships with their teachers (Zee & Roorda, 2018).

## **Teacher Strategies**

The ways teachers interact with students affect their behavioral, cognitive, and emotional development (Hamre & Pianta, 2005; O'Connor & McCartney, 2007). The interactions can be understood as "pedagogical responses or strategies" that educators used to meet students' social, emotional, and cognitive needs in order facilitate student learning and development (Deng et al., 2017; Hamre, Hatfield, Pianta, & Jamil, 2014; Hamre & Pianta, 2005). In this study we are interested in two types of teacher pedagogical strategies, including social-learning strategies, and high-powered strategies. Social-learning strategies refer to teaching strategies that focus on the development of students' social skills (e.g., helping students in making social connections, encouraging students' engagement, praise students for appropriate behaviors) whereas high-powered strategies focus on discipline, restriction, control and punishment (e.g., punishing students for aggressive behaviors, forcing the appropriate behaviors, having students apologize for their disruptive behaviors) (Coplan et al., 2011). Teachers' use of social-learning strategies has been shown to positively associate with preschool students' social and emotional development (Hamre et al., 2014) and secondary school students' school adjustment and academic achievement (Aldrup, Klusmann, Lüdtke, Göllner, & Trautwein, 2018). Previous research suggests that in-service teachers tend to have different responses toward problem behaviors in the classroom. For example, teachers tend to use social-learning strategies (e.g., encourage the student to join activities such as sports and music) with shy/quiet students, but are more likely to use high-powered strategies (e.g., intervene directly to stop/change the disruptive behavior) with talkative/exuberant students (e.g., Arbeau & Coplan, 2007; Brophy & McCaslin, 1992; Coplan, Bullock, Archbell, & Bosacki, 2015; Coplan et al., 2011; Thijs, Koomen, & Van Der Leij, 2006).

## **The Present Study**

The goal of this study was to examine the links between preservice teachers' shyness and their attitudes (self-efficacy, warmth/support) and strategies (social-learning strategies, high-powered strategies) to hypothetical children displaying shy and exuberant behaviors in the classroom. Due to the lack of previous research with the population of teaching professionals, our hypotheses were somewhat speculative in nature and derived from the extant literature on shyness. For example, among adults, shyness is typically associated with lower general self-efficacy (Caprara, Steca, Cervone, & Artisticco, 2003; Leary, 2001). Accordingly, we expected that preservice teachers identified as shy would report lower *self-efficacy* and would perceive themselves as less skilled in dealing with students' classroom social behaviors. We also speculated that shy preservice teachers would report the lowest levels of *warmth and support* (e.g., having sympathy, being patient) in the classroom. This assumption is based on the research showing that shy individuals are wary and self-conscious in social contexts (Bruch, 2001; Crozier, 2005) and, thus, shy preservice teachers may be hesitant to overly display affection toward children in the classroom.

We also explored two types of strategies (i.e., social-learning strategies, and high-powered strategies) that preservice teachers might employ in response to students' problematic social behaviors in the classroom (Coplan et al., 2011). First, social-learning strategies (e.g., modelling appropriate behaviors, praising for appropriate behaviors) in a classroom typically require a teacher to employ communication, problem-solving, and motivational skills that may be particularly difficult for shy individuals to demonstrate in the social context of the classroom (Leary, 2001). In this regard, we further expected that shy teachers would also be least likely to report using such strategies in response to children's classroom social behaviors. Finally, because we are not aware of any research on associations between teacher shyness and the use of *high-powered* strategies (e.g., punishment), we did not hypothesize the associations.

In the present study, we assessed teacher responses to two types of potentially problematic student social behaviors (as depicted by hypothetical vignettes): shyness and verbal exuberance. For comparison purposes, we also included a vignette of a typical/average child. Although not a primary focus of the present study, drawing upon previous studies of teachers' beliefs and responses to such behaviors (e.g., Coplan et al., 2015, 2011; Deng et al., 2017), we expected teachers to have the most negative views and responses toward verbally exuberant behaviors.

## Method

### Participants

Participants were 335 elementary preservice teachers (88% female; 96% white) from three consecutive cohorts ( $n_1 = 107$ ,  $n_2 = 86$ ,  $n_3 = 142$ ) at the end of the last semester of their teacher education program at a research university in the United States. At the time of the survey, they were student teaching in the field as first-year full-time teachers. Most participants were traditional undergraduate students (95% were aged 20-25 years) with a few being non-traditional (5% aged 26-42 years). Most participants were pursuing a certification in elementary education (61%), with the rest in special education (22%), early childhood (6%), inclusive education (i.e., included elementary education, special education, early childhood) (9%), and English Language Learner (2%). After the approval was obtained from the university's Institutional Review Board, all preservice teachers enrolled in a capstone course were invited to participate in the study for three consecutive semesters. Compensation was provided as class credit and the consent rate was 84%.

### Measures

To assess *shyness*, participants completed the *Revised Cheek and Buss Shyness Scale* (RCBS; Cheek, 1983) designed to measure adolescents and adults' shyness. There are 13 items on the scale (e.g., I feel tense when I'm with people I don't know well; I am often uncomfortable at parties and other social functions) (Cheek, 1983). Participants were asked to respond to the 13 items on a 5-point scale (1 = Very uncharacteristic or untrue, strongly disagree, 2 = Uncharacteristic, 3 = Neutral, 4 = Characteristic, 5 = Very characteristic or true, strongly agree). The RCBS has shown strong internal consistency ( $\alpha$  from .86 to .90) and 45-day retest reliability ( $r = .88$ ) (Melchior & Cheek, 1990). The scale showed high internal consistency in the current sample ( $\alpha = .86$ ). In addition, the RCBS has also shown good convergent/discriminant validity, correlating moderately to strongly with scores on other self-report measures of shyness and social anxiety measures among university students (Hopko, Stowell, Jones, Armento, & Cheek, 2005; Leary, 1991).

Preservice teachers' *attitudes and strategies* were assessed using the *Child Behavior Vignettes* (Coplan et al., 2011), which were developed following the conventionalization of shyness and exuberance among children and other vignettes measuring mothers' responses to shyness and aggression among children. Participants were presented with three vignettes depicting hypothetical male students displaying shy/quiet, exuberant/talkative, and average/typical classrooms behaviors. The child in the shy vignette was described as often speak softly, hesitant and nervous in social interactions and rarely participate in group work. The exuberant child, on the contrary, frequently speak loudly, often interrupt the teacher and others, and cannot wait his turn in group activities. The average child shows a typical pattern of behaviors such as talking regularly in class, raising his hand before talking, and taking turn in group activities (see Coplan et al., 2011 for the scenarios). Following each vignette, participants were asked to responded to a series of accompanying items on a 5-point scale from 1 (definitely disagree) to 5 (definitely agree) for the scales of self-efficacy and warmth/support and from 1 (very unlikely) to 5 (very likely) for the scales of social-learning and high-powered strategies. In the present study, we were interested in a total of twelve items assessing: (1) *self-efficacy* with two items (e.g., "I would feel adequately prepared to deal with him"); (2) *warmth/support* with three items (e.g., "I would be especially supportive of the child"); (3) *social-learning strategies* with four items (e.g., "involve a classmate to help

create a positive solution”); and (4) *high-powered strategies* with three items (e.g., “intervene directly to stop/change the behavior”) (for more details, see Deng et al., 2017). This protocol has previously demonstrated good psychometric properties and evidence of validity (e.g., Coplan et al., 2015, 2011; Deng et al., 2017). Deng et al. (2017) reported the internal reliabilities being .88, .71, .64, and .85 for teacher self-efficacy, teacher warmth/support, social learning strategies, and high-powered strategies, respectively, and in the present study the reliabilities were .88, .72, .63, and .85 respectively. Deng et al. (2017) also conducted confirmatory factor analyses to verify the fitness for shy and exuberant child behavior vignettes.

## Results

The purpose of the study was to examine how preservice teacher shyness related to their responses toward hypothetical children displaying problem behaviors in the classroom (shy/quiet, talkative/exuberant). Following the protocol established by Coplan et al. (2011), three groups of preservice teachers were created based on shyness scores: (1) *outgoing* ( $\leq 25\%$ ;  $n = 71$ ); (2) *average* ( $> 25\%$  and  $< 75\%$ ,  $n = 171$ ); and (3) *shy* ( $\geq 75\%$ ,  $n = 93$ ). Coplan et al. (2011) suggested that the relationship between teacher shyness and their responses is not linear in nature. We followed this theoretical approach and categorized distinct levels of shyness in preservice teachers that might have been otherwise missed with the continuous approach. For example, it was expected that highly shy teachers would be more knowledgeable in recognizing and accommodating children’s shyness compared to less shy teachers.

These three teacher groups did not differ significantly on other sample characteristics (i.e., gender, ethnicity, age, and highest degree obtained). A series of 3×3 mixed repeated-measures ANOVA was then performed with child behavior Vignette (shy, exuberant, typical) as a within-subject variable and teacher Group (outgoing, average, shy) as a between-subject variable for each of the four teacher beliefs dependent variables (i.e., teacher self-efficacy, teacher warmth/support, social-learning strategies, and high-powered strategies). Mauchly’s Test of Sphericity suggested that sphericity assumption was met for teacher self-efficacy ( $p = .18$ ), but violated for teacher warmth/support ( $p = .01$ ), social-learning strategies ( $p < .001$ ) and high-power strategies ( $p < .001$ ). We used the Huynh-Feldt correction values when sphericity was violated. Descriptive statistics are presented in Table 1, and the results for Bonferroni Comparison for the main effects of preservice teachers’ responses across teacher type is presented in Table 2.

Table 1

Descriptive Statistics by Child Vignette and Teacher Type

	Self-efficacy		Warmth/support		Social-learning strategies		High-powered strategies	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<b><i>Shy child</i></b>								
Shy teacher <sup>1</sup>	3.85	.61	4.30	.56	4.16	.52	1.85	.58
Average teacher <sup>2</sup>	4.02	.58	4.34	.46	4.27	.42	1.82	.47
Outgoing teacher <sup>3</sup>	4.27	.57	4.53	.54	4.42	.43	1.69	.47
Total	4.03	.60	4.37	.51	4.28	.46	1.80	.50
<b><i>Typical child</i></b>								
Shy teacher	4.17	.69	3.93	.59	3.43	.64	1.25	.56
Average teacher	4.33	.64	3.99	.63	3.66	.66	1.29	.52
Outgoing teacher	4.65	.53	4.24	.73	3.69	.80	1.20	.38
Total	4.36	.65	4.03	.65	3.60	.69	1.26	.50
<b><i>Exuberant child</i></b>								
Shy teacher	3.82	.65	3.82	.85	3.90	.51	3.52	.52
Average teacher	3.97	.64	3.93	.59	4.08	.51	3.31	.64
Outgoing teacher	4.15	.59	4.12	.72	4.17	.53	3.42	.76
Total	3.97	.64	3.94	.64	4.05	.52	3.39	.64

Note. <sup>1</sup>  $n = 71$ . <sup>2</sup>  $n = 170$ . <sup>3</sup>  $n = 93$ .

Table 2

Bonferroni Comparison for the Main Effects of Preservice Teachers' Responses Across Teacher Type (Shy, Average, and Outgoing)

Comparisons among teacher types	Mean Diff	S.E.	95% CI
<i>Teacher self-efficacy</i>			
Shy vs. Average	-.16*	.06	[-.31, -.01]
Shy vs. Outgoing	-.41**	.08	[-.60, -.23]
Average vs. Outgoing	-.25*	.07	[-.42, -.09]
<i>Teacher warmth/support</i>			
Shy vs. Average	-.07	.06	[-.22, -.08]
Shy vs. Outgoing	-.28*	.08	[-.47, -.10]
Average vs. Outgoing	-.21*	.07	[-.38, -.46]
<i>Social-learning strategies</i>			
Shy vs. Average	-.17*	.05	[-.31, -.04]
Shy vs. Outgoing	-.26**	.07	[-.42, -.10]
Average vs. Outgoing	-.09	.06	[-.23, -.06]
<i>High-powered strategies</i>			
Shy vs. Average	.07	.05	[-.05, .18]
Shy vs. Outgoing	.10	.06	[-.04, .24]
Average vs. Outgoing	.04	.05	[-.09, .16]

\*  $p < 0.05$ . \*\*  $p < .001$ .

### **Teacher Self-Efficacy**

There were significant main effects of child Vignette,  $F_{(2, 664)} = 64.96, p < .001$ , partial  $\eta^2 = .16$  (a large effect), but no Vignette  $\times$  Group interaction,  $F_{(4, 664)} = .74, p = .57$ . Test of between-subject effects revealed a significant main effect of teacher Group,  $F_{(2, 332)} = 14.29, p < .001$ , partial  $\eta^2 = .08$  (a medium effect). Preservice teachers reported significantly higher self-efficacy in dealing with the typical child ( $M = 4.39, SE = .04$ ) as compared to both shy ( $M = 4.05, SE = .03$ ) ( $p < .001$ ) and exuberant children ( $M = 4.00, SE = .04$ ) ( $p < .001$ ). There was no difference between preservice teachers' self-efficacy in dealing with shy and exuberant children. Results from follow up simple effects analyses using the Bonferroni correction indicated significant differences among all three teacher groups, with *outgoing* teachers reporting higher self-efficacy ( $M = 4.36, SE = .06$ ) than both *average* teachers ( $M = 4.11, SE = .04$ ),  $p = .001$ , and *shy* teachers ( $M = 3.95, SE = .05$ ),  $p < .001$ . In addition, *average* teachers reported significantly higher self-efficacy than *shy* teachers,  $p = .036$ .

### **Teacher Warmth/Support**

For teacher warmth/support, tests of within-subject effects indicated a significant main effect of Vignette,  $F_{(2, 662)} = 85.36, p < .001$ , partial  $\eta^2 = .21$  (a large effect), but no interaction between Vignette and teacher Group,  $F_{(4, 378)} = .495, p = .739$ . Test of between-subject effects suggested a significant main effect of teacher Group,  $F_{(2, 331)} = 7.16, p = .001$ , partial  $\eta^2 = .04$  (a small effect). Preservice teachers reported significantly higher warmth/support in dealing with the exuberant child ( $M = 4.39, SE = .03$ ) as compared to both shy ( $M = 3.96, SE = .04$ ) ( $p < .001$ ) and average children ( $M = 4.05, SE = .04$ ) ( $p < .001$ ). Preservice teachers reported more warmth/support in dealing with average than shy children ( $p = .029$ ). *Outgoing* teachers reported significantly more warmth/support ( $M = 4.30, SE = .06$ ) than their *shy* ( $M = 4.02, SE = .05$ ) ( $p = .007$ ) and *average* ( $M = 4.09, SE = .04$ ) counterparts ( $p = .001$ ). There is no difference between shy and average teachers in terms of their warmth/support toward children.

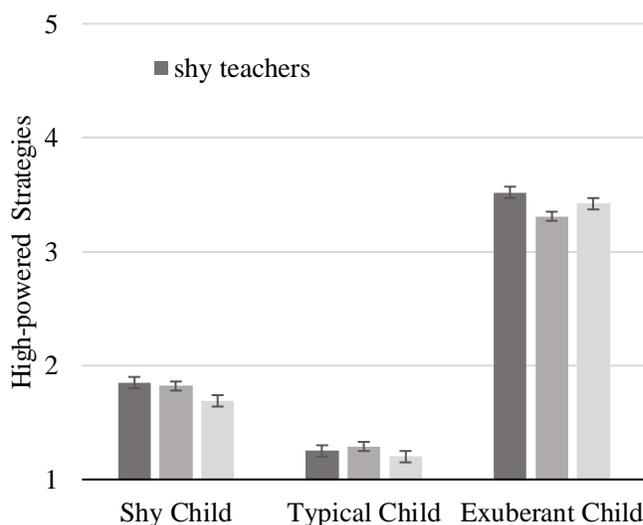
### **Teacher Strategies**

***Social-Learning Strategies.*** For social-learning strategies, tests of within-subject effects indicated a significant main effect of Vignette,  $F_{(2, 664)} = 184.69, p < .001$ , partial  $\eta^2 = .36$  (a large effect), but no interaction between Vignette and teacher Group,  $F_{(4, 664)} = .86, p = .47$ . Tests for between-group effects indicated a significant effect of teacher Group,  $F_{(2, 332)} = 8.59, p < .001$ , partial  $\eta^2 = .05$  (a small effect). Preservice teachers reported being more likely to use social-learning strategies when working with exuberant children ( $M = 4.30, SE = .03$ ) than shy children ( $M = 4.05, SE = .03$ )

( $p < .001$ ) and typical children ( $M = 3.60, SE = .04$ ) ( $p < .001$ ). Preservice teachers were more likely to use social-learning strategies for shy than average children ( $p < .001$ ). *Outgoing* teachers were significantly more likely to report using social-learning strategies ( $M = 4.10, SE = .06$ ) than their *shy* ( $M = 3.84, SE = .04$ ) counterparts,  $p = .001$ . No difference was observed between outgoing and average teachers, and between average and shy teachers.

**High-Powered Strategies.** Finally, for high-powered strategies, results indicated a significant main effect of Vignette,  $F_{(2, 664)} = 1495.00, p < .001$ , partial  $\eta^2 = .82$  (a large effect), but not for teacher Group,  $F_{(2, 333)} = 1.68, p = .20$ , which was superseded by a significant Vignette  $\times$  teacher Group interaction,  $F_{(4, 666)} = 2.93, p = .02$ , partial  $\eta^2 = .02$  (a small effect). Teachers reported significant differences among all three vignettes in using high-powered strategies, with highest scores for the exuberant child ( $M = 3.42, SE = .04$ ), compared to the shy ( $M = 1.79, SE = .03$ ) ( $p < .001$ ) and then the typical child ( $M = 1.25, SE = .03$ ) ( $p < .001$ ). In addition, shy teachers were less likely than average teachers to use high-powered strategies with shy children, but more likely with exuberant children (see Figure 1).

Figure 1. Effect of Teacher Shyness (Shy, Average, Outgoing) on High-powered Strategies by Child Behavior



## Discussion

The purpose of the present study was to examine the associations between preservice teachers' shyness (shy, average, and outgoing) and their responses toward hypothetical children displaying problem behaviors (shy/quiet, talkative/exuberant) in the classroom. Overall, results indicated significant differences between shy and outgoing preservice teachers in terms of their perceived self-efficacy beliefs, warmth and support, as well as their likelihood to employ different strategies in response to problem behaviors in the classroom.

### Teacher Self-Efficacy

Shy preservice teachers reported the lowest perceived self-efficacy beliefs in dealing with student behaviors in the classroom as compared to their average and outgoing counterparts. This finding is consistent with previous studies linking shyness with a general lack of self-efficacy (Leary, 2001). More specific to the classroom, Bullock et al. (2015) recently reported that teacher extraversion was positively associated with self-efficacy for classroom management among early childhood educators. This finding has implications for shy preservice teachers. For example, among teachers, self-efficacy is associated with other important dispositions, such as openness to new ideas, willingness to experiment with new methods, persistence and resilience while working with the difficult students (Jerald, 2007). Teacher self-efficacy also influences their job satisfaction and students' academic achievement (Caprara, Barbaranelli, Steca, & Malone, 2006; Klassen et al., 2011). Thus, for shy preservice teachers, this initial lack of self-confidence may contribute to performance issues that are essential for success in the classroom. In addition, we postulate that shy preservice teachers might be less likely to engage in various teaching-related activities interacting with children with difficult behaviors during a teacher education program, which provides them fewer opportunities to gain mastery

experiences and meaningful feedback leading to self-efficacy (Bandura, 1986). Indeed, previous reports have suggested that outgoing teachers were more likely to be involved in teaching activities that support student engagement and performance compared to their introverted peers (Reeve, 2009).

### **Teacher Warmth/Support**

Outgoing teachers reported the highest levels of warmth/support (e.g., I would be patient with the child; I would have sympathy for the child) and use of social learning strategies (e.g., promote social skills; encourage the child to join activities) in response to student behaviors, whereas shy and average teachers did not differ significantly for these variables. In this regard, it may be that shyness in itself does not prevent preservice teachers from expressing positive emotions or modeling social behaviors in the context of the classroom. In contrast, being more sociable and outgoing may contribute to these tendencies. In support of this assertion, it has been previously reported that as compared to their more introverted counterparts, extraverted teachers are more likely to be directly involved in teaching activities that support student engagement and performance (Reeve, 2009), tend to participate in learning activities in the workplace such as informal interaction with colleagues and experimentation of new teaching practice (van Daal, Donche, & De Maeyer, 2014), and are generally more effective in the classroom (e.g., Rushton et al., 2007).

### **Teacher Strategies**

Our finding revealed that shy preservice teachers were less likely to use social-learning strategies compared to outgoing preservice teachers. In the current study, social-learning strategies were conceptualized as promoting social skills by modeling appropriate behaviors, praising the child for appropriate behaviors, involving classmates to help create positive solutions, and encouraging the child to join activities to increase social interactions. This finding is somewhat congruent with previous work regarding the link between teacher personality and teacher behaviors (e.g., Rushton et al., 2007) showing that more outgoing teachers who were higher in extraversion tended to also be more effective in the classroom.

For high-powered strategies, regardless of their levels of shyness, preservice teachers were more likely to use high-powered strategies such as directly intervening for exuberant children who were depicted as more disruptive to the classroom environment than both shy and average children. The results corroborate with previous research showing that elementary school teachers were also more likely to use higher-powered strategies with exuberant children (e.g., Arbeau & Coplan, 2007; Brophy & McCaslin, 1992; Coplan et al., 2015, 2011; Thijs et al., 2006). For example, a recent study by Nelson and Evans-Stout (2019) reported that teachers did not take as proactive an approach to working with shy children as they with exuberant children. In addition, preservice teachers were more likely to use high-powered strategies for shy children than average children, which might be due to teachers' increasing awareness of the link between shyness and socioemotional difficulties in childhood (Rubin, Coplan, & Bowker, 2009). When preservice teachers' own shyness is considered as a factor, interestingly, shy preservice teachers were less likely to use high-powered strategies with shy children (e.g., punish the child; have the child apologize for his behavior) compared to their average counterparts, perhaps because shy preservice teachers are better able to understand this type of behavior and thus might be more empathetic toward shy children (Coplan et al., 2011). To be noted, shy preservice teachers were still more likely to use high-powered strategies with shy children compared to their outgoing counterparts. However, compared to average counterparts, shy teachers are more likely to use high-powered strategies in response to exuberant behaviors, possibly because they understand exuberance less well compared to shyness.

### **Implications**

Our findings suggest that shyness among preservice teachers can have potential implications for their subsequent job performance. Summing up, it appears from the results of this study that preservice teachers' shyness can impede their teaching strategies, attitudes, and relationships with their children. These findings raise concern about the need for self-awareness and clear understanding of the personality traits of preservice teachers entering the teaching profession. Fajet et al. (2005) noted that preservice teachers believe that personality characteristics are as important for good teaching as academic preparation and subject knowledge. It has also been suggested previously that preservice teachers need to recognize how their personality characteristics and beliefs might affect their teaching performance (Bastian et al., 2017; Jamil et al., 2012; Rushton et al., 2007; Stuart & Thurlow, 2000). Through recognition of their own personality traits and the importance of social-learning strategies, highly shy preservice teachers might optimize their performance in a classroom by using more pedagogically responsive strategies (e.g., social-learning strategies) to deal with problem student behaviors that would have a more positive effect on children.

Moreover, teacher education programs should evaluate their efforts to provide assistance and mentoring to preservice teachers who report higher levels of shyness. We suggest that teacher education programs need to prepare preservice teachers to effectively understand and address their personality traits through the knowledge and skills they receive during training. Highly shy preservice teachers who would force themselves to be actively involved in all extracurricular activities at their new job may end up feeling tired and exhausted. It is important to understand that shy and introverted individuals have a need for some quiet time alone in order to recharge their energy (Fairhurst & Fairhurst, 1995; Spencer, 2016). Self-awareness about their shyness may help preservice teachers to schedule their school activities more effectively, such as volunteering to supervise independent projects or mentoring small groups of students. Last but not least, pairing them up with a more outgoing colleague might provide shy teachers a safe and comfortable environment to improve their professional performance in terms of dealing with problem behaviors in the classroom.

### **Limitations and Future Research**

Notwithstanding, some caveats must be considered in the interpretation of our results. For example, the reliance on self-report may have inflated associations among study variables due to shared-method variance. Moreover, preservice teachers only responded to vignettes depicting hypothetical children's behaviors. Both of these issues could be addressed by future researchers by including direct observations of preservice teachers' practices in a classroom with different child behaviors and interviewing preservice teachers related to their perceptions of different child behaviors to solicit richer data. Also of note, to reduce participant load, only male vignettes were included in the current study. Although previous research does not suggest a strong pattern of gender-based beliefs and responses to classroom misbehaviors for children in early childhood (e.g., Coplan et al., 2015, 2011), future research should examine teachers' reactions to both boys and girls because shyness seems to be viewed less negative for girls than for boys (Doey, Coplan, & Kingsbury, 2014) and there might be a gender difference for preservice teachers' reactions toward child behaviors in the classroom. Doey et al.'s (2014) review study on gender difference on shyness also suggested that most existing studies did not specifically consider the difference between boys and girls. In addition, although we found no difference between male and female preservice teachers in their responses, future research might continue to consider teachers' own gender as a factor affecting their responses when the proportion of female preservice teachers are different than that in the present study (88%). The present study only included preservice teachers from a large Midwest research university in the United States, and the results might not be generalizable to preservice teachers from institutions with drastically different characteristics. Finally, we were explicitly interested in the role of preservice teacher shyness in their professional performance in the classroom. Additional measures of teacher personality (e.g., Big Five) might also add to our understanding of how traits might influence teacher attitudes and performance in the classroom.

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