

Same-Gender Peer Interaction and Preschoolers' Gender-Typed Emotional Expressiveness

Eric W. Lindsey¹

Published online: 11 March 2016
© Springer Science+Business Media New York 2016

Abstract The present study was guided by hypotheses derived from peer-socialization models of gender development that suggest preschool children's time spent interacting with same-gender peers would be linked to gender-typed emotional expressiveness. Specifically, I predicted that girls who engaged in high levels of same-gender peer interaction would express more happiness, sadness, and fear, whereas boys who engaged in more same-gender peer interaction would express more anger. To address these hypotheses, a longitudinal study was conducted in which video recordings were made of 122 preschool children (57 boys, 65 girls; 86 European American, 9 African American, 17 Hispanic, and 10 other ethnicity) attending a University sponsored preschool program in the U.S. Southwest over a period of 2 years. Video recordings of children's peer interactions in Years 1 and 2 were coded for involvement with same-gender peers and emotional expressiveness. Results of analyses revealed that both girls and boys who spent more time interacting with same-gender peers in Year 1 expressed more happiness in Year 2. Boys who spent more time interacting with same-gender peers in Year 1 displayed higher levels of anger in Year 2. Girls who spent more time interacting with same-gender peers in Year 1 displayed higher levels of sadness in Year 2. The findings support arguments made by the peer-socialization model of gender development that gender-segregated peer interaction contributes to patterns of gender-typed expression of emotions.

Keywords Preschool children · Peer relationships · Gender-typed emotional expressiveness · Same-gender peer interaction

Emotional expressiveness plays a major role in children's positive peer relationships and social adjustment in the United States (Sallquist et al. 2012; Sallquist et al. 2009). As early as preschool, the ability to appropriately communicate feelings to peer partners has been identified as an important element of socioemotional competence among U.S. samples (Garner et al. 1997; Mize and Ladd 1988). Concomitantly, difficulties in emotional expressiveness have been linked to social adjustment problems among preschool children (Miller et al. 2006). For example, it is well established that in childhood high levels of anger are associated with conduct problems in boys, such as defiance and aggression (Milich et al. 1982; Miller and Olson 2000). In turn, high levels of sadness and fear are linked to symptoms of depression and anxiety, which tend to be more prevalent in girls (Luby et al. 2009; Zahn-Waxler et al. 2008). Consequently, the identification of factors that underlie gender differences in emotion expression could shed light on the mechanisms that account for known gender differences in the prevalence of childhood maladjustment.

The goal of the present study was to test a theoretical model proposed by Rose and Rudolph (2006) arguing that same-gender peer interaction reinforces children's gender-typed behavior patterns. The model was examined in relation to U.S. preschool children's gender-typed expression of emotions, given evidence that at this age differences are seen in girls' and boys' tendency to express specific emotions (Chaplin and Aldao 2012). Understanding the role that early gender segregation may play in girls' and boys' patterns of emotional expressiveness will add to existing knowledge regarding the social construction of gender-typed behavior. Specifically,

✉ Eric W. Lindsey
ewl10@psu.edu

¹ Applied Psychology, Penn State University Berks Campus, 7009 Tulpehocken Road, Reading, PA 19610, USA

by examining how individual differences in preschool children's play with same-gender peers predicts changes in girl's and boy's subsequent expression of emotion, my study provides information about how individual differences in affiliation with same gender peers accounts for variation in children's gender-typed expression of emotion over time. To accomplish this goal, data were collected based on direct observations of preschool children's interactions with peers over a period of 2 years. Analyses focused on examining how gender-segregated peer play in Year 1 was related to changes in children's emotional expressiveness from Year 1 to Year 2. By looking at changes over time, my study directly examines the effect that same-gender peer play has on gender-typed patterns of emotional expressiveness. In the following literature review a more thorough rationale for the study is presented. All of the studies cited in the review of literature are based on U.S. samples unless an exception is noted.

Gender-Typed Emotions

Social constructionist theorists (Deaux and Major 1987; Shields 2002) argue that cultural expectations regarding what is appropriate behavior for males and females influence the expression of gender. In relation to emotional expressiveness, social constructionist theorists suggest that cultural attitudes about the roles of men and women contain specific information concerning how each gender should express emotion (Averill 1980; Shields 2002), and what specific emotions are appropriate for males and females (Becht and Vingerhoets 2002; LaFrance et al. 2003). Broadly speaking, social constructionist theorists suggest that females are expected to be more nurturing and relationship focused than are males, whereas males are expected to be more assertive and individualistic (Brody and Hall 2000; Wood and Eagly 2002). In turn, the specific emotions of happiness, sadness, and fear have been identified as functioning to bring people together or promote closeness, and thus they are considered to be socially constructed in a gender-typed pattern for females to display more frequently than males (LaFrance et al. 2003; Zahn-Waxler and Robinson 1995). Anger, on the other hand, has been identified as serving the function of assisting with overcoming obstacles and expressing independence so that it is socially constructed to be more appropriate for males to display more frequently than females (Brody 1999; Eagly and Steffen 1984).

Consistent with the premise of social constructionist theory, comparisons of samples from several different countries revealed that beliefs about gender and emotion vary from one culture to another (Diener and Lucas 2004). Expressions of sadness and fear are considered more appropriate to the feminine gender role, whereas anger is more commonly linked to the masculine gender role (Dillion et al. 1985; Plant et al.

2000). Gender-typed beliefs about emotion also appear to play a role in socialization strategies parents employ with preschool age children in that, when reading emotion picture books with gender-neutral characters, parents label the character "girl" more often in scenes pertaining to happiness and sadness and use the label "boy" more in scenes about anger (van der Pol et al. 2015). Parents also show a greater acceptance of anger (Birbaum and Croll 1984) and lower acceptance of sadness (Fuchs and Thelen 1988) in boys than in girls. In addition, parents talk more about sadness and less about anger with their daughters than with their sons (Fivush and Wang 2005). Studies also suggest that gendered stereotypes may be mirrored in children's emotional expressiveness patterns in social interactions. A recent meta-analysis conducted by Chaplin and Aldao (2012) examining 166 observational studies of children's emotional expressiveness, the majority (86%) of which were based on White samples from the United States., revealed small but significant differences in girls' greater tendency than boys' to express positive emotions, as well as sadness and anxiety, whereas boys were found to express more anger than girls. Moreover, gender differences in patterns of emotional expressiveness were found to be more robust in studies in which children were observed with peers, compared to studies based on observations with parents.

Peers represent important agents of socialization during the preschool period (Bukowski et al. 2014). Just as parents and other adults are likely to adopt socialization strategies that reflect the dominant beliefs of their culture, so too peers act to socialize children in ways that are consistent with cultural norms (Chen 2012). There is evidence that preschool children hold stereotyped beliefs about emotion that mirror patterns of beliefs seen in adult samples in that both boys and girls associate expressions of sadness and fear with females, but link expression of anger with males (Birbaum 1983; Birbaum and Croll 1984). These gender-typed attitudes about emotional expression may influence the types of emotions that children express when interacting with peers. Furthermore, peers may establish emotional display rules based on culturally informed gender-typed attitudes about emotions, and they may use these rules to regulate other children's behavior through social exclusion or other forms of social reinforcement (Garner et al. 1997). However, few studies have examined how preschool children's peer interaction patterns may be related to gender-typed expression of emotion.

Preschool Children's Interactions with Peers

During the preschool years interactions with peers occur predominantly in same-gender peer groups (Maccoby 1998; Maccoby and Jacklin 1987). Both girls and boys interact more frequently with same-gender peers than with other-gender peers (Bukowski et al. 1993; Kovacs et al. 1996). Despite

these group level trends, there are wide individual differences in children's propensity to interact with same-gender peers, and such differences appear to be relatively stable (Colwell and Lindsey 2005; Fabes et al. 2003). Although interaction with other-gender and mixed-gender peers may be of limited duration for any given child, children's experience with other-gender and mixed-gender peers may have important consequences for their social development. Moreover, research suggests that different relationship styles are formed within same-gender male and female peer groups (Ramsey 1995). Therefore, a child who interacts exclusively with same-gender peers may develop unique social patterns relative to a child who spends a portion of their time interacting with mixed-gender or other-gender peers.

Gender-Typed Peer Interaction

Rose and Rudolph (2006) outline a theoretical model explaining how exposure to same-gender peers contributes to the development of gender-typed peer relationship styles. The authors posit that gender differences in patterns of emotion and behavior displayed by young children can be partially accounted for by gender differences in peer relationship processes that are fostered, at least in part, by exposure to same-gender peers. Specifically, the underlying thesis of the model is that exposure to same-gender peers elicits and strengthens gender-linked relationship processes. In keeping with peer-socialization models (Maccoby 1990, 1998), and based on principles of social learning and reinforcement (Bussey and Bandura 1999), the authors suggest that children develop gender-typed behavior through a process of differential reinforcement that increases gender-typed behavior and decreases cross-gender behavior. Group related processes, such as attraction to other in-group members and devaluing of out-group members (Tajfel 1982), contribute to children's identification with the same-gender peer group and a tendency to segregate by gender. Because gender segregation is so pervasive, the vast majority of children are exposed to same-gender peers far more than other-gender peers during early childhood (Martin et al. 2013). As a result, over time, socialization by same-gender peers should contribute to mean-level gender differences in social behavior.

In support of Rose and Rudolph's (2006) proposal, evidence suggests that the amount of time children spend with same-gender peers contributes to how much gender-typed behavior they exhibit. Specifically, Martin et al. (2002) found that spending time with same-gender peers predicted increased gender-typed behavior (e.g., playing with dolls for girls and trucks for boys) over a 6-month period among preschool and Kindergarten age children. The implication of the Martin et al. (2002) study is that youth who have the most exposure to same-gender peers should be the most likely to

exhibit gender-linked relationship processes, and, therefore, be more likely to display gender-typed behavior. Accordingly, knowing the degree to which individual girls or boys spend time with same-gender peers and exhibit gender-linked relationship processes should be helpful for understanding individual differences in boys' and girls' gender-typed behavior.

The Present Study

Following the model proposed by Rose and Rudolph (2006), the goal of the present study was to examine the effect of gender segregation on preschool children's emotional expressiveness (see Fig. 1). Specifically, I sought to examine if children's involvement in gender-segregated peer interaction would predict increased gender-typed patterns of emotional expressiveness longitudinally. Gender-segregated peer interaction was examined by observing children's interactions with peers during their normal hours of attending preschool and by noting the gender composition of the peers with whom children interacted. In addition, observations were made of children's emotional expressiveness. The general hypothesis guiding my study was that children who engaged in high levels of gender-segregated peer interaction in Year 1 would be characterized by more gender-typed patterns of emotional expressiveness one year later. More specifically, in keeping with social constructionist theory and past empirical evidence concerning gender differentiated patterns of specific emotional expressions (Chaplin and Aldao 2012), I hypothesized (a) that girls who engaged in high levels of same-gender peer interaction in Year 1 would express more happiness in Year 2 (Hypothesis 1), (b) that boys who engaged in high levels of same-gender peer interaction in Year 1 would express more anger in Year 2 (Hypothesis 2), (c) that girls who engaged in high levels of same-gender peer interaction in Year 1 would express more sadness in Year 2 (Hypothesis 3), and (d) that girls who engaged in high levels of same-gender peer interaction in Year 1 would express more fear in Year 2 (Hypothesis 4).

Method

Participants

Data were collected over a period of 4 years from Fall 2001 to Spring 2005. The sample consisted of 122 children who attended a University laboratory childcare center in a Midwest city of the United States for 2 consecutive years. There were 39 children with data from 2001 to 2003, 38 children with data from 2002 to 2004, and 45 children with data from 2003 to 2005. ANOVA comparisons revealed no significant differences between groups based on years of

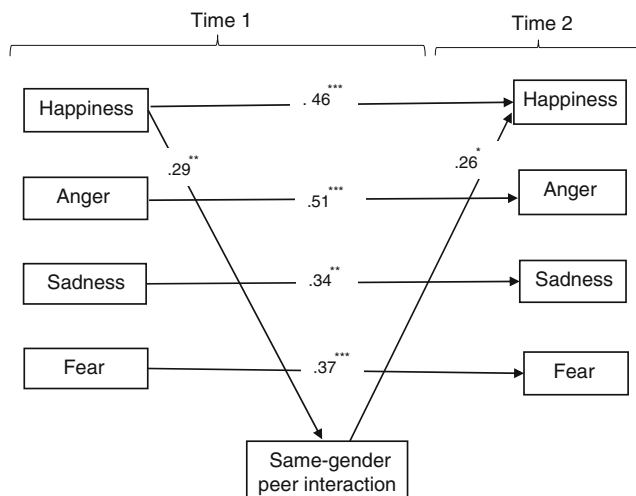


Fig. 1 Path analysis model examining associations between emotional expressiveness and same-gender peer interaction. Only significant standardized regression coefficients after controlling for child age are shown. * $p < .05$. ** $p < .01$. *** $p < .001$

participation, or differences between children with 2 years of data and children with one year of data on demographic characteristics or any measure used in my study (see Table 1 for summary of demographic characteristics of sample).

The institutional review board (IRB) of the University where the data were collected approved the procedures associated with my study. As a condition of children attending the University childcare center, parents and guardians consented to have their children involved in approved research, but they were allowed to opt out of any study or study component. In addition, children were able to refuse to take part in any research activity. For my study, parents of 24 children did not give consent, and 12 additional children did not want to be interviewed. Thus, the sample for my study represents 78% of all eligible children who attended the center during the 4 years of data collection.

Procedure

In each year, data were collected from September to May. At the beginning of the school year, a written description of the study was distributed to parents of all the children attending the preschool, along with a family demographic questionnaire and a consent form for their child to participate. Parents were asked return the demographic questionnaire and consent form using a pre-stamped envelope within 3 weeks, and follow-up reminder letters were distributed to those who missed the deadline.

Beginning in November and continuing through April of each year, trained research assistants videotaped children's behavior in the childcare setting. Researchers spent 1 week in the classrooms pretending to videotape children without turning the camera on in order to acclimate children to their

presence and reduce reactivity. Using a predetermined random list of names, researchers followed a target child with the videocamera for 5 minutes. After recording one child's behavior, the researcher moved to observe the next child on the list, until each child in the classroom had been observed once. Then the researcher started over by choosing a child's name from the list, at random, and proceeding through the list again in consecutive order. In this way, the order of observation was changed with each pass to control for order effects. Videotaping took place predominately during the free-play periods of the school day (86% of all observations), both during the morning (54% of observations) and the afternoon (46% of observations), as well as indoors (51% of observations) and outdoors (49% of observations).

This procedure was repeated on each visit, with each researcher averaging three visits to a classroom per week over the 4-month period. In Year 1, a total of 3048 5-minute scans were collected over the 6-month period, for an average of 24 scans (120 minutes) per child, and a range of 20 to 27 scans (100 to 135 minutes). The average number of scans for boys was 25.81 (129.05 minutes), with a range of 21 to 27 (105 to 135 minutes), and the average number of scans for girls was 23.18 (115.90 minutes), with a range of 20 to 25 (100 to 125 minutes). In Year 2, a total of 3015 5-minute scans were collected over the 6-month period, for an average of 24 scans (120 minutes) per child, and a range of 18 to 29 scans (90 to 145 minutes). The average number of scans for boys was 24.16 (120.08 minutes), with a range of 19 to 25 (95 to 125 minutes), and the average number of scans for girls was 24.84 (124.20 minutes), with a range of 18 to 29 (90 to 145 minutes). Differences in the observation time across children were the result of absences and limited availability of children.

Measures

Coding Naturalistic Observations of Children's Interaction with Peers

Using observational schemes similar to those employed in previous research with young children in school settings (Fabes et al. 2003; Ladd et al. 1999; Mize and Ladd 1988;), 20 trained research assistants (10 different coders in Year 1 and Year 2), who were unaware of the research questions guiding the study, coded the videotapes of children's behavior in the preschool setting. Researchers received 30 hours of training before coding data to be used in analyses that included reviewing the coding manual, reviewing practice tapes with the primary investigator who identified exemplars of behaviors from each scale, and independently coding practice tapes until they achieved 80% agreement with the primary investigator. Once reliability was achieved, coders were randomly assigned videotapes to code. To assess reliability during ongoing coding, approximately 20% of the tapes ($n = 50$) were

Table 1 Demographic statistics for boys and girls, years 1 and 2

	Boys (<i>n</i> = 57)			Girls (<i>n</i> = 65)		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
Year 1						
Child age in months	56.23	11.45	35.16–70.58	58.99	14.52	34.24–71.68
Father occupation status ^a	68.38	21.22	32.13–81.52	71.11	18.54	37.13–87.04
Mother occupation status ^a	62.61	17.54	23.71–77.83	64.25	17.12	27.28–78.37
Parents' marital status						
Married/cohabitating	52 (91%)			57 (88%)		
Single parent	5 (9%)			8 (12%)		
Total children in home	1.78	.89	1.00–4.00	1.85	.91	1.00–5.00
Ethnicity ^b						
European American	41 (72%)			45 (69%)		
Mexican American	7 (12%)			10 (15%)		
African American	4 (7%)			5 (8%)		
Other ^c	5 (9%)			5 (8%)		
Year 2						
Child age in months	67.71	10.81	47.25–82.12	69.07	12.81	46.76–83.68
Father occupation status ^a	69.31	20.45	32.13–81.52	72.54	16.03	37.13–87.04
Mother occupation status ^a	64.14	16.72	23.71–77.83	66.11	15.81	27.28–78.37
Parent marital status						
Married	52 (91%)			55 (86%)		
Single parent	5 (9%)			10 (14%)		
Total children in home	1.88	.81	1.00–4.00	1.96	.85	1.00–5.00

^aBased on Entwisle and Astone (1994) Total-based Socioeconomic Index in which higher scores reflect occupations with greater prestige

^bData for ethnic group membership is reported only for Year 1 because children's ethnic group status did not change over time

^cOther included Asian American, Pacific Islander, American Indian, and all other ethnic identity groups

assigned randomly to a primary coder (whose ratings were used in the analysis) and a reliability coder. The coders independently rated their assigned tapes and were unaware of which tapes had been assigned for reliability purposes. Each tape contained approximately 25 5-minute scans. Reliability between the primary and reliability coders was calculated using Kappa coefficients.

Observations of Children's Behavior

Video records from both Year 1 and Year 2 were coded using a micro-analytic coding scheme. For this coding scheme, 10 trained research assistants, who were unaware of the research questions guiding the study, coded each 10-s segment of video on a variety of dimensions (see Table 2 for a description of each dimension and kappa coefficients). First, the coder identified the child's social involvement, by noting whether the child was engaged in solitary activity, interacting with one or more adults, interacting with one or more peers, or interacting with both an adult and one or more peers. If the child was interacting with one or more peers, the coder noted whether

the child was interacting with peers who were of the same gender, the other gender, or with peers of both genders. Next, coders identified whether or not the target child expressed: (a) positive emotion, in the form of happiness/excitement/joy, and (b) negative emotion, in the form of anger/frustration/sadness /anxiety/fear. In addition, when negative emotion was coded as being present, coders used the emotional cues displayed by the target child to code what negative emotion was exhibited using the following categories: (a) anger, (b) sadness, (c) fear, or (d) unspecified negative emotion. More than one category could be coded for any given interval.

Data Reduction

Several composite variables were created from the observational codes. First, a composite variable representing the amount of time children spent interacting with same-gender peers was created. This composite was accomplished by dividing the total number of intervals in which a child was observed in same-gender peer interaction by the total number

Table 2 Summary of coding categories of children's behavior**A. Social Involvement**($\kappa = .96$)

- 1 Solitary activity: child does not engage in any form of interaction with another person during the segment.
- 2 Interacting with one or more adults: child makes some behavioral (e.g., handing an object or toy) or verbal initiation to an adult, or responds to an initiation an adult directs to them, and does not engage in interaction with a peer, during the segment.
- 3 Interacting with one or more peers: child makes some behavioral (e.g., handing an object or toy) or verbal initiation to a peer, or responds to an initiation a peer directs to them, and does not engage in interaction with an adult, during the segment.
 - 3a Gender of peer partner ($\kappa = .90$)
 - 3a1 Same gender peer interaction: child interacts only with peers of the same-gender during the segment.
 - 3a2 Other gender peer interaction: child interacts only with peers of the other-gender during the segment.
 - 3a3 Mixed gender peer interaction: child interacts both a same- and another-gender peer during the segment.
- 4 Interacting with both an adult and one or more peers: child makes some behavioral (e.g., handing an object or toy) or verbal initiation, or responds to an initiation, by both an adult and a peer, during the segment.

B. Positive emotional expression(Year 1 $\kappa = .80$; Year 2 = $\kappa = .84$)

- 0 No positive emotion: child displays no evidence of positive emotion during the segment.
- 1 Positive emotion: child displays some evidence of positive emotion, such as smiling, chuckling, laughter, and/or positive animated behavior, during the segment.

C. Negative emotional expression(Year 1 $\kappa = .74$; Year 2 = $\kappa = .79$)

- 0 No negative emotion: child displays no evidence of negative emotion during the segment.
- 1 Negative emotion: child displays some evidence of negative emotion, such as yelling, screaming, hitting, crying, frowning, or other perturbed facial expression, during the segment.
 - 1a Type of negative emotion (Year 1 $\kappa = .77$; Year 2 = $\kappa = .74$)
 - 1a1 Anger: child displays anger such as an irritated look, a negative tone, an expression of annoyance, becoming irritated, whining, yelling, screaming, or throwing a temper tantrum.
 - 1a2 Sadness: child displays sadness such as by frowning or crying.
 - 1a3 Fear: child displays fear such as an alarmed expression, nervousness, apprehension, clinging behavior, avoidance of some object or person, or anxiety
 - 1a4 Unspecified: child displays a negative emotion that cannot be clearly identified as anger, sadness, or fear.

Behaviors coded in 10 second segments

of intervals in which each child interacted with one or more peers. The resulting score represents the proportion of time each child spent in same-gender peer interaction. The proportion score was subsequently transformed into an Arc sine variable to be used in analyses; however, for ease of interpretation, the mean presented in the tables and text is the raw, untransformed proportion.

Second, composite variables representing children's expression of four different emotions (i.e., happiness, anger, sadness, and fear) were created. A score representing the overall frequency of emotional expressiveness was created for each emotion type by taking the sum of the number of intervals that a child was coded as expressing an emotion and dividing that sum by the total number of intervals the child was observed. For example, a happiness score was created by summing the total number of intervals that the target child was identified as expressing happiness and dividing that score by the total number of intervals that the target child was observed. Thus, scores represent the proportion of time the child expressed a specific emotion, relative to the time that they did not display the particular emotion. In this way, 4 separate emotion scores were created: happiness, anger, sadness and fear. Scores were arcsine transformed prior to analysis to reduce the skew of the data and to better approximate a normal distribution (Cohen and Cohen 1975). Scores could range from .00 to 1.00. For the purpose of my study, from Year 1 children's involvement with same-gender peers, and their emotional expressiveness variables were included in data analysis. From Year 2, only children's emotional expressiveness variables were included.

Results

Although not directly linked to any hypotheses, preliminary correlation analyses were conducted to determine if child behaviors varied as a function of child age or family demographic variables. There was a significant negative association between age and children's negative emotional expressiveness, $r = .27$, $p = .03$, suggesting that younger children displayed more negative emotion with peers than older children. One-way ANOVAs were used to examine differences between girls and boys on demographic variables, but no significant differences were found: child's age, $F(2,242) = 3.16$, $p = .41$; father's occupational status, $F(2,242) = 2.01$, $p = .33$, mother's occupational status, $F(2,242) = 4.53$, $p = .58$; and number of children in the home, $F(2,242) = 2.71$, $p = .37$.

Gender Differences in Emotional Expressiveness

To examine if patterns of gender differences in emotional expressiveness seen in previous studies (Chaplin and Aldao 2012) were replicated in the current sample, children's emotional expressiveness scores were subjected to a 2×2 (child gender \times year) repeated measures multivariate analysis of variance (MANOVA) (see Table 3). Year (Year 1; Year 2) was a within participant variable, whereas child's gender was a between participants variable. This MANOVA revealed a significant main effect for gender of child, $F(2, 242) = 36.79$, $p = .001$, $\eta^2 = .28$, and year, $F(2, 242) = 16.91$, $p = .04$,

Table 3 Descriptive statistics for same-gender peer interaction and emotional expressiveness for boys and girls, years 1 and 2

	Boys (<i>n</i> = 57)			Girls (<i>n</i> = 65)		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
Year 1						
Same-gender interaction	.57	.21	35.16–70.58	.61	.16	34.24–71.68
Emotion expressiveness						
Happiness	.26 ^a	.18	.11–.43	.39 ^a	.16	.18–.57
Anger	<u>.18^b</u>	.13	.06–.35	<u>.10^b</u>	.13	.00–.27
Sadness	.01 ^c	.14	.00–.13	.08 ^c	.10	.00–.22
Fear	<u>.03</u>	.03	.00–.16	<u>.09</u>	.06	.00–.25
Year 2						
Emotion expressiveness						
Happiness	.29 ^d	.22	.10–.42	.40 ^d	.19	.16–.59
Anger	<u>.14^e</u>	.12	.05–.32	<u>.06^e</u>	.15	.00–.24
Sadness	.05 ^f	.08	.00–.15	.08 ^f	.07	.00–.21
Fear	<u>.07</u>	.06	.00–.19	<u>.13</u>	.06	.00–.29

Untransformed means are presented in the table, but arc sine transformations were conducted for use in all other analyses. Means with the same superscripts are significantly different at $p < .05$. Means that are underlined are significant different from Year 1 to Year 2 at $p < .05$

$\eta^2 = .16$, but no significant interaction effect. Similar to the pattern seen in a meta-analysis of previous studies (Chaplin and Aldao 2012), follow up one-way ANOVAs indicated that girls displayed more happiness, $F(1, 121) = 21.12$, $p = .007$, $\eta^2 = .19$, and sadness, $F(1, 121) = 25.70$, $p = .006$, $\eta^2 = .19$, than boys did, whereas boys displayed more anger, $F(1, 121) = 18.54$, $p = .030$, $\eta^2 = .17$, than girls did. Children expressed more anger in Year 1 than in Year 2, $F(1, 121) = 23.42$, $p = .007$, $\eta^2 = .19$, and more fear in Year 2 than in Year 1, $F(1, 121) = 19.27$, $p < .03$, $\eta^2 = .18$.

Correlations

Correlations between the same-gender peer interaction at Year 1 and emotional expressiveness at Year 1 and Year 2 are presented in Table 4. Overall, the correlational analyses indicated that children's interaction with same-gender peers was related to children's expression of discrete emotions. Although these findings are informative, they do not directly address the hypotheses of the study concerning to what extent same-gender peer interaction relates to patterns of change in girls' and boys' emotional expressiveness over time.

Path Model

Study hypotheses were examined with a path analytic approach using Mplus 6 (Muthén and Muthén 2012). Path analysis allowed for the examination of change in emotional expressiveness from Year 1 to Year 2 as a function of children's level of engagement in same-gender peer interaction in Year 1. Overall model fit was examined with multiple fit indices

including chi square, ratio of chi square to degrees of freedom, root mean square error of approximation (RMSEA), and comparative fit index (CFI). The chi-square goodness of fit index tests exact model fit and a nonsignificant chi-square value (i.e., $p > .05$) supports model fit. Another fit index, the RMSEA, rewards model parsimony. RMSEA values below .06 support good model fit (Hu and Bentler 1999). Lastly, the CFI measures the fit of the model in comparison to the absolute fit of a baseline model and a value above 0.95 for the CFI indicates good model fit (Hu and Bentler 1999). There was no missing data in my sample.

Because I was interested in examining whether the magnitude of associations among emotional expressiveness and same-gender peer interaction differed for boys and girls, I examined group invariance in the overall path model. Specifically, an unconstrained model in which focal path coefficients were allowed to vary across boys and girls was compared with a model in which these path coefficients were constrained to be equal (i.e., to test the moderating role of child's gender). The chi-square difference test was used to compare the chi square and degrees of freedom for the two models (unconstrained vs. constrained) to determine whether constraining the focal path coefficients worsened model fit (Byrne 2004). This approach of estimating separate path models, for the sample as a whole and separately for boys and girls, has the advantage of parsimony in that it produces indices to directly compare the fit and magnitude of effects in each model (Goodnight et al. 2007).

The model tested in Fig. 1 allowed me to examine the hypotheses that same-gender peer interaction in Year 1 would predict gender-typed patterns of emotional expressiveness at

Table 4 Correlations among Study Variables

	1	2	3	4	5	6	7	8	9
1. Same-gender interaction	–	.28**	.11	.31*	.11	.27*	.02	.33*	.12
Emotion expressiveness: Year 1									
2. Happiness	.35**	–	.28*	-.42**	-.34*	.56**	.24*	-.31*	-.27
3. Anger	.41**	.36**	–	.33**	.23*	.11	.53**	.32*	.19
4. Sadness	-.27*	.29**	.26*	–	.31*	-.26*	.30*	.42**	.23*
5. Fear	.25*	.11	.22*	.12	–	.06	.23*	.12	.52**
Emotion expressiveness: Year 2									
6. Happiness	.30*	.57***	.25*	-.31*	-.08	–	.30*	-.32**	-.26*
7. Anger	.33**	-.37**	.62***	.24*	.10	.29*	–	.29**	.25*
8. Sadness	-.25*	-.33**	.22*	.32*	.20	-.35**	.23*	–	.33**
9. Fear	.22*	.01	.09	.10	.33*	.41**	.24*	.14	–

Correlations for boys are presented below the diagonal line; for girls, above
 * $p < .05$. ** $p < .01$

Year 2, after accounting for Year 1 emotional expressiveness. Child’s age and ethnicity were included as covariates to control for their effects. To account for their association with each other, correlation terms were included between the specific emotional expressiveness variables within Year 1 and Year 2. Child’s emotional expressiveness variables at Year 1 were included as predictors of emotional expressiveness at Year 2. The fit indices supported good fit for the model with $\chi^2(10) = 10.23, p = .04$; RMSEA = .051; and CFI = 0.98.

The majority of the paths from the covariates to emotional expressiveness and same-gender peer interaction at Year 1 were nonsignificant. However, the path from child’s age to child’s expression of anger was negative and statistically significant ($\beta = -.26, p = .03$). The respective stability paths from each of the specific emotional expressiveness variables in Year 1 to their matching counterpart in Year 2 were positive and highly statistically significant, demonstrating the stability in emotional expressiveness during preschool. The path from happiness in Year 1 to same-gender peer interaction in Year 1 was positive and statistically significant. None of the other paths from emotion expression in Year 1 to same-gender peer interaction in Year 1 was statistically significant. The path from same-gender peer interaction in Year 1 to expression of happiness in Year 2 was positively statistically significant. However, the paths from same-gender peer interaction to expression of anger, sadness, and fear were not statistically significant.

When examining gender as a moderator of the paths in the unconstrained model, the fit indices supported good fit, with $\chi^2(10) = 7.42, p = .05$; RMSEA = .028; and CFI = 1.00. Furthermore, the constrained model (which assumes no moderating influence of gender) had significantly poorer model fit relative to the unconstrained model, $\Delta\chi^2(10) = 27.83, \Delta p = .008$. As shown in Fig. 2, in the unconstrained model, the path from happiness in Year 1 to same-gender peer

interaction in Year 1 was positive and statistically significant for both girls and boys. For boys, but not girls, the path from anger in Year 1 to same-gender peer interaction in Year 1 was positive and statistically significant. For girls, the path from sadness in Year 1 to same-gender peer interaction in Year 1 was positive and statistically significant, whereas the same path for boys was negative and statistically significant. The path from same-gender peer interaction in Year 1 to expression of happiness in Year 2 was positive and accounted for a significant 6% and 7% of the variance in Year 2 happiness for girls and boys, respectively. This finding supports Hypothesis 1 that girls who engaged in more same-gender peer interaction in Year 1 would express more happiness in Year 2.

Hypothesis 2 concerning the role of same-gender peer interaction and an increase in boys’ expression of anger from

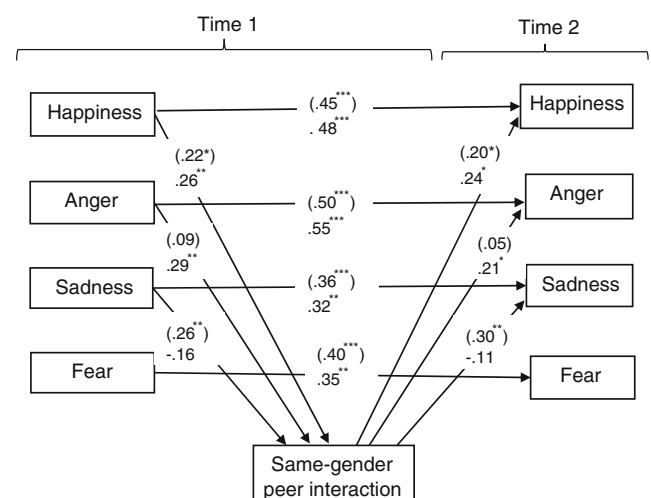


Fig. 2 Unconstrained path model examining child gender as moderator. Standardized path coefficients are presented, with path coefficients for girls in parenthesis and path coefficients for boys outside parenthesis. * $p < .05$. ** $p < .01$. *** $p < .001$

Year 1 to Year 2 also was supported in that for boys the path from same-gender peer interaction in Year 1 to anger in Year 2 was positive and accounted for a significant 6% of the variance. For girls the path from same-gender peer interaction in Year 1 to sadness in Year 2 was positive and accounted for a significant 9% of the variance. This finding supports Hypothesis 3 that girls who engaged in more same-gender peer interaction in Year 1 would express more sadness in Year 2. Although unrelated to a specific hypothesis, it is of interest to note that the path for same-gender peer interaction in Year 1 and sadness in Year 2 was negative and accounted for a significant 5% of the variance. Contrary to the prediction of Hypothesis 4, the path from same-gender peer interaction to expression of fear in Year 2 was not statistically significant for girls or boys.

Discussion

Context plays an important role in the emergence and maintenance of children's gender-typed behavior. It has been well established that the preschool context of U.S. children's peer interactions is predominated by a strong preference for same-gender playmates (Maccoby and Jacklin 1987; Serbin et al. 1993). Consistent with this characterization, children in the present study were observed to interact with same-gender peers approximately two times more often than with other-gender or with mixed-gender peer groups. Although past studies have reported that boys engage in more gender-segregated interaction than do girls (Fabes et al. 2003; Kovacs et al. 1996), this pattern was not the case with my sample in the present study. In fact, there were no differences between girls and boys in same-gender peer interaction.

A major goal of the present study was to examine the long-term consequences of interaction with same-gender peers for children's emotional expressiveness. Emotional expressiveness represents a domain of behavior in which gender stereotypes are prevalent (Hess et al. 2000; Miller et al. 2006), although more equivocal empirical evidence provides some support for the existence of actual differences in patterns of emotional expressiveness between females and males (Chaplin 2015). In keeping with a model outlined by Rose and Rudolph (2006), following principles of social-learning and cognitive development theory, I hypothesized that high levels of same-gender peer interaction would be related to gender-typed patterns of emotional expressiveness. Specifically, based on previous evidence of gender-typed differences in the expression of happiness (Chaplin and Aldao 2012), I hypothesized that same-gender peer interaction in Year 1 would be related to an increase in girls' expression of happiness in Year 2. This hypothesis was supported in that the data revealed that girls who engaged in high levels of same-

gender peer play in Year 1 expressed more happiness in Year 2. However, the same pattern was observed for boys.

Moreover, the link between same-gender peer interaction in Year 1 and expression of happiness at Year 2 remained significant for both girls and boys even after accounting for expression of happiness at Year 1. The fact that girls expressed more positive emotion than boys did at both Year 1 and Year 2 does suggest that a gender-typed pattern of expressing happiness exists and that it may be enhanced by same-gender peer interaction. That is, positive emotions appear to be more prevalent in girls' interactions with other girls, compared to boys' interactions with other boys in my sample of U.S. preschool children. Thus, girls who spend more time interacting with other girls have the experience of an atmosphere in which it is socially normative to express high levels of positive emotion. This pattern may result in a peer socialization process wherein girls are reinforced for expressing more positive emotion than boys are.

The finding that same-gender peer interaction was linked to expression of happiness in both girls and boys offers insight into children's predisposition to engage in gender-segregated play. The experience of positive emotion is a powerful motivating force (Fredrickson 1998). To the extent that interacting with same-gender peers is conducive to the experience of positive emotion (Brody and Hall 2000; Garner et al. 1997), children may be more likely to seek out same-gender peers as playmates in order to experience happiness. This argument is consistent with theorizing that children find the content and activity level of same-gender peers more enjoyable than that of other-gender peers. For example, Thome (1993) characterized the interaction between boys' and girls' peer groups as a form of "border work" that contains both positive and negative elements that children find over stimulating emotionally. As a consequence, children may limit their exposure to such conflicting emotional states by interacting predominately with same-gender peers and avoiding mixed-gender, or other-gender, peer interactions. It may also be that high levels of same-gender peer interaction is an indicator of social acceptance by same-gender peers for girls and boys, and as such contributes to children's experience of happiness. Further research is needed to explore actual differences in children's emotional experiences during same-gender, other-gender, and mixed-gender peer interactions.

Theoretical and empirical evidence from a social constructionist perspective suggest that males have a greater tendency to express anger than females (Chaplin and Aldao 2012). Applying Rose and Rudolph's (2006) peer socialization model to this perspective, I hypothesized that boys who engaged in more same-gender peer interaction in Year 1 would express more anger in Year 2. Support was found for this hypothesis in that not only was there a mean difference in boys expressing more anger than girls did, but also more same-gender peer interaction in Year 1 was linked to an increase in boys'

expression of anger in Year 2. In contrast, there was no significant association between same-gender interaction in Year 1 and expression of anger in Year 2 for girls. The fact that the link between same-gender peer interaction in Year 1 and boys' expression of anger in Year 2 remained significant even after accounting for anger in Year 1 suggests that the experience of same-gender peer interaction contributed to an increase in the expression of anger for boys in my sample of U.S. preschool children. It may be that boys who spend more time interacting with other boys receive positive reinforcement from other boys for freely expressing anger, whereas boys who spend time interacting with girls get messages of social disapproval for expressing anger. Alternatively, boys who are more inclined to express anger may be drawn to interaction with same-gender peers more than boys who are less inclined to express anger. Regardless of the direction of effect, which cannot be identified with precision given that patterns association between emotional expressiveness and same-gender peer interaction could have been established in toddlerhood prior to the assessments made in the present study, our findings suggest that same-gender peer interaction may solidify and strengthen an existing gender-typed pattern of expressing anger in boys.

According to social constructionist theorists, sadness is an emotion that serves the purpose of soliciting comfort and support from others, or conveying sympathy and understanding to others (Eagly and Steffen 1984; Plant et al. 2000). Because cultural norms prescribe females to be more relationship focused and nurturing than males, sadness is socially constructed in a gender-typed pattern for females to display more frequently than males (LaFrance et al. 2003; Zahn-Waxler and Robinson 1995). The findings of my study support this view in that girls expressed more sadness than boys at both Year 1 and Year 2. In addition, as hypothesized, girls who engaged in high levels of same-gender peer interaction in Year 1 expressed more sadness in Year 2. Although children in my sample expressed relatively low levels of sadness, this pattern of findings is consistent with Rose and Rudolph's (2006) peer-socialization model of gender-typed behavior suggesting that girls' existing tendency to express sadness is intensified by same-gender peer interaction. It may be that girls who spend time interacting with other girls witness more peer models who express sadness, increasing the likelihood that girls may imitate expressions of sadness. It may also be that the types of play and play themes in which girls engage are more conducive to the expression of sadness relative to types of play in mixed-gender or other-gender peer interactions. Future work should consider how emotional expressiveness in same-gender peer interaction varies as a function of type of play.

In keeping with gender-typed expectations of the expression of fear (Dillion et al. 1985), I hypothesized that same-gender peer interaction in Year 1 would increase girls', but not boys', expression of fear in Year 2. Although girls did express

more fear than did boys in both Year 1 and Year 2, there was no association between same-gender peer interaction and expression of fear for girls or boys. Consistent with other naturalistic studies of children's peer interactions (Garner et al. 1997; Malatesta-Magai et al. 1994), in the present study expressions of fear were relatively infrequent and difficult to detect. It may be that the overall low frequency of expression of fear contributed to an inability to identify links between same-gender peer interaction and expression of fear. It might be fruitful for future studies to examine how frequency of same-gender peer interaction relates to children's expression of fear in situations likely to induce fear.

In addition to those shortcomings already outlined, a number of limitations are important to consider when evaluating the results of my study. First, the ethnic composition of my sample was predominately White, making it difficult to generalize the results to other ethnic groups. Second, although adequate reliability of coding expression of emotions was obtained, the reliability of coding of negative emotion and types of negative emotion (i.e., anger, sadness, and fear) was lower than that of positive emotion. Thus, interpretations of data based on the coding of negative emotion should be made with caution. Third, the use of videotape recording limited the amount of information that could be acquired from children. It is possible that instances of emotional expression were missed due to the difficulty of capturing very active children from every angle, or that nuances in children's expression of emotion were missed due to the distance of the camera from the child. Fourth, in a related vein, the assessment of peer interaction and emotional expressiveness occurred in slightly different contexts. That is, the measures of children's interactions with same-gender peers were obtained based exclusively on observations of peer interaction, whereas the measures of emotional expressiveness were based on observations of peer interaction, as well as interactions with adults during preschool. Thus, there may have been factors that were not assessed, but that were related to both gender of peer partner and emotional expressiveness, that could account for the links observed in my study. A more fine-grained analysis of emotions expressed in the context of same-gender peer interaction may yield greater specificity in connections between same-gender of peer interaction and patterns of emotional expressiveness.

Taking these limitations into consideration, my findings do offer some potential insight into understanding the role same-gender peer interaction in patterns of emotional expressiveness among young children. Consistent with the model proposed by Rose and Rudolph (2006), interaction with same-gender peers correlated with gender-typed patterns of emotional expression of happiness, anger, and sadness. The findings suggest that children's propensity to interact with same-gender peers may lead to individual differences in children's expression of emotions and, as a result, gender-typed displays

of emotion may become more channeled over time. However, it is also possible that persistent tendencies of boys and girls to express particular types of emotion may contribute to preferences for interacting with same-gender peers. Additional longitudinal and experimental research is needed to clearly define the direction of effect between gender-segregated peer interaction and gender-typed patterns of emotional expressiveness in young children.

Acknowledgments This investigation was supported by faculty development grants from the College of Human Sciences at Texas Tech University to the author. The author would like to thank Molly Beiler, Chelly Cadet, Gina Feretti, Chris Forbes, Iris Miller, Mitzi Rivera, Stephen Rotkiski, and Marcy Tocker for their help in various phases of data collection and coding, and to Tiffany Miller and Samuel Warrick for help in editing the manuscript. The author is grateful to the children and teachers of the Texas Tech Child Development Research Center for their time and participation.

References

- Averill, J. R. (1980). A constructivist view of emotion. In R. Plutchik & H. Kellerman (Eds.), *Theories of emotion*. New York, NY: Academic.
- Becht, M. C., & Vingerhoets, A. J. (2002). Crying and mood change: A cross-cultural study. *Cognition & Emotion, 16*, 87–101. doi:10.1080/02699930143000149.
- Birbaum, D. W. (1983). Preschoolers' stereotypes about sex differences in emotionality: A reaffirmation. *The Journal of Genetic Psychology: Research and Theory on Human Development, 143*, 139–140. doi:10.1080/00221325.1983.10533542.
- Birbaum, D., & Croll, W. L. (1984). The etiology of children's stereotypes about sex differences in emotionality. *Sex Roles, 10*, 677–691. doi:10.1007/BF00287379.
- Brody, L. R. (1999). *Gender, emotion, and the family*. Cambridge, MA: Harvard University Press.
- Brody, L. R., & Hall, J. A. (2000). Gender, emotion, and expression. In M. Lewis & J. M. Haviland-Jones (Eds.), *Handbook of emotions* (2nd ed., pp. 338–349). New York, NY: Guilford Press.
- Bukowski, W. M., Gauze, C., Hoza, B., & Newcomb, A. F. (1993). Differences and consistency between same-sex and other-sex peer relationships during early adolescence. *Developmental Psychology, 29*, 255–263. doi:10.1037/0012-1649.29.2.255.
- Bukowski, W. M., Castellanos, M., Vitaro, F., & Brendgen, M. (2014). Socialization and experiences with peers. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 228–253). New York, NY: Guilford Press.
- Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review, 106*, 676–713. doi:10.1037/0033-295X.106.4.676.
- Byrne, B. M. (2004). Testing for multigroup invariance using AMOS graphics: A road less traveled. *Structural Equation Modeling, 11*, 272–300. doi:10.1207/s15328007sem1102_8.
- Chaplin, T. M. (2015). Gender and emotion expression: A developmental contextual perspective. *Emotion Review, 7*, 14–21. doi:10.1177/1754073914544408.
- Chaplin, T. M., & Aldao, A. (2012). Gender differences in emotion expression in children: A meta-analytic review. *Psychological Bulletin, 139*, 735–765. doi:10.1037/a0030737.
- Chen, X. (2012). Culture, peer interaction, and socioemotional development. *Child Development Perspectives, 6*, 27–34. doi:10.1111/j.1750-8606.2011.00187.x.
- Cohen, J., & Cohen, P. (1975). *Applied multiple regression/correlation analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Colwell, M. J., & Lindsey, E. W. (2005). Preschool children's pretend and physical play and sex of peer play partner. *Sex Roles, 52*, 497–509. doi:10.1007/s11199-005-3716-8.
- Deaux, K., & Major, B. (1987). Putting gender into context: An interactive model of gender-related behavior. *Psychological Review, 94*, 369–389. doi:10.1037/0033-295X.94.3.369.
- Diener, M. L., & Lucas, R. E. (2004). Adults desires for children's emotions across 48 countries associations with individual and national characteristics. *Journal of Cross-Cultural Psychology, 35*, 525–547. doi:10.1177/0022022104268387.
- Dillion, K. M., Wolfe, E., & Katz, H. (1985). Sex roles, gender, and fear. *The Journal of Psychology, 119*, 355–359. doi:10.1080/00223980.1985.10542907.
- Eagly, A. H., & Steffen, V. J. (1984). Gender stereotypes stem from the distribution of women and men into social roles. *Journal of Personality and Social Psychology, 46*, 735–754. doi:10.1037/0022-3514.46.4.735.
- Entwisle, D. R., & Astone, N. M. (1994). Some practical guidelines for measuring youth's race/ethnicity and socioeconomic status. *Child Development, 65*, 1521–1540. doi:10.1111/j.1467-8624.1994.tb00833.x.
- Fabes, R. A., Martin, C. L., & Hanish, L. D. (2003). Young children's play qualities in same-, other-, and mixed-sex peer groups. *Child Development, 74*, 921–932. doi:10.1111/1467-8624.00576.
- Fivush, R., & Wang, Q. (2005). Emotion talk in mother-child conversation of the shared past: The effects of culture, gender, and event valence. *Journal of Cognition and Development, 6*, 489–506. doi:10.1207/s15327647jcd0604_3.
- Fredrickson, B. (1998). What good are positive emotions?. *Review of General Psychology, 2*, 300–319. doi:10.1037/1089-2680.2.3.300.
- Fuchs, D., & Thelen, M. H. (1988). Children's expected interpersonal consequences of communicating their affective state and reported likelihood of expression. *Child Development, 59*, 1314–1322. doi:10.2307/1130494.
- Garner, P. W., Robertson, S., & Smith, G. (1997). Preschool children's emotional expressions with peers: The roles of gender and emotion socialization. *Sex Roles, 36*, 675–691. doi:10.1023/A:1025601104859.
- Goodnight, J. A., Bates, J. E., Staples, A. D., Pettit, G. S., & Dodge, K. A. (2007). Temperamental resistance to control increases the association between sleep problems and externalizing behavior development. *Journal of Family Psychology, 21*, 39–48.
- Hess, U., Senecal, S., Kirouac, G., Herrera, P., Philippot, P., & Kleck, R. E. (2000). Emotional expressivity in men and women: Stereotypes and self-perceptions. *Cognition and Emotion, 14*, 609–642. doi:10.1080/02699930050117648.
- Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. doi:10.1080/10705519909540118.
- Kovacs, D. M., Parker, J. G., & Hoffman, L. W. (1996). Behavioral, affective, and social correlates of involvement in cross-sex friendship in elementary school. *Child Development, 67*, 2269–2286. doi:10.1111/j.1467-8624.1996.tb01856.x.
- Ladd, G. W., Birch, S. H., & Buhs, E. S. (1999). Children's social and scholastic lives in kindergarten: Related spheres of influence?. *Child Development, 70*, 1373–1400. doi:10.1111/1467-8624.00101.
- LaFrance, M., Hecht, M. A., & Paluck, E. L. (2003). The congingent smile: A meta-analysis of sex differences in smiling. *Psychological Bulletin, 129*, 305–344. doi:10.1037/0033-2909.129.2.305.

- Luby, J. L., Essex, M. J., Armstrong, J. M., Klein, M. H., Zahn-Waxler, C., Sullivan, J. P., & Goldsmith, H. H. (2009). Gender differences in emotional reactivity of depressed and at-risk preschoolers: Implications for gender specific manifestations of preschool depression. *Journal of Clinical Child & Adolescent Psychology*, *38*, 525–537. doi:10.1080/15374410902976312.
- Maccoby, E. E. (1990). Gender and relationships. *American Psychologist*, *45*, 513–520. doi:10.1037/0003-066X.45.4.513.
- Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge, MA: Harvard University Press.
- Maccoby, E. E., & Jacklin, C. N. (1987). Gender segregation in childhood. In H. W. Reese (Ed.), *Advances in child development and behavior* (Vol. 20, pp. 239–288). New York: Academic.
- Malatesta-Magai, C., Leak, S., Tesman, J., Shepard, B., Culver, C., & Smaggia, B. (1994). Profiles of emotional development: Individual differences in facial and vocal expression of emotion during the second and third years of life. *International Journal of Behavioral Development*, *17*, 239–269. doi:10.1177/016502549401700202.
- Martin, C. L., Ruble, D. N., & Szkrybalo, J. (2002). Cognitive theories of early gender development. *Psychological Bulletin*, *128*, 903–933. doi:10.1037//0033-2909.128.6.903.
- Martin, C. L., Kornienko, O., Schaefer, D. R., Hanish, L. D., Fabes, R. A., & Goble, P. (2013). The role of sex of peers and gender-typed activities in young children's peer affiliative networks: A longitudinal analysis of selection and influence. *Child Development*, *84*, 921–937. doi:10.1111/cdev.12032.
- Milich, R., Landau, S., Kilby, G., & Whitten, P. (1982). Preschool peer perceptions of the behavior of hyperactive and aggressive children. *Journal of Abnormal Child Psychology*, *10*, 497–510. doi:10.1007/BF00916696.
- Miller, A. L., & Olson, S. L. (2000). Emotional expressiveness during peer conflicts: A predictor of social maladjustment among high-risk preschoolers. *Journal of Abnormal Child Psychology*, *28*, 339–352. doi:10.1023/A:1005117009370.
- Miller, A. L., Fine, S. E., Gouley, K. K., Seifer, R., Dickstein, S., & Shields, A. (2006). Showing and telling about emotions: Interrelations between facets of emotional competence and associations with classroom adjustment in Head Start preschoolers. *Cognition and Emotion*, *20*, 1170–1192. doi:10.1080/10409289.2010.497450.
- Mize, J., & Ladd, G. W. (1988). Predicting preschoolers' peer behavior and status from their interpersonal strategies: A comparison of verbal and enactive responses to hypothetical social dilemmas. *Developmental Psychology*, *24*, 782–788. doi:10.1037/0012-1649.24.6.782.
- Muthén, L. K., & Muthén, B. O. (2012). *Mplus: User's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly*, *24*, 81–92. doi:10.1111/j.1471-6402.2000.tb01024.x.
- Ramsey, P. G. (1995). Changing social dynamics in early childhood classrooms. *Child Development*, *66*, 764–773. doi:10.1111/j.1467-8624.1995.tb00904.x.
- Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin*, *132*, 98–131. doi:10.1037/0033-2909.132.1.98.
- Sallquist, J. V., Eisenberg, N., Spinrad, T. L., Reiser, M., Hofer, C., Liew, J., & Eggum, N. (2009). Positive and negative emotionality: Trajectories across six years and relations with social competence. *Emotion*, *9*, 15–28. doi:10.1037/a0013970.
- Sallquist, J., DiDonato, M. D., Hanish, L. D., Martin, C. L., & Fabes, R. A. (2012). The importance of mutual positive expressivity in social adjustment: Understanding the role of peers and gender. *Emotion*, *12*, 304–313. doi:10.1037/a0025238.
- Serbin, L. A., Powlishta, K. K., & Gulko, J. (1993). The development of sex typing in middle childhood. *Monographs for the Society for Research in Child Development*, *58*, 1–74. doi:10.2307/1166118.
- Shields, S. A. (2002). *Speaking from the heart: Gender and the social meaning of emotion*. Cambridge, England: Cambridge University Press.
- Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, *33*, 1–39. doi:10.1146/annurev.ps.33.020182.000245.
- Thorne, B. (1993). *Gender play: Girls and boys in school*. New Brunswick, NJ: Rutgers University Press.
- van der Pol, L. D., Groeneveld, M. G., van Berckel, S. R., Endendijk, J. J., Hallers-Haalboom, E. T., Bakermans-Kranenburg, M. J., & Mesman, J. (2015). Fathers' and mothers' emotion talk with their girls and boys from toddlerhood to preschool age. *Emotion*, *15*, 854–864. doi:10.1037/emo0000085.
- Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: implications for the origins of sex differences. *Psychological Bulletin*, *128*, 699–727. doi:10.1037/0033-2909.128.5.699.
- Zahn-Waxler, C., & Robinson, J. (1995). Empathy and guilt: Early origins of feelings of responsibility. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 143–173). New York, NY: Guilford Press.
- Zahn-Waxler, C., Shirtcliff, E. A., & Marceau, K. (2008). Disorders of childhood and adolescence: Gender and psychopathology. *Annual Review of Clinical Psychology*, *4*, 1–29. doi:10.1146/annurev.clinpsy.3.022806.091358.