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Effects of Children’s Gender and Teacher Presence on Social Influence in Preschoolers

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Abstract

This study investigated the effects of children’s gender and teacher presence on social influence. In a pretest, children (17 boys, 15 girls) aged 39 to 61 months were presented with pairs of gender-neutral toys and asked to state their toy preference for each pair. The same children, in a separate session, were introduced to puppets that specifically liked the version of the toy the children originally did not like, either with or without a teacher puppet present. The puppet stated reasons why that toy was better. Children were then asked which version of the toy they preferred. Whether children changed their preferences or maintained their original choice was recorded. Results indicated that neither boys nor girls were more influenced by a boy puppet or a girl puppet ($p > .05$). Additionally, the presence of a teacher did not affect the amount of influence the puppets had over the children ($p > .05$). Overall, the findings provide evidence that children are not affected by the gender of the puppets and the presence of a teacher in gender-neutral situations.
Effects of Children’s Gender and Teacher Presence on Social Influence in Preschoolers

Young children are constantly surrounded by adults, as well as their peers. Children play, interact, and learn with children their age under the constant supervision of authority figures such as parents, teachers, and other adults. Consequently, children are exposed to the thoughts, beliefs, and ideals of the adults and the children around them. They are continually persuaded by their friends, parents, and teachers to make specific choices about play and other matters.

While children, just as adults, are influenced by those around them, far fewer studies have been conducted on the effects of social influence in children compared to the number of studies on adults. To learn more about influence in children, this study examined how the social influence of one child over another child is affected by the gender of each child. Additionally, the study addressed how much children’s influence is affected by the presence of an adult female.

I first reviewed the existing literature on how gender affects social influence in children. The current research on gender stereotyping in children was then examined. Lastly, various theories that describe how children understand the concept of gender and form gender stereotypes, as well as how this knowledge of gender affects social influence in preschool-aged children, was reviewed.

Effect of Gender on Social Influence in Children

Most children play with other children their age almost every day. This proximity means there are many opportunities for children to influence each other regarding play options, whether it be over activity choice or toy choice. When children are playing in mixed-sex groups, the gender of the child is considered a status characteristic, an aspect of a person that can determine
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an individual’s status (Lockheed, Harris, & Nemceff, 1983). Lockheed et al. found that girls are considered to be less leader-like and less competent than boys are; that is, girls have a lower status than boys have. Additionally, Jacklin and Maccoby (1978) found that boys have more influence than girls. A further study showed that differences in social influence are also seen in gendered toy choices. When using masculine toys, boys were not influenced by female puppets, whereas with feminine toys, they were influenced by female puppets (Kim, 2004).

Overall, men and boys are generally more influential than women and girls (Carli, 2001; Carli & Bukatko, 2000). Even though women and girls do not possess the same amount of influence that men and boys have, they are still able to be influential. Men and boys exert influence because they are deemed competent and authoritative. Women and girls, on the other hand, are able to be influential with men and boys by being likable. People perceive likable women and girls as wanting to benefit the group rather than inappropriately seeking to influence others (Cialdini & Goldstein, 2004). Thus, girls are still able to influence boys by displaying communal behavior, even though they may be at a status disadvantage.

Children are acutely aware of the gender of their peers. In a study conducted using 4- and 5-year-old children, when the children tried to exhibit dominance over another child and influence that child, the most common tactic used was verbal assertiveness, the use of greater volume of voice and more directive statements. The verbal assertiveness was most successful when children were trying to make commands (Williams & Schaller, 1993). A meta-analytic finding shows that boys are more likely to use assertive speech than girls, whereas girls are more likely to use affiliative language, which is supportive and warm language (Leaper & Smith, 2004). Even though verbal assertiveness is generally the most successful dominance tactic, preschool-aged children have been shown to alter their language when they are talking in same-
sex interactions versus mixed-sex interactions. In particular, boys use fewer direct commands when there are more girls in the group (Killen & Naigles, 1995). This change in behavior parallels meta-analytic findings on adults, showing that both men and women communicate more warmly to women than to men (LaFrance, Hecht, & Paluck, 2003; Leaper & Ayres, 2007). However, boys are still more influential when speaking in a more masculine manner, as children prefer their peers to speak in a manner consistent with traditional gender-stereotypes (Kim, 2004; Kishore, 2001; Olm-Shipman, 2000). Preschool aged children, like adults, alter their behavior in same-sex versus mixed-sex interactions. Thus, the children are clearly modulating their behaviors based on the gender of other children, showing they are aware of gender and specific gender stereotypes.

**Gender Stereotyping in Children**

For children to develop gender stereotypes, they must first understand that there are two genders and have formed some gender schemas. A study of 2- and 3-year-olds indicated that young children already possess vast knowledge of sex role stereotypes that are consistent with adult stereotypes in our society (Kuhn, Nash, & Brucken, 1978). The study revealed that there are some behaviors that both boys and girls expect both genders to display, while there are some activities that are gender specific. For example, neither boys nor girls believed that one sex preferred activities such as building a tower, playing outside, and saying, “I love you” over the other sex. However, both boys and girls believed that girls more often play with dolls, help their mother, and say, “I need some help.” Boys, on the other hand, are believed to like to help their father, play with cards, and say, “I can hit you.” In addition, gender differences were found regarding the perception of whether or not other activities were gender specific. For example, only girls, not boys, believed that girls like to look nice, give kisses, and sew. Overall, even
though there were some activities for which boys and girls did not share the same beliefs, the data showed that boys and girls as young as two hold gender stereotypes that are consistent with typical adult stereotypes. Children also maintain gender stereotypes about characteristics such as color. One study showed that children believe that green and blue are boy colors, while pink is only a girl color. Additionally, certain objects were stereotypically associated with boys, such as hammers and fire hats, but other objects were stereotypically associated with girls, such as dresses and tiaras (Eichstedt, Serbin, Poulin-Dubois, & Sen, 2002). These data show that children possess gender stereotypes about individuals’ behaviors, toy preferences, and other characteristics.

Although preschool-aged children have developed gender stereotypes, this information would not be as important if the children were not aware of gender consistency, as then they would not realize that the stereotypes would always be pertinent. At a young age, children learn about gender consistency, the knowledge that individuals are not able to change genders regardless of the outside physical appearance of a person (Kohlberg, 1966). Additionally, children are able to apply gender consistency to other individuals, as well as pictorial representations of boys and girls (Marcus & Overton, 1987). Thus, children understand that other children and teachers should always display the same gender stereotypical behavior.

Children eventually develop beliefs about gender norms and concepts of gender. They generate intrinsic values that they associate with the behaviors of each gender. Through observations, direct instruction from adults, and their own personal experiences, children learn about gender stereotypes. Theories such as gender schema theory, social learning theory, social role theory, and status characteristic and expectation states theory explain how children learn and internalize various concepts of gender.
Gender Schema Theory

According to gender schema theory, children learn about the world through categorization. The various categories that children and adults use to help organize information are called schemas, which are cognitive representations of different concepts, including objects, people, and places. Schemas allow individuals to quickly recall specific information about a given concept, thereby making it easier to know how to respond (Bartlett, 1995). Gender schema theory claims that one cognitive schema that people use is gender. More specifically, this theory states that people have generalized readily available information about each gender to help them quickly process information and form judgments about others (Bem, 1981; Bem, 1983; Liben & Signorella, 1980).

For children to acquire gender schemas, there must first be an obvious physical dichotomy between the genders that the children are able to perceive and learn. Children develop gender schemas as they learn about these dichotomies (Bem, 1983). Within the gender schema, people develop presumptions about the behaviors, physical attributes, preferences, and attitudes that are stereotypically associated with each gender (Bem, 1981). For example, people assume women to behave in a more nurturing and caring manner than men and for men to speak in a more authoritative and direct way than women (Carli, 1999).

By the time children are preschool aged, they possess various aspects of typical stereotypes regarding gender differences that are in line with typical adult stereotypes (Etaugh & Riley, 1979). Preschool aged children are aware that certain toys and activities are related to each respective gender (Martin, 1989). For example, Etaugh and Riley (1979) showed that 3- and 4-year-old children, when asked to choose which trait went with a male or female character,
were able to correctly place the traits by stating that males were aggressive and strong and that females were emotional and affectionate.

As children learn about gender schemas, they compare themselves against their knowledge of gendered behavior and modify their behaviors accordingly (Kagan, 1964). They are able to use their knowledge about their own gender when creating their own schemas (Bem, 1981). Children start to perceive that women have lower status than men have. Additionally, women are seen to have more communal qualities than men possess, whereas men are thought to display greater competency than women. Communal behaviors are verbal and nonverbal behaviors that specifically provide support to others. Some of these behaviors include smiling, agreeing with others, being friendly, and helping others (Carli, 2004).

**Social Learning Theory**

Children acquire knowledge of gendered behavior through the development of gender schemas, and these behaviors are further supported by the reactions of adults. Social learning theory states that boys and girls receive different socialization from adults. Additionally, children’s knowledge of gender stereotypes develop when they see behaviors that are modeled by adults, particularly parents. Thus, because of the information children are receiving from various socialization processes and modeled behaviors, typical sex-typed behaviors and gender norms are reinforced in children (Maccoby & Jacklin, 1974).

The conflicting socialization processes between males and females begin in the first year of life (Block, 1983). For example, in one study, right after birth, even when babies had similar lengths, Apgar scores, and weights, parents described girls as weaker, softer, and more delicate than boys. In contrast, parents described boys as better-coordinated, firmer, and stronger than girls (Rubin, Provenzano, & Luria, 1974). This finding demonstrates that from the birth of their
children, parents already see and treat boys and girls differently and impose their views of the respective gender on their children. As children get older, parents continue unconsciously to encourage different behaviors in their sons versus daughters. For example, one study found that daughters completed more housework than sons and did more feminine chores, such as cooking and cleaning than boys. Additionally, parents were more likely to support the educational advancement of their sons and had greater perceptions of their sons’ academic achievement than of their daughters (Raley & Bianchi, 2006). Further research showed that parents encouraged their sons to be more physically active and aggressive while they supported more passive and nurturing play in their daughters (Tauber, 1979). By supporting and encouraging play that reinforces this behavior in their children, parents promote stereotypical behaviors, thus socializing their children in a way that further enforces gender norms.

When parents support these gender typed behaviors, they train boys and girls to occupy different social roles. Parents encourage their daughters to behave in a more nurturing manner, which is seen as relatively submissive compared to the aggressive and assertive behavior of boys. In general, women occupy more domestic and lower status occupational roles than men do (Carli, 2004). Thus, submissive behaviors in girls and authoritative behaviors in boys mirror the behaviors in adults, resulting in men occupying higher status positions than women obtain. Parents are caught in a vicious cycle, as they are behaving in the manner in which they were taught to behave, thus modeling the stereotypical behaviors that have resulted from differing roles.

**Social Role Theory**

The gendered stereotypes that children learn and internalize eventually lead to people possessing different social roles. Social role theory contends that the inequalities in the roles
men and women possess result in differing beliefs about the intrinsic behaviors and traits of men versus women. The perception of gendered behaviors in each gender is a consequence of people observing men and women in different occupations. People generally see men in higher status positions than women (Eagly, 1987). The claim that each gender occupies differing roles is similar to social learning theory, as they perpetuate the social belief that each gender possesses different characteristics and roles.

In most situations, men have higher levels of status and power than women have. This is especially true when power is determined by possessing legitimate authority (Carli, 1999). Currently in society, men are more likely to be employed than women and have a higher probability of possessing a role that provides formal authority (Carli, 2004). Consequently, males make more money, which leads to men having a higher status than women. In general, higher status individuals are assumed to have agentic characteristics, such as being authoritative, direct, and competent (Carli, 2004). Thus, men are expected to be more agentic than women. Even when women try to display traits typically associated with the male gender role, such as competence, leadership, and authority, they are not received well, are viewed negatively, and are sometimes ignored (Eagly, 1987, Carli, 1999). This occurs because women are expected to be warm, nice, and selfless, and are consequently punished when they are not, such as when they are trying to display male gender role traits (Carli, 2004). This double standard has arisen because the roles that women have typically held as homemakers and lower status employees require communal qualities, such as nurturance. Even as women have moved into the workplace and obtained high status positions, people still expect women to be warm and nice. Thus, as parents raise their children, parents transfer their beliefs about social roles to their children, and
then reinforce children for enacting behaviors appropriate to adult social roles, as predicted by social learning theory.

**Status Characteristic and Expectation States Theory**

People constantly make judgments about an individual based on that person’s social role. They see both genders as occupying different roles, as stated in the social role theory. Another theory that accounts for some of the perceived gender differences in society is the status characteristic and expectation states theory. According to this theory, people are examined and consequently evaluated according to their social status, with higher status people receiving more favorable evaluations. Some of the status characteristics that exist in this society include gender, race, level of education, and occupational position. Status characteristics that are intrinsic to a person, such as education level, race, and ethnicity, are known as diffuse characteristics, while skills related characteristics, such as the ability to play the piano or not, are known as specific status characteristics (Berger & Fisek, 2006; Berger, Fisek, Norman, & Zelditch, 1977). For example, gender is a diffuse status characteristic as it splits the population into at least two groups, male and female, with men seen as having higher status than women. High status individuals are allowed to be directive and to influence others, but lower status individuals are not. However, a low status individual who displays communal behaviors is able to exert influence on others because people perceive that the individual has no personal desire to be in charge (Ridgeway, 2001).

Men are considered to be dominant, logical, and self-confident, and to act as a leader, while women are seen as being emotional, submissive, illogical, and home-oriented. Men are seen as possessing the authority and competence that women do not have (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Moss, Barbuto, Matkin, & Chin, 2005). Because of
their higher authority, men are particularly resistant to female influence (Carli, 1999, 2004). One study showed that in group situations, when a woman tried to act as an authority figure, men did not believe the woman possessed adequate power or status, so ignored the woman’s ideas (Meeker & Weitzel-O’Neil, 1985). Thus, knowing the gender of an individual immediately influences people’s expectations of that individual’s behaviors and role in society because of gender is a status characteristic. These expectations that adults have of men and women are internalized and then are directly and indirectly taught to their children, through social learning.

Men and women possess different social roles and can be observed enacting these roles by other people, including their children. Consequently, parents directly and indirectly teach their children about the different social roles that men and women possess, based on the roles they themselves possess, with women typically occupying more domestic roles and lower status occupational roles. Children then mirror what they see in adult society regarding the roles that men and women fill. Additionally, children learn about adults’ immediate evaluations of individuals based on their social role and thus, their status. Therefore, based on the beliefs of their parents and other significant adults, children learn that men and boys have more influence than girls and women have and learn to judge women and girls as having a lower status.

**Current Study and Hypothesis**

My study examined how gender affects social influence in preschool-aged children. Specifically, the study researched how much influence boys and girls have over their own respective gender and the opposite gender. This was done using gender neutral toys and language, so the influence was purely from the gender of the child. Additionally, the study investigated how the presence of an adult figure affects the amount of influence children have over one another. Having an adult present in the study made the situation more like what occurs
in real life for preschoolers, as adults are always supervising, listening to, and watching children. However, conducting research with preschool children confederates creates an impossible challenge. Thus, this study used puppets. Research by Bartsch, Wade, and Estes (2011) demonstrated that preschool aged children’s responses given to scenarios with puppets did not differ significantly compared to when the children were given scenarios with humans.

Other research has demonstrated that in adults, as well as in children, male individuals are seen as having more power than their female counterparts. Men and boys resist female influence more than male influence. Women and girls, because they possess relatively low status, exert less influence than men (Meeker & Weitzel-O’Neil, 1985; Ridgeway, 2001; Carli, 2004). Thus, I hypothesized that:

**Hypothesis 1.** Male children would be less influenced by female puppets than by male puppets.

**Hypothesis 2.** Female children would be equally as influenced by male and female puppets.

When a child is young, the presence of parents directly influences the amount of freedom and the types of behaviors the child displays. Thus, the behaviors of the children change when there is an adult present (Block, 1983). However, boys are more likely to comply with their father than their mother whereas girls are equally compliant with both of their parents (Power, McGrath, Hughes, & Manire, 1994). Moreover, one investigation showed that in a school setting, girls changed their play choices more consistently than boys did when a teacher was present. Specifically, girls were more likely to play with more gendered toys when a teacher was present than when a teacher was not present (Serbin, Connor, & Citron, 1981). Therefore, even
though parents and adults encourage various behaviors, boys and girls respond differently to the presence of female parents and teachers.

**Hypothesis 3.** Girls would be more influenced overall by both male and female puppets when a teacher was present than boys will be, but both boys and girls would be influenced more with a teacher present than when the teacher was not present.

**Method**

**Participants**

Participants were 32 (15 girl, 17 boy) preschool children ($M_{age} = 49.8$ months; range 39 to 61 months) attending a laboratory preschool associated with a small liberal arts college in a New England state. The children were predominantly white and middle to upper-middle class, reflecting the demographics of the community.

**Pretest**

A pretest was conducted to determine which toys would be used in the study to insure that the toys were relatively gender neutral. Each child was told by his or her teacher that s/he was going to be playing a game and was then escorted from his or her classroom to a separate room. When the child got to the research room, the child was told that s/he would be playing a game about toys. The researcher then took out 10 pairs of the same types of toys, told the child what each toy was, and asked the child how much s/he liked the toy. The child indicated his or her preference by pointing to a small, medium, or large circle. The child was told that the small circle meant s/he liked the toy a little, the medium circle indicated s/he sort of liked the toy, and the large circle demonstrated s/he liked the toy a lot (see Appendix A). The answer of the child was recorded. The interviewer then asked, “Which of these two toys do you like better?” The child’s response was recorded. At the end of the pretest session, the child was offered a sticker
and then the researcher escorted the child back to class. As a result, children evaluated each type of toy on a 3-point scale, indicating whether they liked it (1) a little, (2) sort of, or (3) a lot.

The mean liking scores of each toy for each gender are presented in Table 1. Of the 10 toys, only two toys, the book and the dress-up clothes, had significantly different mean liking scores between boys and girls. For both toys, girls had greater mean liking scores than did the boys, indicating they preferred the toy more than the boys liked the toy. As a result, the books and the dress-up clothes were not used in the test. The eight toys that mean scores that were not significantly different between boys and girls were used for the actual test. These were puzzles, play-doh, musical instruments, balls, markers, teddy bears, blocks, and coloring sheets (see Appendix B).

Procedure

Children were told they were going to be playing a game. The researcher accompanied the child from his or her classroom to a different room. The child was told that s/he was going to be watching short plays with puppets and that after each play, the child would be asked questions about which toy s/he preferred.

Half of the children were told that a teacher puppet would be watching during the plays and were shown the puppet; the remaining children did not have a teacher puppet present during the plays. Each child was then presented with the same eight plays. Up to two puppets were used in each play; one was the teacher, who was the same puppet in all eight skits, and one was a child, who changed each time. The child puppet was a boy in four of the skits and a girl in four of the skits (see Appendix C). In each of the skits, the puppet specifically preferred the version of the toy the child did not prefer in the pretest. The puppet stated reasons why his or her version of the toy was the better choice. For each child, the toy each puppet played with was determined
at random, so that male and female puppets ultimately presented each toy at some point in the study (see Appendix D). After each skit was over, the child was asked version of the toy s/he would prefer. Once the skits were finished, the child was offered a sticker and the researcher brought the child back to class.

The child’s response was recorded as either (1) not changing his or her preferred toy or (2) changing his or her preferred toy. Each child saw four skits with a girl puppet and four skits with a boy puppet. This created a 5-point scale reflecting degree of influence by the girl puppet and degree of influence by the boy puppet. For example, if a child did not change his or her choice for any of the skits with the girl puppet, s/he would have a score of four. Conversely, if a child changed his or her opinion for all the boy puppets, s/he would have a score of eight.

Results

A 2 (gender of child) X 2 (gender of puppet) X 2 (teacher present or absent) mixed model ANOVA was performed on the data. The gender of the child and presence or absence of the teacher were between subjects variables and the gender of the puppet was a within subjects variable. Results revealed that there were no main effects or interactions. To test whether the average amount of attitude change was greater than zero (i.e. no attitude change), the overall mean for the sample was contrasted with the value of zero. Results showed that there was a significant increase in attitude change, $F(1, 28) = 33.61, p < .001$.

The first hypothesis predicted that boys would be less influenced by female puppets than by male puppets. To test this hypothesis, a contrast was conducted comparing the mean switching scores for boys with male (5.076) versus female puppets (5.312). The hypothesis was not supported, $F(1, 28) = .264, \text{ns.}$ There was no effect of the gender of the puppet on switching for boys, $d = .15$. The second hypothesis predicted that girls would be equally influenced by
female puppets as by male puppets. To test this hypothesis, a contrast was conducted comparing the mean scores of switching for girls for female (5.348) versus male puppets (5.411). This hypothesis was supported, \( F(1, 28) = .017, p = 0.85 \). Further, there was no effect of the gender of the puppet on the switching scores for girls, \( d = .07 \).

The last hypothesis contained two parts. The first was that overall, girls would be more influenced by both male and female puppets when a teacher is present than boys would be. To test this hypothesis, a contrast was performed comparing switching scores for boys when a teacher was present with either a male (4.778) or female puppet (5.000) against switching scores for girls when a teacher was present with either a male (5.250) or female (5.125) puppet. This hypothesis was not supported \( F(1, 28) = .846, \) ns. However, there was a small effect of a teacher’s presence on boys and girls, \( d = .24 \). The second part predicted a main effect of teacher such that all children would be more influenced when a teacher is present (5.038) than when a teacher is not present (5.536). This was not supported \( F(1, 28) = 1.258, \) ns. A moderate effect was found for switching when a teacher was present versus absent, \( d = .40 \).

**Discussion**

The goal of the present study was to explore the influence of teacher presence or absence and the gender of a child on social influence in a gender-neutral context (i.e., with gender neutral toys and language). The findings presented did not support the hypothesis that boys would be more influenced by male puppets than female puppets. However, the results did support the hypothesis that girls would be equally influenced by female and male puppets. The final hypothesis contained two parts: that when a teacher is present girls would be more influenced by both male and female puppets and that children would be more influenced when a teacher is present than not present. Neither part of the final hypothesis was supported. Although the
gender of the puppet and the child and the presence or absence of a teacher were not influential, children were significantly influenced by the puppets overall.

Contrary to my initial hypothesis, I found that boys were equally influenced by male and female puppets when trying to influence toy choice. This finding neither supports theories such as the social role theory, which states that men generally have higher roles and status than women (Eagly, 1987), nor research showing that boys resist the influence by girls more than by boys (Meeker & Weitzel-O’Neil, 1985; Carli, 2004). The discrepancy in the data may be explained because other studies that have found social influence in preschool-aged children have used gendered toys. For example, Kim (2004) found that boys were not influenced by female puppets regarding masculine toys, however, they were influenced by female puppets about feminine toys. An additional investigation found that toddlers preferred gendered toys more than neutral toys (Caldera, Huston, & O’Brien, 1989). Similarly, other researchers found that children showed preference for gender-typed toys, unless persuaded by their teacher that the toys were appropriate for each gender (Serbin, Connor, & Iler, 1979). The neutrality of the toys in the current study may explain the lack of significant results. Children may not have a large preference for either version of a neutral toy, so are easily influenced by both male and female puppets.

In addition to using neutral toys, the puppets all used neutral language. This neutrality may have been another factor in obtaining non-significant results. Olm-Shipman (2000) demonstrated that children preferred those who used gender-consistent language. Furthermore, boys are more influential when speaking in a more masculine manner (Kim, 2004; Kishore, 2001). Men and boys are typically seen as using more assertive and direct language (Carli, 2004). Therefore, as both boys and girls used neutral language, the greater amount of persuasion
that is typically associated with assertive male language was absent. The additional power that men and boys gain by using candid and assertive language was no longer present. The lack of gendered language may have removed the higher status and, consequently, greater amount of influence that men and boys typically have over women and girls when influencing other men and boys.

The second hypothesis, that girls would be equally influenced by male and female puppets was supported. To support this hypothesis, there was no significant difference between switching by girls for male and female puppets. This result is consistent with other data demonstrating that the gender of others does not affect the level to which girls are influenced. For example, Kim (2004) found that girls were no more or less influenced by a boy or a girl. Girls were equally influenced, regardless of whether the children spoke with gender congruence (i.e., a male puppet speaking in a masculine manner) or gender incongruence (i.e., a male puppet speaking in a feminine manner). These data support the status characteristic and expectation states theory. The girls were equally influenced by the male and female puppets because girls have lower status social roles than boys have. The female preschoolers were equally influenced by higher status boys and by girls, who are of equal status (Berger et al., 1977; Eagly, 1987). Thus, girls do not resist the influence of other girls in the same manner that boys resist female influence. Therefore, the girls displayed what would be expected based on these theories: that male and female puppets would equally influence the girls. One limitation in this interpretation is that the hypothesis was supported with non-significant results. The results are ambiguous, as they might be due to an actual lack of difference in social influence between male and female puppets on girls, or because of another methodological factor, such as the lack of power or the neutrality of the toys and the speech. Nevertheless, one can conclude that girls did not
demonstrate a gender of puppet effect as \( p = 0.85 \). Myers and Well (1991) has shown that a \( p > 0.25 \) can adequately demonstrate a lack of difference. Thus, girls are likely equally influenced by both male and female puppets.

The third hypothesis was not supported. Girls were not significantly more influenced by male and female puppets when a teacher was present than boys were; nor were all of the children more influenced when a teacher was present versus not present. Overall, the teacher did not have any effect on the amount of social influence. This lack of significance may have been because the teacher never vocalized anything. The teacher was simply present during the study and was said to be watching the children play. Previous research has demonstrated that children are influenced by teacher’s actions and opinions, and not their mere presence (Serbin et al., 1979). However, the teacher never did anything that the children would be able to perceive in this study. Thus, the teacher did not have a great influence over the children because they children were not able to infer whether the teacher expected them to behave in a way that conforms to social norms or not. Additionally, the presence or absence of a teacher significantly affects which activities children prefer. The amount of influence a teacher has over children’s play choices is dependent upon the activity. For example, one study showed that when a teacher was present, children preferred art, large blocks, science, and library areas. When a teacher was absent, children chose to be at activities such as the water table and small block areas (Tomes, 1995). The toys chosen in this study may not be toys that are greatly influenced by teacher presence or absence.

Children are raised in a very gendered world and are exposed to different socialization processes from birth (Block, 1983; Rubin et al., 1974). From a very young age, children know that girls typically play with certain toys and that boys play with other toys (Kuhn et al., 1978). Thus, when activities are introduced in a gendered manner, there is a significant difference in the
gender of the children who play with each toy. In the present study, both versions of each toy were neutral and presented in a neutral manner, via the neutral language of the puppets. This extreme neutrality may have resulted in the nonsignificant results, as the stimuli were not gendered enough to produce gendered behaviors seen in normal social roles. If true, this may mean that preschoolers may behave in a non-stereotypical manner in gender-neutral contexts. Even though children learn about various social rules of men and women and display this behavior in gendered situation, children may be able to break from social norms if they are in a more neutral setting.

**Limitations**

There are at least three possible limitations in the study. One limitation may have been that a woman narrated all of the skits. The children may have focused on the gender of the narrator, instead of the gender of the puppet. Consequently, the children may have reacted to the puppets as though they were all girls. However, there were overt signals that some of the puppets were boys and some were girls, such as the use of personal pronouns, typically gendered names, and either a stereotypically male or female appearance. Thus, the children most likely correctly identified the puppets as either a boy or girl. A second limitation was that at least one child said they had a friend who had the same name as one of the puppet's. The child may have placed her knowledge of her friend on the puppet and made her toy preference choice as though the puppet had some of the qualities of her friend. Other children may have known people who had the same names of the puppets in the skits. This is less likely to have happened, as the names of the puppets were specifically matched against the names of the parents and siblings of the children tested to help reduce this possibility. Finally, there may have been small effect sizes
but not significant results for the main effect of teacher because there was not enough power as the sample size was relatively small.

**Future Directions**

The results presented here suggest that there is no interaction effect of teacher presence and gender on social influence in preschool-aged children. Future research examining social influence, gender, and teachers should consider repeating this method with gendered toys as well as neutral toys. The addition of gendered toys would help determine if the non-significant results were indeed a factor of using neutral toys. Additionally, since previous research has shown social influence to be greater when there is a pronounced gender difference in the presentation of the toys, a future study should complete the same method without using neutral language.
References


Appendix A

Pretest Dots

From left to right: a lot, sort of, a little
Appendix B

Toy pairings

Clockwise from left to right: musical instruments, play-doh, puzzles, coloring sheets, balls, blocks, markers, teddy bears
Child puppets

From left to right: Sophia, Trevor, Hannah, Luke, Jessica, Reid, Rachael, Tom

Teacher puppet
Appendix D

For this game, you are going to watch some plays with puppets at school. (In all of the shows, the teacher is going to be watching the children. Here is the teacher. She is going to be sitting here watching all of the plays.) After each play, I am going to ask you a question.

NAME is playing with puzzles. (*Bring out the puzzles.*) Here are two puzzles, but NAME is playing with this one. NAME says to you: “I really like this puzzle. The puzzle pieces fit better. The picture on the puzzle is so much better.” NAME is going to go play with something else now. (*Remove puppet.*) Now (child’s name), which puzzle would you like to play with?

(*Remove the toys from the table.*)

Here is NAME. (*Bring out puppet.*) NAME is playing with musical instruments. (*Bring out bells.*) NAME is playing with this musical instrument. NAME says: “This musical instrument is better. It fits better in my hand than the other musical instrument. I like the way it sounds. The other one doesn’t have a pretty sound.” NAME is going to play with another friend. (*Remove puppet.*) (Child’s name), which musical instrument would you want to play with?

This is NAME. (*Bring out puppet.*) NAME is playing with a ball. (*Bring out the balls.*) NAME is playing with this one. NAME says: “I really like this ball. It is so bouncy and the color is better. Who would want to play with the other ball? This one feels better.” NAME is going to play with something else. (*Remove puppet.*) (Child’s name), which ball do you want to play with?

Now let’s see what NAME is playing with. (*Bring out puppet.*) NAME is playing with playdough. (*Bring out the playdough.*) Here are the two different playdoughs, but NAME is only using this one. NAME says: “I like this playdough better because it is softer and I can make fun things with it. The color is better than the other one.” NAME is going to play something
else. (*Remove puppet.*) Now (child’s name), which playdough would you like to play with?

(*Remove playdough from the table.*)

(The teacher is still here watching.)

(Child’s name), this is NAME. (*Bring out puppet.*) Today NAME is playing with a teddy bear. (*Bring out teddy bears.*) NAME is playing with this teddy bear. NAME says: “I like this teddy bear the best. It is easier to play with. It is softer than the other one. It is really pretty.” NAME is done with the teddy bears now. (*Remove puppet.*) Which one do you want to play with?

Here is NAME. (*Bring out puppet.*) NAME is using blocks. (*Bring out blocks.*) NAME is playing with these blocks. NAME says: “These blocks build better. I like using them better. They look better. Who would want to use the other blocks?” It looks like NAME is done with the blocks. (*Remove puppet.*) Which blocks would you like to use?

This is NAME. (*Bring out puppet.*) NAME is using a coloring page. (*Bring out coloring pages.*) NAME is using this coloring page. NAME says: “This coloring page is better. The picture is better. I really like the coloring. I don’t like the other coloring page.” NAME is done with her coloring page. (*Remove puppet.*) Which coloring page would you like to use, (child’s name)?

This is the last puppet show. Here is NAME. (*Bring out puppet.*) NAME is using markers. (*Bring out markers.*) NAME is using these markers. NAME says: “I like these markers a lot. They color really well. The colors are nicer.” NAME is done using markers. (*Remove puppet.*) (Child’s name), which markers do you want to use?
### Mean liking on a 3-point scale

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<th>Girl</th>
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* indicates $p < .05$