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Summer 8-19-2013

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## Recommended Citation

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*Undergraduate Theses—Unrestricted*. Paper 10.

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Parenting Preschoolers with Disruptive Behavior Disorders: Does Child Gender Matter?

Antonya M. Gonzalez

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### Abstract

Parental responses to child behavior can have an important impact on later behavioral outcomes. Children with Disruptive Behavior Disorders often engage in externalizing and disruptive behaviors, which usually elicit negative responses from parents. Boys are more frequently diagnosed with these disorders, resulting in a dearth of literature on parental responses to girls with Disruptive Behavior Disorders. Studies have found that parents react more negatively when girls engage in disruptive behavior, plausibly because it is contrary to societal gender expectations. The current study investigates this dynamic within the population of preschoolers with Disruptive Behavior Disorders. I predicted that parents would show more negative behaviors toward girls than they would toward boys. Fifty-nine parent-child dyads were included in the study, and all children were diagnosed during their interview with a Disruptive Behavior Disorder. Each dyad completed an interaction task, which was coded for non-supportive parenting strategies and negative affect. The majority of parental response variables were not found to be significantly different between child gender groups, possibly because this population of parents may be better acclimated to disruptive behavior in their children. The exception to these findings, Ambiguous Directions, was a non-supportive parenting strategy found to be significantly more common in parent-boy dyads. This result was consistent with the current literature, which suggests that parents are less explicit and directive in their communication with young boys. In summary, literature on this topic remains inconclusive, and further research should be done on the intersection between parenting, child gender, and Disruptive Behavior Disorders.

### Parenting Preschoolers with Disruptive Behavior Disorders: Does Child Gender Matter?

Gender plays an important role in young children's development. Children start reacting to both their own gender and the gender of others as early as infancy and toddlerhood (Leman & Tenenbaum, 2011). Boys and girls become more aware of gender norms and begin viewing people in relation to these norms. When this awareness develops, children start to self-socialize according to their gender. Parents, teachers and peers also socialize children to learn gendered behaviors (Maccoby, 1998). Parents also respond to children's behavior based on gender, which often reinforces the gender norms. Parental responses to preschool gendered behaviors are of particular interest, as preschool is the time period when significant gender differences in behavior emerge (Fagot & Hagan, 1985; Alink et al., 2006). In this paper, I consider the preschool age range to be between two and six-years-old, though most studies vary in what age range they capture.

In American culture, the dimensions of masculinity and femininity are viewed as traits in accordance with their respective genders (Maccoby, 1998). Masculinity is typically associated with traits such as toughness and assertiveness. Boys more frequently engage in masculine play behaviors such as sports or roughing around. They are also expected to demonstrate more externalizing behaviors than girls are. At a young age, boys begin showing more impulsivity, hyperactivity and aggression. In contrast, femininity is associated with "daintiness, gentleness and modest manner." These traits are commonly seen during play activities such as dress up or playing with dolls. Girls are expected to show more internalizing behaviors, such as compliance, dependency and shyness. Though children of both genders engage in either type of behavior, frequent cross-gender behavior is usually regarded as atypical.

The cultural perception of gender appropriate behavior is especially important in the domain of parenting. Parental treatment of preschool children has been shown to differ depending on gender. Parents talk more to girls more, and specifically talk much more to them about emotions (Maccoby, 2003). Young girls are also encouraged by their parents to be more prosocial and take the perspective of others (Keenan & Shaw, 1997). Overall, internalizing behaviors in girls are encouraged. When young girls display prosocial and internalizing behaviors, they usually receive positive enforcement.

### **Gender Differences in Disruptive Behavior**

Observed gender differences in disruptive behavior also contribute to existing gender norms. In general, boys display more externalizing behaviors and girls display more internalizing behaviors (Chen, 2010). Between ages two and four, these gender differences in behavior begin to emerge. Specifically, this is the age when boys begin to show more disruptive behavior than girls do. One significant difference between preschool boys and girls is a difference in inhibitory control and impulsivity. In a recent meta-analysis, researchers analyzed studies of temperament in children aged three months to thirteen years (Else-Quest, Hyde, Goldsmith & Van Hulle, 2006). These studies were coded for a number of temperament dimensions. There were large differences by gender in effortful control and inhibitory control. Girls displayed more of both types of control than boys. From these results, the authors concluded that girls might be better at regulating attention and inhibiting inappropriate behaviors.

In another study focusing on inhibitory control, researchers found gender differences specifically within the preschool population (Kochanska, Murray, Jacques, Koenig & Vandergeest, 1996). Children were assessed using both observations and parent reports. The observational measures included tasks that measured different aspects of inhibitory control.

Results showed that girls had significantly higher levels of inhibitory control and lower levels of impulsivity. It seems that these differences are clearly evident during the preschool period, though it is uncertain how early they begin to emerge.

In addition to having less inhibitory control and more impulsivity, boys tend to engage in more physical and aggressive acts than girls do (Maccoby, 1998). In a study by Smith and Green (1975), the authors examined possible gender differences in preschool aggression. They observed children in nursery schools and play groups and recorded the amount and type of aggressive incidents that occurred. Boys were more likely to be involved in aggressive incidents at thirteen of the fifteen observed nurseries. The authors concluded that boys tend to display more aggressive behavior than girls at the preschool age level. A later study by Fagot and Hagan (1985) confirmed these results, adding that preschool boys are also generally more assertive in their actions than preschool girls.

These gender differences in aggression emerge relatively early on, with boys engaging in significantly more aggressive acts than girls before the age of four. Alink et al. (2006) examined physical aggression in children by having parents fill out a questionnaire evaluating their children's levels of physical aggression. Two and three-year-olds demonstrated more physical aggression than one-year-olds. In addition, boys exhibited more physical aggression than girls at age two and three. This study indicates that gender differences in physical aggression emerge as early as the beginning of preschool.

An explanation for these gender differences in aggression is that girls typically demonstrate aggression in a nonphysical way. In a study on gender differences in aggression expression, Crick et al. (2006) observed children two to five-years-old in a longitudinal study. Participating children were observed during their free periods, and their acts of aggression were

coded as either relational or physical. Relational aggression, the type hypothesized to be used more by girls, is defined as aggression that uses tactics of social intimidation rather than direct physical action. Girls displayed significantly more relational aggression than boys, and boys showed more physical aggression than girls.

Another observational study on aggression types also found that girls displayed more relational aggression than boys did (Ostrov & Keating, 2004). Additionally, teachers perceived that children who engaged in gender atypical aggression were dominant over their peers. However, girls who utilized more overt forms of aggression, through physical and verbal means, were less likely to be accepted by their peers. Another interesting finding of the study was that there were no significant gender differences in aggression style while adult supervisors were present. This finding indicates that preschool children are able to alter their behaviors and aggression in front of adults. Additionally, it shows that at this age, children are aware of what behaviors are considered socially acceptable.

This phenomenon was further explored by Gray et al. (2012), who looked at disruptive behavior in preschoolers in relation to social context. Preschoolers were observed in interactions designed to elicit disruptive behavior. They were placed in interactions with the examiner and parent separately. The results showed that disruptive preschool girls seem to be able to regulate their own behavior in the presence of a non-parental adult. Contrarily, disruptive preschool boys showed similar levels of disruptive behavior when they were in the presence of either a parent or a non-parental adult. This study suggests that preschool girls might appear less disruptive to clinicians or other non-parental adults. These implications are interesting in the context of parent child interactions and the possibility that Disruptive Behavior Disorder diagnoses may be missed in preschool girls if diagnoses are based largely on clinician observation.

### **Disruptive Behavior Disorders and Gender Differences**

Though a certain degree of disruptive behavior is considered normative during the preschool age range, some preschoolers manifest these symptoms above and beyond typical levels (Keenan & Wakschlag, 2000). These disruptive behaviors can often increase the risk of later mental health problems. I have chosen to specifically focus on Attention-Deficit Hyperactivity Disorder and the Disruptive Behavior Disorders: Oppositional Defiant Disorder and Conduct Disorder. Though these three disorders are classified differently, a number of studies group them together as externalizing disorders. I refer to these three disorders collectively as Disruptive Behavior Disorders.

Attention Deficit Hyperactivity Disorder, or ADHD, is a disorder characterized by symptoms of inattention, hyperactivity or impulsivity that are inappropriate for the expected developmental level (Kutcher et al., 2004). ADHD is divided into three subtypes: inattentive, hyperactive/impulsive and combined (displaying both inattentive and hyperactive/impulsive symptoms). Though this disorder occurs in both males and females, boys are more often diagnosed with ADHD. Due to this difference in disorder prevalence rate, there is a dearth of literature on girls with ADHD.

In a meta-analysis of gender differences in ADHD, researchers found that girls exhibit certain symptoms of ADHD at a different rate and level than boys do (Gaub & Carlson, 1997). There were no gender differences in levels of impulsivity, social functioning, academic performance or fine motor skills. Girls had lower levels of hyperactivity and externalizing behavior but higher levels of intellectual impairment. The authors also concluded that gender differences might be magnified in non-referred samples as opposed to clinic-referred samples. A later meta-analysis by Gershon (2002) also showed that girls with ADHD demonstrate less

externalizing behaviors than boys do. In this study, they also had lower rates of hyperactivity, inattention and impulsivity.

There is controversy within the existing literature regarding gender differences in the manifestation of ADHD symptoms (Hinshaw & Blachman, 2005). In contrast to the results of the previous meta-analyses, a later study found no significant gender differences in the manifestation of ADHD (Biederman et al. 2005). Researchers assessed a group of non-referred children with and without ADHD. They analyzed this data for gender differences in ADHD characteristics and symptoms. There were no gender differences in impairment, duration, or any of the fourteen ADHD symptoms listed in the DSM-III. This study, like the aforementioned meta-analyses, focused on the manifestation of ADHD throughout childhood rather than just preschool. This controversy may not be as pronounced in preschoolers and toddlers, since young children of both genders seem to exhibit externalizing behaviors similarly (Keenan & Shaw, 1997).

Studies focusing specifically on preschool children have found fewer gender differences in the manifestation of ADHD symptoms and behaviors. A study by Kakouros, Maniadaki and Karaba (2005) showed that preschoolers tend to exhibit aggression in addition to their other ADHD symptoms. Teachers filled out questionnaires on ADHD symptoms and aggressive behavior for each nursery school student. Results showed a positive correlation between ADHD and aggressive behavior. In general, girls and boys with ADHD manifested their aggression similarly. However, for certain behaviors, such as hitting and snatching objects, girls with ADHD actually displayed more of this behavior than boys did. These results imply that preschool girls with ADHD do display aggression, but may demonstrate symptoms of aggression differently.

A later study supports the idea that preschoolers have fewer gender differences in ADHD symptom expression (Lavigne, LeBailly, Hopkins, Gouze & Binns, 2009). The study assessed a number of four-year-olds to examine the prevalence of child psychiatric disorders in preschoolers. Data showed that ODD and ADHD were the most common disorders. Boys were diagnosed with ADHD more than girls, but this difference was only significant for the inattentive type of ADHD. This is most likely because preschool boys and girls demonstrate similar levels of hyperactivity and impulsivity. Another study supported this conclusion by showing that preschool aged children of both genders with ADHD generally tend to display high levels of hyperactivity and impulsivity (Thorell & Rydell, 2008). Conclusively, it seems that gender differences in ADHD might not be as pronounced within the preschool population, as both boys and girls exhibit disruptive behaviors.

Oppositional Defiant Disorder, or ODD, is characterized by a number of oppositional behaviors towards adults (Kutcher et al., 2004). Children with ODD have argumentative, disobedient, and often hostile tendencies. Conduct Disorder, or CD, is similar to ODD, but it is a more serious disorder with poorer prognosis. CD is also characterized by aggression and antisocial behavior. Often times, ODD can lead to a later diagnosis of CD. In the case of both of these disorders, boys are diagnosed more frequently than girls are.

Diagnosing preschoolers with ODD and CD is difficult, and because of this, there is a general lack of literature on preschoolers with these two disorders. Many disruptive behaviors are considered normative during this age range (Wakschlag, Tolan & Leventhal, 2010). In an attempt to develop a more preschool appropriate nosology for ODD and CD, Wakschlag, Tolan and Leventhal have developed criteria for these disorders based on preschool age manifestations of the core diagnostic dimensions. Their study showed that preschoolers can demonstrate

characteristics such as aggression and noncompliance in non-normative degrees. There remains some debate on this topic, especially since CD is especially difficult to diagnose in preschoolers.

There are also very few studies on gender differences on the manifestation of ODD and CD (Carlson, Tamm & Gaub, 1997). This dearth of data can be attributed to the fact that most studies on these two disorders have been conducted with male populations (Kann & Hanna, 2000). The suggested gender differences in ODD are similar to the gender differences found in ADHD. It is also possible that girls with ODD might defy authority in a more passive manner, such as ignoring the requests of adults (Ohan & Johnston, 2005). Additionally, as previously discussed, girls may show similar levels of aggression, but express their aggression relationally.

A recent study examined gender differences in ODD symptoms in children seven to nine-years-old (Munkvold, Lundervold & Manger, 2011). Parents were asked to rate the level at which their children exhibited the DSM-IV symptoms of ODD. Overall, girls were significantly less likely to have ODD symptoms endorsed. According to results, boys displayed significantly higher levels of ODD symptoms in all domains except emotional symptoms. However, because this sample consisted of older children, these results may not be generalized to the preschool population.

A number of studies focusing on preschoolers have shown a lack of gender differences in ODD symptoms. A study by Webster-Stratton (1996) used the psychiatric assessments of young children with ODD to examine possible gender differences in symptoms. The study looked at children four to seven-years-old. There were no differences found in the symptoms displayed by girls and boys. Young boys and girls were equally as likely to exhibit externalizing behaviors. However, boys tended to exhibit more physical aggression with parents than girls did. The

findings also showed that mothers tend to rate boys as having more externalizing symptoms than girls, while fathers tend to rate both genders similarly.

Another study looking specifically at preschool boys and girls with ODD supports these earlier results (Nixon, 2002). Children were assessed using measures filled out by both parents and teachers. Additionally, a laboratory parent-child interaction was coded for child and parent behaviors. Data from these measures showed very few gender differences in behavior problems and symptoms. In conclusion, it seems that along with ADHD, gender differences in ODD are less pronounced within the preschool population. Unfortunately, little to no studies have been conducted specifically on gender differences in preschoolers with CD.

### **Parent Responses to Disruptive Behavior**

Parents and adults have gender-specific perceptions of Disruptive Behavior Disorders and their symptoms in young children. In general, studies have shown that the public perceives Disruptive Behavior Disorders to be more common in boys than in girls (Quinn & Wigal, 2004; Ohan & Johnston, 2005). In a study by Ohan and Johnston, the authors looked at parental perceptions of ADHD in the context of gender. Mothers were asked to rate gender-appropriateness of the DSM-IV symptoms of ADHD, ODD and CD. In addition, they rated a group of symptoms where the wording had been altered to make the symptoms seem more representative of females. As predicted, mothers rated these altered items as more gender appropriate for females. Additionally, mothers viewed the DSM symptoms and overt aggression as generally more descriptive of boys. They also rated the male-descriptive symptoms as more concerning than the female-descriptive symptoms. This study has interesting implications for girls who display “male-descriptive” symptoms of a Disruptive Behavior Disorder, and for possibilities of how this might influence parenting.

Another study looked at the reaction of nursery school teachers to preschool children with Disruptive Behavior Disorders (Maniadaki, Sonuga-Barke & Kakouros, 2003). The teachers responded that they thought Disruptive Behavior Disorders were equally severe in boys and girls, but they were more atypical for girls. Regardless of the equality in severity ratings, teachers still thought Disruptive Behavior Disorders in girls were more concerning. It is possible that disruptive behavior is perceived as less typical in girls because it is viewed as “unfeminine” behavior.

A number of studies on general preschool disruptive behavior have results consistent with this hypothesis. In a study by Condry and Ross (1985), college students evaluated a gender-neutral dyad of children playing in the snow. Subjects were told that the children were one of four combinations of children: boy-boy, boy-girl, girl-boy or girl-girl. Boy-boy dyads were rated lower in aggression and higher in active affectionate behavior. According to these results, aggressive actions between two boys are more likely to be viewed as normative or even positive.

In a more recent study on adult reactions to aggression in boys and girls (Brown, 2009), a sample of female adults read four vignettes, two describing acts of relational aggression and two describing acts of overt aggression. Half of participants were told their vignettes described a girl, while the other half was told their vignettes described a boy. Participants responded by rating how strongly they would react to the described behaviors. The adults reacted most strongly to the vignettes where boys displayed relational aggression and where girls displayed overt aggression. These findings are consistent with the theory that gender incongruent behavior elicits more negative reactions from adults. In a study by Hastings and Coplan (1999), researchers specifically looked at maternal beliefs about child aggression, and found that mothers are more

accepting of boys who are aggressive and defiant than they are of girls who show those behaviors.

In addition to aggression, parents tend to react differently to other types of behavior depending on child gender (Keenan & Shaw, 1997). In general, when toddler girls engage in behaviors that are more typical of females, they receive more positive feedback from parents (Fagot, 1978; Lytton & Romney, 1991). Parents are generally more accepting of internalizing behaviors in girls (Keenan & Shaw, 1997). It has been shown that when toddler girls engage in play behaviors that are more active and involve more motor skills, they elicit more negative reactions from their parents. In Keenan and Shaw's meta-analysis, studies showed that parents tend to ignore their daughters when their daughters try to be assertive and direct in interactions. In contrast, when their daughters are compliant with demands they receive positive feedback.

Kim, Arnold, Fisher, & Zeljo (2005) looked at the influence of child gender on the parenting of preschool children. Results showed that internalizing symptoms in girls and externalizing symptoms in boys, both of which are regarded as gender congruent behaviors, are associated with a more lax parenting style. This parenting style is characterized by generally permissive behaviors that fail to reinforce rules or consequences. In contrast, externalizing symptoms in girls and internalizing symptoms in boys are associated with overreactive parenting, which is characterized by negative responses such as "displays of anger, meanness and irritability." These results are also confirmed by Brown's (2009) later findings on parent responses to gender incongruent aggression. An earlier study by Keown & Woodward (2002) also showed that early onset hyperactivity in preschool boys is associated with lax parenting, but this dynamic was not investigated in girls.

Other studies on parenting and disruptive behavior have not found differences based on child gender. Browne et al. (2010) followed four and five-year-olds through early adolescence, and found that child gender and disruptive behavior are not associated with different parenting types. Another study used parent child interactions to look specifically at the parenting of preschoolers with ADHD (Seymour, 2006). Mothers were equally responsive to disruptive behavior in children of either gender. In conclusion, the mixed results within the literature indicate a need for more research on the associations between parenting and gender incongruent behavior.

### **Current Study**

The current study is an investigation into the role of child gender in parenting preschoolers with disruptive behavior. Specifically, I hope to look at a possible association between child gender and the type of response parents have to their disruptive behavior. I will be looking at children with the three Disruptive Behavior Disorders: ADHD, ODD and CD. My study will use observational parent-child interaction data that has been coded for parent and child behavior variables.

The literature shows that even though gender differences in disruptive behavior emerge during preschool, these differences do not seem to be as prominent within the preschool population. These results pose an intriguing research question: How do parents react when preschool girls demonstrate a level of disruptive behavior similar to that expected of boys? Based on the previous literature suggesting a possible relationship between parenting style and gender incongruent behavior, I predict that parents will demonstrate more non-supportive strategies and negative affect during disruptive interactions with girls than in disruptive interactions with boys.

## Method

### Participants and Procedure

Participants were initially recruited between May 2003 and March 2005 as part of a longitudinal study called the Preschool Depression Study, which is funded by the National Institute of Mental Health. They were recruited from preschools and primary care providers in the St. Louis area. These recruitment sites were randomly selected using a geographically stratified method. During sampling, each potential participant was screened using the Preschool Feelings Checklist (Luby, Heffelfinger, Mrakotsky & Hildebrand, 1999). Participants were selected so that each child fell into one of three groups: children with depressive symptoms, children with disruptive behavior and a control group. About 6000 checklists were distributed. Of these checklists, N=1474 checklists were returned. Checklists that had scores higher than 3 or equal to 0 were considered eligible for study participation.

The eligible checklists (N=899) were contacted and screened by phone. The screening process eliminated any potential participants with Autistic Spectrum Disorders, neurologic disorders, speech or language delays, and/or chronic illness. After screening, N=416 individuals were invited to participate in the study. Ultimately, N=305 participants came in for the initial assessment. These initial assessments lasted 3-4 hours, and primary caregivers and children were assessed separately. Children were assessed using a battery of developmental measures while primary caregivers were interviewed about their child's behaviors. Each caregiver also reported any possible psychiatric symptoms demonstrated by their child.

Approximately a year after the initial assessment, participants were asked to return to the lab for a follow up assessment. N=277 participants returned for the follow up assessment, which followed the same format as the initial assessment. The main difference between the two

assessments was the inclusion of a Parent Child Interaction Task at the beginning of the follow up assessment. The data used in the current study is from the follow up assessments conducted from 2004 to 2006. The current study focuses only on a sub-group of participants (N=59): those diagnosed during the interview with one of the three Disruptive Behavior Disorders (ADHD, ODD and CD). Parents received \$150 as compensation for their interview, which included the interview measure and interaction task listed below.

### **Measures**

**Preschool Age Psychiatric Assessment (PAPA).** The current study used the PAPA to diagnose Disruptive Behavior Disorders. The PAPA is a measure used for DSM-IV diagnoses, and covers a variety of psychiatric symptoms and impairments. It is designed for the caregivers of children ages two to six. It is a diagnostic assessment using a trained interviewer, and it has been found to have test re-test reliability (Egger et al. 2006). The PAPA interviews were all tape recorded in order to establish inter-rater reliability through group calibration. The PAPA was administered to all study participant caregivers during both their initial and follow up assessment. All diagnoses were calculated using computer algorithms based on the DSM-IV.

In addition to independent Disruptive Behavior Disorder diagnoses, the PAPA also provides an overall externalizing severity score. This score is calculated by summing the number of ADHD, ODD and CD symptoms endorsed during the PAPA interview. In total, there are eighteen possible ADHD symptoms, eight possible ODD symptoms, and fifteen possible CD symptoms.

**The Waiting Task.** The current study used data from the Waiting Task parent-child interaction. During this task, children must wait eight minutes to open a present that has been given to them (Carmichael-Olson, Greenberg & Slough, 1985) Parents receive instructions to

keep their child from opening the gift. They are also given measures to fill out during the task. The open-ended nature of this interaction allows children and parents flexibility and freedom. It also creates a slightly stressful situation, as parents must focus their attention on their child and their paperwork at the same time. This task has been established as a valid measure of parenting strategy (Luby et al., 2012).

The current study used a specific selection of variables from the coding manual for this task (Belden, Luby, Kuebli, Blankenship & Williams, 2006). All of the variables showing child dysregulated behavior were used to determine the child disruptive behavior levels during the episode. These variables were: Whining, Sucking or Mouthing Objects, Frequent Movement, Changing Proximity to Caregiver, Disobedience, Inappropriately Handling the Gift, On-Task Arguing or Complaining, Off-task Arguing or Complaining, Crying, Yelling or Shouting, Negative Statements, Negative Body Movements and Aggression. From the parent codes, seven negative strategy codes and four negative affect codes were analyzed separately, but all non-supportive parent variables were used to calculate an overall parental hostility variable. The parent variables included in analyses were: Ignoring, Minimizing, Criticism, Punitive or Threatening Words, Coercion or Bribery, Ambiguous Directions, Physical Force, Yelling/Shouting/Negative mumbling, Irritated Affect, Raising Voice, Negative Body Movements, and Negative Statements.

The aforementioned eleven parent variables were analyzed separately because I predicted those variables would capture negative parental responses. On the basis of previous literature, I predicted that the following behaviors would be more likely to occur when parents interacted with girls rather than boys: Ignoring, Minimizing, Criticizing, Punitive or Threatening Words, Ambiguous Directions, Physical Force, and Yelling/Shouting/Negative Mumbling. Additionally,

I hypothesized that while interacting with girls, parents would be more likely to display the following indicators of negative affect: Irritated Affect, Raising Voice, Negative Body Movements and Negative Statements.

The task was coded in 30-second intervals, with variables marked as either present or absent for each interval. The coding team of five individuals (four coders and one master coder) went through intensive training using the variable guidelines established by the coding manual. The master coder and the coding team worked together to establish consensus on cases until an inter-rater reliability of .90 was reached. For the remainder of cases, 25% were double coded by the master coder and a member of the coding team. Reliability for all codes ranged from .69 to .92.

### **Statistical Analysis**

An analytical concern of the current study was equality between the two gender groups. A difference in disruptive behavior between the groups could easily be a confounding variable. An independent samples t-test was conducted in order to compare the two groups based on PAPA externalizing severity score. Because the severity score did not necessarily reflect the amount of disruptive behavior in the episode, I also collapsed variables coded during the Waiting Task that captured child disruptive behavior. Because not every dyad interaction lasted the entirety of sixteen intervals, for each individual interaction, all disruptive behaviors were summed together and then divided by the total number of intervals coded. These proportional disruptive behavior variables were used for all subsequent analyses. Another independent samples t-test was done to ensure that disruptive behavior during the episode was equal between both gender groups. Additionally, Chi-square tests were used to compare demographic characteristics by child gender, diagnosis and co-morbidity.

In order to test my hypotheses, I conducted an independent samples t-test to examine possible parenting differences by child gender. The t-test included each negative parental behavior variable from the Waiting Task. I collapsed each variable across intervals and calculated means for each behavior. Two of the original eleven variables (Minimizing and Negative Statements) were excluded because these strategies were not present during any interval for any participant. The mean for each parent variable was used during analyses in order to control for the amount of intervals coded. I used the Bonferroni Method to control for multiple comparisons. Additionally, negative parental behavior variables were collapsed separately to create a variable that measured overall parental hostility. These variables were summed together and then divided by the number of intervals coded. The median for this variable was used as the divider to categorize parental non-supportive strategies into low and high levels of parental hostility. Participants who fell on or above the median were considered to have high levels of parental hostility, and all those below the median were considered to have low levels of parental hostility. A Chi-square test was used to compare overall parental hostility between groups.

## **Results**

### **Characteristics of Sample**

The study included 59 parent-child dyads, with the majority of parents being female ( $n = 54$ ). Sixty-three percent of children were male ( $N = 37$ ) and 37% were female ( $N = 22$ ). Participants were between the ages of four and seven-years-old ( $M = 5.63$ ). All participants in the study were diagnosed with a Disruptive Behavior Disorder during their interview using the Preschool Age Psychiatric Assessment. Forty-two percent of children had two or more

Disruptive Behavior Disorder diagnoses ( $N = 25$ ). Table 1 includes more information about the sample's demographic characteristics.

### **Negative Parental Behavior**

An independent samples t-test was conducted to compare negative parental behavior between gender groups. These tests were done using a Bonferroni adjusted alpha level of 0.006 per test ( $.05/9$ ). In total, eleven strategies were tested. Eight of the nine variables compared were not significantly different between groups. There was a significant difference in Ambiguous Directions between boys ( $M = 0.11$ ,  $SD = 0.12$ ) and girls ( $M = 0.04$ ,  $SD = 0.04$ );  $t(57) = 3.26$ ,  $p = .002$ . These results suggest that parents give boys with Disruptive Behavior Disorders more ambiguous directions than they do to girls. Figure 1 shows the differences in mean occurrence of caregiver behaviors by child gender. Table 2 includes analysis results for all parental non-supportive variables.

### **Overall Parental Hostility**

A chi square test of independence was used to compare the overall parental hostility score between gender groups. The relationship between these variables was not significant;  $X^2(1, N = 59) = .97$ ,  $p = .324$ . These results suggest that there is no child gender difference in the amount of parental hostility demonstrated in response to disruptive behavior.

## **Discussion**

### **Results of the Current Study**

The current study found that for the majority of variables, parental negative affect and non-supportive strategies were not significantly different between preschool boys and girls with Disruptive Behavior Disorders. The only variable found to be significant was Ambiguous

Directions, which was used more by parents when interacting with boys than when interacting with girls. These results did not support my initial hypothesis that parents would show significantly more negative affect and non-supportive strategies when interacting with girls rather than boys. Additionally, the variable of Ambiguous Directions was found to be significant in the opposite direction. These results have interesting implications when placed in the context of previous literature on parental responses to disruptive behavior in preschoolers.

### **Parenting Preschool Children with Disruptive Behavior**

As the literature on this topic is somewhat inconclusive, the results of the current study are consistent with some findings and inconsistent with others. One of the first studies to explore this topic found that parents respond to girls' disruptive behavior with overreactive parenting, which is usually characterized by negative affect and responses (Kim, Arnold & Zeljo, 2005). The current study analyzed specific variables that I hoped would capture overreactive parenting, but these variables were not significantly different between gender groups. Kim, Arnold and Zeljo used the Eyeberg Child Inventory to measure disruptive behavior levels and the Parenting Scale to measure parental reaction styles. In comparison, the current study used data from observations to capture levels of parental behavior. This particular interaction might not have been representative of parental responses to disruptive behavior, as it was a short activity and disruptive behavior levels varied with each child. The aforementioned study may have had more significant results because parents were answering questions based on all of their experiences with their child.

The results of my study were also inconsistent with a study by Brown (2009), which also used the Parenting Scale to measure caregiver reactions. The Parenting Scale was administered with four separate vignettes in order to capture participants' responses to different scenarios of

disruptive behavior. Similar to the study by Kim et al. (2005), this study may have more effectively captured parental responses to disruptive behavior, as each vignette was specifically tailored to describe disruptive behavior in children of both genders. My study might have had different results if the levels of disruptive behavior displayed by each child could somehow be standardized. In order to address this issue, the data from the Preschool Depression Study could be analyzed by including all children (with or without a Disruptive Behavior Disorder) with a designated level of disruptive behavior during the episode. However, new data would need to be collected in order to do this analysis within the Disruptive Behavior Disorder population, as the limited size of our sub-sample did not allow for this type of selection.

In contrast to the aforementioned articles, other studies have produced results similar to the current study. For example, a study by Browne et al. (2010) did not find significant differences in parenting based on child gender. This study used data from the Canadian National Longitudinal Survey of Children and Youth (NLSCY). Parental behavior was measured using the Parent Practices Scale, which includes a measure of parents' levels of hostile and ineffective parenting. The data from the NLSCY also included a number of child behavior scales. In order to create a variable that captured each child's level of disruptive behavior, the author collapsed the responses on this scale that specifically measured externalizing symptoms.

Another study focusing on children with ADHD did not find a significant difference in maternal responsiveness based on child gender (Seymour, 2006). This study had a more similar methodology to the methodology of the current study. Mothers and children engaged in a series of parent child interactions for 25 minutes. These interactions were then coded for parenting behavior. To assess child levels of disruptive behavior, parents filled out a series of measures that established an ADHD diagnosis. The similarity in both methodology and results for this

study and the current study suggests that parent child interaction data may capture parental behavior differently than survey data. One possible improvement on the current study would be the addition of a written measure of parental behavior. Using self-report measures as well as observation might give a fuller picture of parental behavior as well as confirm or negate discrepancy between these measurement types.

Another explanation behind my results is the possibility that parents who have children with Disruptive Behavior Disorders might be more acclimated to externalizing symptoms in their children. The children participating in the current study were all diagnosed with a Disruptive Behavior Disorder based on the PAPA, which uses caregiver reports to establish its diagnosis. Their qualification for inclusion within the study was completely based off of parental endorsement of symptoms. Parents included in this sample were all well aware of their children's externalizing and disruptive behaviors. Consequently, their reactions to disruptive behavior might not be the same as the reactions of parents whose children have more normative and non-clinical levels of disruptive behavior. In support of this explanation, the only other study that selected a sample based on a Disruptive Behavior Disorder diagnosis was the study by Seymour (2006), which also found no difference in parental behavior based on child gender. Though the other studies did measure disruptive behavior, they were not based on the endorsement of frequent and long-term disruptive behavior symptoms.

### **Lax Parenting and Child Gender**

Of all the parenting variables measured, Ambiguous Directions was the only one found to be significant. Contrary to my hypothesis, parents used Ambiguous Directions significantly more often when interacting with boys. As a variable, Ambiguous Directions was coded during the interaction whenever the caregiver gave the child directions that were unclear. An example of an

ambiguous direction would be a parent's use of the phrase "Stop It!" without further explanation of what behavior the child should stop or why or how they should stop this behavior. Though this variable is certainly indicative of negative parenting, it is not necessarily indicative of overreactive or hostile parenting. Tone of voice was considered irrelevant in the coding of this variable. Consequently, this result might actually be consistent with the results of the study by Kim, Arnold and Zeljo (2005).

These authors found that there was a significant correlation between externalizing symptoms in boys and lax parenting. In this study, lax parenting was equivalent to permissive parenting and a failure to take action or establish consequences. Another study by Keown & Woodward (2002) looked at potential differences in parenting boys with or without hyperactive behaviors. The authors also used the Parenting Scale to measure parental overreactivity and laxness. Like the study by Kim and colleagues, this study also showed that lax parenting was significantly associated with hyperactivity in boys.

Because Ambiguous Directions are a failure on the part of the parent to clearly express a demand or thoroughly explain an instruction, this variable could be considered indicative of lax parenting. Using this interpretation, the results of the current study are consistent with these two earlier studies. The results of all three studies can be considered consistent with the initial hypothesis that parents respond more negatively to gender incongruent behaviors in children. More specifically, parents presumably react to gender congruent behavior with a lax parenting style and react to gender incongruent behaviors with an overreactive parenting style. This could possibly be a result of parents' inherent perpetuation of gender stereotypes through their responses to gendered behaviors.

The overall results of the current study do not necessarily provide direct evidence to support this theory of gender incongruent behavior. However, the significant findings for Ambiguous Directions support previous literature showing that parents are more likely to utilize lax parenting techniques in response to gender congruent behavior. Because the current study is not a direct manipulation, conclusions of causation cannot be drawn. Additionally, without direct measurement of gender stereotype endorsement, the theory of gender incongruent behavior cannot be viewed as a definite explanation for these results.

### **Parental Communication and Child Gender**

Primarily, Ambiguous Directions is a variable that captures caregiver communication style. The Waiting Task was designed to mimic every day situations where parents must attend to something other than their child. The structure of this interaction allows for a glimpse into parenting strategies, presumably ones that are used while parents are otherwise occupied and cannot fully attend to their child's needs. As a dependent variable, Ambiguous Directions are an indicator of parental communication style during these types of interactions. The results of the current study indicate that parents might be less explicit in their communication style when speaking to preschool boys rather than preschool girls.

Mothers generally tend to speak more to their daughters than they speak to their sons (Maccoby, 2003). A meta-analysis by Leapers, Anderson and Sanders (1998) examined possible differences in parental speech based on child gender. Results showed that parents speak more and use more supportive speech with girls. This result is consistent with my finding that parents were more likely to be ambiguous in their directions when speaking to boys.

The authors also found that this difference in speech is significant during early childhood. As children get older, the amount of speech directed at boys and girls becomes more balanced,

but the type of speech used is different for each gender. Mothers start to use more directives when speaking with girls than when speaking with boys. The authors suggested that this might be because mothers want to grant sons autonomy and are more likely to socialize with girls. It should be noted that these differences are most likely moderated by parent gender, as other studies have found that fathers speak more to sons than daughters (Lanvers, 2004). However, the majority of studies on parental communication differences have focused on mothers, as they are more likely to be the primary caregiver. In conclusion, my results appear to support previous findings that girls receive more detailed and directed communication from mothers.

### **Limitations of the Current Study**

The current study has a number of limitations that qualify the generalization of its results. The study sample size was relatively small, and only included 59 total dyads. Additionally, because there were more boys than girls in the study sample, parent child interactions between caregivers and preschool boys were better represented than interactions with preschool girls. A larger and more equally distributed sample size might have elicited different results.

Another limitation of the current study is the specific selection of individuals included in the sample. All child participants in the sample had been diagnosed with a Disruptive Behavior Disorder. While this population does need further attention from researchers and clinicians, the results of this study may not generalize to preschool children without a Disruptive Behavior Disorder diagnosis. Because study inclusion was based on diagnosis rather than externalizing severity score or the amount of disruptive behavior during the episode, levels of disruptive behavior between participants were not equivalent. Another important aspect of the study sample was the disproportionate balance of parent gender. Approximately 92% of the caregivers in the sample were mothers (N = 54). Studies have shown that parent gender can play a role in a variety

of parenting behaviors (Fiese & Skillman, 2000; Leaper, Anderson & Sanders, 1998). An improvement on the current study would be the inclusion of only one parent gender or a study with balanced sample that examined possible interactions between parent and child gender.

A further limitation of the current study was the nature of the parent child interaction. Though the Waiting Task is designed to look at parenting strategies, it does not necessarily elicit disruptive behavior. While the situation might be somewhat stressful for some children, others might be better at regulating their emotions for a short period of time. Because the task places more stress on the parent than on the child, it may not be the most ideal interaction task for measuring parental response to disruptive behavior. A task placing more pressure and stress on the child or a task specifically designed to elicit disruptive behaviors might be better suited to capture this concept.

### **Conclusions and Future Directions**

The results of the current study suggest that there may not be a difference based on child gender in parents' strategies and affect toward preschoolers with Disruptive Behavior Disorders. However, the significant difference in parent use of Ambiguous Directions between child gender groups is consistent with previous research on parenting styles and communication. Ambiguous Directions can be viewed as a variable measuring lax parenting, and its significantly higher presence in parent child interactions with boys is consistent with the literature. Additionally, because Ambiguous Directions are a failure to explicitly communicate directives, this result also supports findings that parents are less explicit in their communications with boys than in their communications with girls.

This topic is important because of the relationship between negative parental responses and disruptive behavior. In a study by Kroneman, Loeber, Hipwell, and Koot (2009),

investigators formulated a “gender-specific reciprocal model” to account for the interplay between girls’ behavior and family environment. Girls who engage in more aggressive behaviors elicit negative responses from parents, teachers and peers. When girls demonstrate oppositional and aggressive tendencies, this gender atypical behavior receives a particularly negative reaction from parents. Specifically, parents respond to this behavior with low levels of support and warmth and high levels of hostility. This “suboptimal parenting,” caused by the girl’s externalizing behaviors, in turn increases the initial disruptive behavior.

This reciprocal model has been demonstrated in both school age and adolescent girls (Hipwell et al., 2008; Huh, Tristan, Wade, & Stice, 2006). Conduct problems in adolescent girls have also been shown to predict increases in parental punishment and decreases in parental warmth (Hipwell et al., 2008). The reciprocal model has also been demonstrated in preschoolers of both genders (Combs-Ronto, Olson, Lunkenheimer, & Sameroff, 2009), but it has not been addressed specifically in preschool girls. The current study contributes to this gap in literature by investigating negative parental responses toward preschool girls. Ultimately, the inconclusive nature of the current literature suggests a need for more research on this topic employing a variety of methodologies. More investigations should be done both within and outside of the preschool Disruptive Behavior Disorder population in order to better understand the parenting of children with externalizing symptoms. As parenting strategies clearly play an important role in children’s behavior, this topic is worthy of further investigation.

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Table 1

*Sample Demographics by Gender*

	Male	Female	Total
<b>Child Race</b>			
White	21	10	31
Black	9	9	18
Multi-Racial or Another Race	7	3	10
<b>Child Age (in years)</b>			
4	7	9	16
5	13	6	19
6	17	7	24
<b>Family Income</b>			
< 20K	9	5	14
20K-40K	4	6	10
40K-60K	7	5	12
60K+	14	2	16
No Information	3	4	7
<b>DBD Diagnosis</b>			
ADHD	22	11	33
ODD	23	14	37
CD	19	9	28
2 or more	18	7	25
<b>Parent Gender</b>			
Male	3	2	5
Female	34	20	54
<b>Total Participants</b>	<b>37</b>	<b>22</b>	<b>59</b>

Table 2

*Parental Behaviors by Child Gender*

Parental Behaviors	Boys		Girls		t (57)	p-value ( <b>&lt;.006</b> )
	Mean	SD	Mean	SD		
Ignoring	.229	.239	.177	.212	.847	.400
Criticism	.000	.000	.003	.013	-1.000	.329
Punitive/Threatening	.002	.010	.014	.054	-1.069	.297
Ambiguous Directions	.110	.118	.040	.044	3.260	.002
Physical Force	.000	.000	.009	.040	-1.000	.329
Yelling/Shouting	.004	.015	.000	.000	1.433	.160
Irritated	.025	.062	.020	.071	.315	.754
Raising Voice	.018	.055	.020	.093	-.108	.914
Negative Body Movements	.002	.103	.000	.000	.768	.445

Figure 1

*Mean Occurrences of Parental Behaviors for Boys and Girls*

