

REASONS CHILDREN BEHAVE THE WAY THEY
DO: ASSESSMENT OF MATERNAL ATTRIBUTIONS

By

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2007

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
MASTER OF SCIENCE
December, 2007

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CHAPTER I

INTRODUCTION

During the past two decades, research on and interest in parental attributions has grown at a steady rate. This is partly due to the important outcomes of the ways parents explain their children's behaviors. For example, parental attributions affect their immediate behavioral and emotional responses, in addition to the long-term quality of the parent/child relationship (Bugental, Johnston, New, & Silvester, 1998). The basic theory underlying the assessment of parental causal attributions is attributional theory. Attributional theory suggests that parental attributions will be about children's immediate behavior (Dix, Ruble, Grusec, & Nixon, 1986). Thus, as a result of the important implications that are associated with parents' causal reasonings, it has been deemed important to assess parental attributions about children's immediate behavior.

As the volume of parental attribution research has increased, so too have the ways in which attributions have been investigated. Attributions have been elicited in different manners, including vignettes, videos, and requests to recall. Attributions have been measured on Likert scales and through the coding of open-ended responses. Attributions have been assessed for children ranging in age from 1 through 17. Additionally, the dimensions on which attributions are commonly measured are numerous and differ from study to study (Joiner & Wagner, 1996).

To date, a widely used standardized protocol for assessing parental causal attributions has yet to be developed. In order for parental attribution data to be easily replicated and extended, it is necessary to ensure that the attribution eliciting structures and dimension formats are comparable across studies. Attribution eliciting structures are the tools used to elicit attributions from parents and dimension formats are the tools used to measure the causal attributional dimensions. Research needs to determine if vignettes

yield similar patterns of causal attributional data that videos and free recall do. In addition, research also needs to confirm if Likert scales measure the same causal dimensions as coded open-ended responses. Once these steps are taken, the area of parental attribution research will move forward.

The purpose of this paper is to explore some of the methodological problems in measuring parental attributions. A comprehensive literature review is followed by a detailed explanation of the current study. First, attribution theory is discussed. This includes how interest in researching attributions has developed and how attributions are attained. Next, five different attributional dimensions are explained. These dimensions include: dispositional/situational, internal/external, stable/unstable, global/specific, and controllable/uncontrollable. Third, the influence of parenting perceptions, efficacy, and goals are explored. Subsequently, past parental attribution research is reviewed. This includes a summary of subject's age, gender, attribution eliciting structures, attribution dimension measurement, and behavior type. A discussion of response biases, namely social desirability, is then described. Finally, the present investigation is presented.

CHAPTER II
REVIEW OF LITERATURE

Attribution Theory

Attribution theory deals with why and how individuals explain events, or their causal explanations (Hewstone, 1983). The theory was derived from several different theorists, including Fritz Heider, Edward Jones, Keith Davis, and Harold Kelley. There is not one single “attribution theory,” but rather several different attributional perspectives (Martinko, 1995). For example, Weiner’s (1986) achievement motivation theory is a self-attribution theory. His theory focuses on a person’s explanation of his/her own failure and success, and the consequences of his/her explanations. In contrast, and more relevant to this study, Kelley’s (1967) model is an “other” attribution theory. This model serves to describe the process of how an individual determines if an outcome is due to another target’s personal responsibility or if it is due to situational factors outside the target’s control.

For the most part, the various perspectives stem from social psychology. Attributions are simply the response(s) a person gives to the question “Why?” One of the tenants of attributional theory is that people often seek answers for why specific and aversive events occur, such as children’s misbehavior (Slep & O’Leary, 1988). A person can provide as many causal reasons as he/she chooses, for any particular behavior. Additionally, a person can give attributions about him/herself or about other people (i.e., parental attributions). Attributions can also be elicited for a multitude of things, including but not limited to: personal events, observed events, persuasion tools, responsibility and blame, and/or social conditions (Harvey et al., 1992).

According to Jones and his colleagues (1972), attributional theory research can be classified among three broad areas. The first concerns itself with the various factors that

are involved in motivating a person to acquire causally appropriate information. The second area deals with the factors that aid in determining the cause(s) that will be provided for a certain event. Lastly, the third broad area focuses on the consequences associated with making one causal attribution versus another causal attribution. Parental attributions can be classified as drawing from all three of these broad areas.

Development of Interest in Researching Parental Attributions

Researching parental attributions for child behavior resulted from a response to the increased fascination of the cognition role within the caregiving relationship (Bugental et al., 1998). For example, attributional research has explored the important role that cognition and emotion serve in maintaining harsh parenting (Smith & O'Leary, 1995), the important role of competency in mothers' discipline preferences (Dix, Ruble, & Zambarano, 1989), and the important role that specific situations play in causing the behavior (Geller & Johnston, 1995), among other interesting findings.

In his article, Miller (1995) discussed two reasons for the interest in parental attributions. The first reason is that within a parent's social-cognitive thinking, children serve as good "targets." That is, children are around their parents, important to their parents, and at times a challenge to their parents. Secondly, a cycle exists within the parent-child relationship, whereby what the parent thinks about his/her child determines how he/she treats the child, which then determines how the child acts in return. The cycle continually repeats, and it is this cycle that helps determine how a child develops.

Once the age-old question, "Why?" is answered by a parent, many things can result. To start with, once a parent determines why his/her child behaved in a certain manner, the parent can then choose the most appropriate consequence. For example, a

laughing eight-year-old child may be doing so for a multitude of reasons. The child could be laughing as a socially appropriate response to a funny face made by the parent, or as a result of a socially inappropriate gesture the child used. Whether the cause of the laugh is appropriate or inappropriate would then help determine the ideal effect, either reinforcement or punishment.

In addition, the interest in researching parental attributions has increased because of the important link between parental attributions and outcomes, such as relationship satisfaction and child health (Joiner & Wagner, 1996). Research has indicated that attributions regarding child appraisal are influenced by changing maternal emotional states (Dix & Reinhold, 1991). Thus, relationship satisfaction between mother and child depends in part upon the attributions a mother makes for her child while in various emotional states. Furthermore, the attributions a parent holds about the cause of his/her child's problems, his/her perception of his/her own ability to handle such problems, and his/her expectations concerning the ability of therapy to help the family, have all been shown to influence the role of the parent in the treatment process (Morrissey-Kane, 2000).

Attribution Attainment Process

One of the core assumptions of attribution theory is that people spontaneously search for attributions. In regards to this assumption, Wong and Weiner (1981) sought to test this component of attribution theory. They found that people do indeed search for attributions. They concluded that people search for attributions following successful and expected outcomes, but more so for unexpected and failure outcomes. In addition, Stratton et al. (1988) reviewed transcripts of family therapy sessions and found that

causal explanations were given at a rate of at least one attribution per minute, sometimes up to four attributions per minute.

Generally within the parental attribution literature, researchers solicit attributions from parents regarding their children's behavior. It is not clear whether or not parents naturally emit attributions concerning their children on their own (Miller, 1995), but stemming from the findings of Wong and Weiner (1981), it is highly likely that parents do. Further support of parental attribution elicitation came from Johnston and her colleagues (1998), who found that parents do in fact offer spontaneous causal attributions for their child's behavior. Based on past research, it appears that parents make attributions for their child's behavior

Another basic tenant of attribution theory is that in order to achieve control and understanding, individuals need to predict how other people are going to behave (Taylor, Peplau, & Sears, 2006). If this does not happen, the world then may appear surprising, random, and/or incoherent. Attributions are at times automatic. Parents likely search for attributions naturally, not solely in the context of a research study. The reasons for doing so are numerous. For example, parents may search for attributions for their children's behavior to determine why their children behaved in the manner that they did, how their children's behavior reflects upon them as a parent, how to handle the behavior (i.e., praise or punishment), or how the specific context aided in eliciting their children's behavior. Simply stated, a parent provides an attribution anytime he/she asks him/herself, "Why did my child behave in that way?"

Attributions and Socialization. The attributions a person makes are fundamental to interpersonal relationships with other people. How individuals interpret the causes of a

situation, in part, helps to determine how they perceive other people, and therefore how they relate to others. This type of cycle is also present within the parent-child relationship. The attributions a parent makes for a child will aid in determining how the parent handles, treats, and relates to his/her offspring. More specifically, within social behavior the parent-child literature suggests that mothers will perceive their children's negative behavior to be temporary and situationally caused, whereas they will perceive their children's positive social behavior as stable, innate, and dispositional (Dix & Grusec, 1985; Goodnow, Knight, & Cashmore, 1986; Gretarsson & Gelfand, 1988). Additionally, the attributions parents make and the ways in which they then respond to their children's reactions in socialization attempts, helps to shape their children's behavior and the parents' preferred parenting style (Smith & O'Leary, 1995).

Past attribution research has found that within the parent-child context, parental attributions included whether or not it was the child's personality disposition that caused the immediate behavior (Dix & Grusec, 1985). Whether or not a parent perceives a child's disposition to be the cause of the behavior has important implications concerning his/her response. When a child's behavior fell into a category of either 1) norm violation or 2) failure to be altruistic, a parent was likely to become more upset the more the child's disposition was seen as the cause (Dix, Ruble, Grusec, & Nixon, 1986). Thus, when a child's disposition is perceived as the cause of a behavior, parents may be more likely to perceive the child as being more responsible for the behavior outcome. Conversely, if a child's disposition is not perceived as the cause of the behavior, the parent may hold the child less responsible for the outcome. Additionally, the Dix et al.

study (1986) found that as parents rated their child's behavior as more intentional, dispositions were more likely to be perceived as the cause of the behavior.

An interesting line of research has examined maternal attitudes towards children's social behavior, specifically within varying child-rearing styles. It was found that for aggressive toddlers, authoritarian mothers were more likely to blame their children for aggression and to obtain compliance, rather than teach their children appropriate skills (Hastings & Rubin, 1999). In contrast, protective mothers (i.e., those mothers who were more restrictive of and concerned about their children's activities) were more likely to use involvement and warmth with their children and to also comfort withdrawn children. It is important to note that not only does a child's social behavior influence the attributions a parent may possibly make, but the adult's parenting style may play a role as well.

Within the context of socialization, research has found that parental attributions have two principle outcomes (Dix, 1993). The first is that attributions regulate the reactions of adults to children, and therefore probably also the socialization experiences to which children are exposed. Additionally, parental attributions may influence the perceptions that children hold of themselves. Young children do not have the cognitive ability to effectively reason critically (Hembree-Kigin & McNeil, 1995). If a child hears a parent provide a dispositional attribution for any given behavior (i.e., he knocked over the vase because he is stupid), a young child does not likely have the maturity to prevent over-generalizing this comment and realize that he/she is not stupid all of the time, maybe just in this one instance. Upon hearing an attribution of this sort, a young child

may believe that he/she is indeed a stupid child, and may now hold this broad perception of him/herself.

Attributions and Disobedience. The attributions a parent makes for a child's negative behavior will determine how the outcome of the behavior will be handled. As Slep and O'Leary (1998) found, the attribution(s) a mother made for her child's misbehavior mediated the harshness of the discipline. Thus, when a mother perceived her child as intentionally misbehaving and believed that the child was responsible for his/her misbehavior, the mother was more likely to be angry and be overreactive in her discipline tactics. Additionally, the less a parent was invested in parenting, the more intense his/her parenting responses were (Geller & Johnston, 1995).

There are multiple dimensions that go into a parent deciding what type of discipline tactic to use. One view holds that there are three broad discipline categories that parents generally fall into (Arnold, O'Leary, Wolff, & Acker, 1993). The first category, laxness, is characterized by a more permissive approach to parenting; the second category, overreactivity, is characterized by displays of anger and meanness; and the third category, verbosity, is characterized by excessive talking, even when not necessary. Of all the different discipline approaches, laxness and overreactive discipline styles are the most closely associated with children's misbehavior (Smith & O'Leary, 1995).

Each discipline category is characterized by broad discipline approaches to which parents are likely to adhere. In addition to these general approaches, other information and events affect parental attributions concerning child disobedience. Dix and Reinhold (1991) determined that mothers believe the timing of children's misbehavior yields useful

information in determining their attributions for the disobedience. Timing can provide useful information about the behavior, such as the motives and causes of it. This information will not only affect parental attributions, but it may also affect how upset the parents become, and the discipline tool(s) they may elect to utilize. Additionally, the results of the Smith and O'Leary (1995) study found that the cognitions and emotions of mothers influence their disciplinary harshness.

A study was completed that looked at the chronic and temporary influences of maternal characteristics on attributions for child disobedience that mothers make (Dix & Reinhold, 1991). The authors discovered that fixed child-rearing ideologies affected disobedience attributions, in that authoritarian mothers were more likely than nonauthoritarian mothers to have negative reactions and attributions. It was also discovered that for more immediate misbehavior, reactions and attributions were more negative than they were for delayed misbehavior. This is because maternal attributions were found to be influenced by time cues relating to how hard it was for their children to comply. Thus, timing affects how upset mothers get and how disapproving they become. Additionally, the authors found that for child misbehavior, happy mothers were more likely to have negative reactions and attributions than unemotional mothers. Thus, emotional states, immediate interaction cues, and child-rearing ideologies influence parental attributions for child behavior.

While taking into account the various factors that play into parental attributions for children's misbehavior, it is important to note how these factors influence parental discipline approaches. Effective parenting strategies may elicit attributions for children's misbehavior, while possibly taking into account the affective emotional states of both the

parent and child, child-rearing ideologies, and other situational factors, in an effort to determine the most appropriate discipline strategy. In short, the attributions parents make for their child's misbehavior are likely what is going to determine how the behavior is ultimately handled.

Types of Attributions

Within the parenting literature, numerous studies have examined attributions. These studies have looked at a range of parental attributions on various causality dimensions, some of which have been investigated more so than others. For example, the existing literature on dimensions such as distinctiveness (Gretarsson & Gelfand, 1988), hostile tendencies (Nix, Pinderhughes, Dodge, Bates, Pettit, & McFadyen-Ketchum, 1999), and competency (Dix, Ruble, & Zambarano, 1989), is very limited in scope when compared to other, more researched dimensions.

When discussing attributions within the parent-child context, it is important to make a distinction between child-centered attributions and parent-centered attributions. Parents can provide both types of attributions, but they usually have different implications. In response to any given child behavior, a child-centered attribution is a cause directly about the child, whereas a parent-centered attribution is a cause directly about the parent. For example, if a child hits her baby brother, the parent could make a child-centered attribution such as, "She is such a bad kid," or a parent-centered attribution such as, "I am such a bad parent." The distinction is whom the focus of the attribution is on, the parent or the child.

The implications of the type of attributions parents give for their children's behavior are vast. Research has generally focused on dispositional attributions and the

implications associated with negative child behaviors. According to Joiner and Wagner (1996), child-centered dispositional attributions can affect a multitude of things. These types of attributions can potentially affect parental attitudes towards themselves and the child, parental behaviors towards the child, the messages the parent gives to the child, and parental psychopathology. Additionally, these types of attributions may affect the child's own beliefs, behaviors, attitudes, and symptoms. Parent-centered negative attributions can also have a detrimental effect on the parent and/or child. The parent may come to believe that he/she is a horrible parent, and therefore may stop trying to be an effective parent. The parent's level of psychopathology may increase, and he/she might acquire more negative parenting styles as a result. Thus, the authors concluded that there are several implications of the negative effects of parent-centered attributions on children, ranging from maladjustment to severe behavior problems to feelings of helplessness.

In a meta-analytic review of parent- and child-centered attributions, Joiner and Wagner (1996) noted that seven specific attributions have been repeatedly looked at within the parent-child literature. These attributions are: internal, stable, global, controllable, intentionality, blame, and selfishness. All of these dimensions exist upon a continuum, with the extremes (i.e., internal vs. external) serving as the endpoints. This literature review includes a detailed description of four of these specific dimensions: internal/external, stable/unstable, global/specific, and controllable/uncontrollable. A brief discussion of the dimensions within the parent-child literature, and existing research on the four dimensions, will follow. It is important to understand the attributions parents make concerning these four causality dimensions, within the parent-child literature, for a multitude of reasons. A thorough understanding of parental attributions will help shed

light on the parent-child relationship, parental expectations, child gender differences, parent gender differences, differences in the types of attributions made for varying child developmental levels, and parental understanding.

Dispositional VS Situational

A large body of research has been conducted on dispositional versus situational attributions. According to the dimensions discussed below, dispositional attributions would be classified as internal to the child, stable, and global. Situational attributions would be classified as external to the child, unstable, and specific. Both dispositional and situational attributions can be either controllable or uncontrollable, depending upon any given child behavior. Research on parental attributions has found that parents believe as children age, their behavior is increasingly controlled by their personality dispositions (Dix et al., 1986). According to Dix (1993), dispositional attributions reflect an important role in characterizing the parent-child relationship because these types of attributions not only regulate behavior, but the inferences that surround these behaviors as well.

When discussing various types of child behavior, the attributions parents may make are numerous. Overall, parents tend to want to view their children's behavior in a more positive light. For example, research has found that parents are likely to see their children's positive behavior as dispositional and their children's negative behavior as situational (Gretarsson & Gelfand, 1998; Dix, Reinhold, Zambarano, 1990). Since mothers tend to explain away their toddlers' aggressive behavior to situational attributions (Hastings & Rubin, 1999), this may indicate that mothers likely view their toddler in the most positive light possible, so they explain away their negatively perceived behavior (aggression and shyness) by classifying it as unstable and changeable.

Thus, parents may want to attribute good things to their children and bad things to something outside of their children.

Additionally, the implications of a dispositional attribution versus a situational attribution depends largely whether the child behavior is positive or negative. Parents may prefer to make dispositional attributions for their children's positive behavior and situational attributions for their children's negative behavior because these types of attributions foster healthier parent-child relationships. This would imply that their children's positive behavior would be more likely to occur across broad situations/areas, be internal to their children, and be stable, whereas negative behavior would only occur in limited situations/areas, be external to their children, and be unstable. Conversely, if a parent made situational attributions for his/her child's positive behavior and dispositional attributions for his/her child's negative behavior, the parent may come to hold more of a negative view of themselves as a parent, his/her child, and/or the parent-child relationship.

Parenting style no doubt plays a large role in what he/she attributes his/her child's behavior to, as well as how it is handled. It has been found that authoritarian mothers were more likely to attribute their children's misbehavior and aggression to dispositional causes, whereas authoritative mothers were more likely to attribute the same negative child behaviors to situational causes (Coplan, Hastings, Lagace-Seguin, & Moulton, 2002). This is important to note because multiple factors do influence parental attributions.

Internal VS External

The purpose of the internal/external dimension is to ascertain the locus of causality. If the cause of the behavior is due to something within the child (i.e., a selfish disposition), then an internal locus is present, whereas if the cause of the behavior is due to something outside the child (i.e., extremely enticing treats on the shelves), then an external locus of causality is present. The function of this dimension is to determine whether the cause of a child's behavior is due to the operation of some trait of or the actual existence of the child, or if it is due to an event or state in the outside world (Stratton, et al., 1988).

Numerous studies have measured the internal/external dimension in the parenting literature, yielding rich information to the field. For example, Dix and his colleagues (1986) found that as children got older, their parents were more likely to attribute their children's behavior to child-centered, internal causes. This follows the reasoning that as children get older they are to be held more accountable for their actions, because as they mature they learn right from wrong.

Parents of children with ADHD, who were taking ADHD medication, were more likely to attribute their children's ADHD symptoms, noncompliance, and oppositionality to external causes (Johnston, Fine, Weiss, Weiss, Weiss, & Freeman, 2000; Johnston & Leung, 2001). Whereas, parents of children with ADHD, who were not taking ADHD medication, were more likely to attribute their children's inattentive-overactive and oppositional-defiant behaviors to internal causes and their children's prosocial behaviors to more external causes (Johnston & Freeman, 1997).

More intense parenting responses to child noncompliance are associated with internal and controllable attributions (Geller & Johnston, 1995; Smith & O'Leary, 1995). If a child misbehaves, and knows better, a parent is more likely to respond harshly to his/her child. Additionally, in the parenting literature, the majority of the research focuses on mothers (Edgington, 1998), but in the research on the internal/external dimension, Sobol, Ashbourne, Earn, and Cunningham (1989) found that mothers were more likely than fathers to attribute child noncompliance to external causes. The reported research on this dimension helps to shed light onto the important ways parents perceive and respond to child behavior.

Stable VS Unstable

The purpose of the stable/unstable dimension is to determine the chance of the causal factor occurring. If the cause of the child's behavior is enduring (i.e., always cranky), then it would be considered stable, but if the cause of the behavior changes frequently (i.e., happy one day, sad the next), it would be considered unstable. The function of this dimension is to determine whether the cause of a child's behavior in one specific situation would also likely be the cause of their behavior in other situations (Stratton, et al., 1988).

Numerous studies have measured the stable/unstable dimension. It is thought that this dimension correlates highly with the relation between parental child-centered attributions and outcomes (Joiner & Wagner, 1996). For example, parents attributed their children's altruistic behavior (i.e., sharing), more so than their children's misbehavior, to enduring, stable characteristics of their child (Coplan et al., 2002; Dix et al., 1986). Another interesting finding, concerning the stability dimension, came from a study by

Hastings and Rubin (1999). They found that mothers classified their two-year-olds' aggressive and shy behavior as a temporary stage, believing that they would eventually grow out of it. These authors also concluded that if these same mothers imagined their two-year-olds as four-year-olds, and they witnessed the same aggressive behavior, they would now attribute their child's behavior to more stable, internal causes.

For children presenting with ADHD, both on and off medication, parents perceived their children's compliant and pro-social behavior as stable, but their noncompliant and oppositional behavior as less stable (Johnston et al., 2000; Johnston et al. 1998). Again, as briefly described above, parents may be more likely to attribute good behaviors to stable causes, believing that the cause of their children's behavior is also likely to be the cause of the behavior in the future, and negative behaviors to unstable causes, believing that the cause of their children's behavior is not likely to be the cause of the behavior in the future. A difference in the stability dimension arose in a study by Sobol et al. (1989) when comparing the ratings of mothers of children with ADHD versus children without ADHD. Mothers of children with ADHD saw the causes of their children's overall behavior as more unstable than did mothers of children without ADHD. This suggests that mothers of children with ADHD attribute their behaviors to unstable factors, likely as a result of the ADHD. Additionally, for parental attribution ratings of inattentive-overactive and oppositional-defiant child behaviors, there were no differences in ratings on the stable/unstable dimension between these two sets of behaviors (Johnston & Patenaude, 1994).

Global VS Specific

The purpose of the global/specific dimension is to establish whether the cause of a behavior affects a few situations/areas of a child's life or a multitude of situations/areas. If the cause of the behavior affects only a few areas of a child's life (i.e., naptime), then it would be classified as specific, whereas if the cause of the behavior affects a range of areas in a child's life (i.e., naptime, bedtime, morning, lunchtime), then it would be classified as global. The function of this dimension is to determine whether the cause of a child's behavior is likely to have limited consequences or widespread consequences (Stratton, et al., 1988).

This dimension has not been as widely researched as the two previously discussed dimensions, but it still has a fair amount of research to support its validity as a parental attribution dimension (Grace, Kelley, & McCain, 1993). It has been determined that the global/specific dimension was a good predictor of child adjustment and parental satisfaction (Joiner & Wagner, 1996). If child misbehavior occurs across multiple situations/areas, then children were likely to be less well adjusted, and parents were less likely to achieve feelings of parental satisfaction. Conversely, if child misbehavior occurred in only specific situations/areas, then children were likely to be better adjusted, and parents were likely to achieve feelings of parental satisfaction.

An interesting finding concerning the global/specific dimension was that parental attributions on the globality dimension were not as predictive of their responses to child noncompliance (Geller & Johnston, 1995). It is the effect of the current situation that was more likely to affect parental "here and now" attributions, instead of whether or not their

children's behavior was likely to occur in other situations/areas. Thus, it is the situation-specific attributions that serve as important predictors for parental responses.

Controllable VS Uncontrollable

The purpose of the controllable/uncontrollable dimension is to determine whether or not the child has control over his/her behavior. If the cause of the behavior can be controlled by the child (i.e., purposely yelling), then it would be classified as controllable, but if the cause of the behavior cannot be controlled by the child (i.e., yelling as a result of being suddenly frightened), then it would be classified as uncontrollable. The function of this dimension is to specify the child's influence over his/her behavior (Stratton, et al., 1988).

Several studies have measured the controllable/uncontrollable dimension. It has been determined that as children age, parents view their behavior as more and more controllable (Dix et al., 1986). Additionally, for any given child misbehavior, research has found that the more control a child has over his/her own behavior, and the more control a parent attributes to his/her own role in causing the child misbehavior, the stronger the parental response to the behavior (Geller & Johnston, 1995). Thus, if a child is seen as being able to control his/her misbehavior, the parent will be likely to respond more strongly and harshly, since the child has power over his/her own behavior. If a child's misbehavior is uncontrollable by him/her (i.e., a 6-month-old who hits his older brother on the head), then the parent will not respond as harshly. Conversely, positive behaviors that a child emits will result in more favorable parental responses, the more controllable it is perceived to be.

The compliant behaviors of children with ADHD who were taking medication were attributed to uncontrollable causes, while the inattentive and hyperactive behaviors were attributed to controllable causes (Johnston et al., 2000; Johnston & Leung, 2001). Thus, appropriate behaviors displayed by the child presenting with ADHD, while taking medication, led parents to more negative parent responses (uncontrollable). This is possibly because they were accustomed to poor behavior on their children's part and they perceived the medication (uncontrollable by their children) as causing the good behavior.

In contrast to children with ADHD, parents of children without ADHD attributed their children's positive behavior to controllable causes and their children's negative behavior to uncontrollable causes (Johnston, Reynolds, Freeman, & Geller, 1998). Other research on the controllable/uncontrollable dimension has found that parents attributed more controllability to oppositional-defiant behaviors than they do to inattentive-overactive behaviors (Johnston & Patenaude, 1994). Thus, parents perceive their children as being able to control their noncompliant behaviors more so than their inattentive behaviors.

Parental Attribution Research

To date, a large amount of research has been conducted on parental attributions. These attributions have focused on both parent- and child-centered attributions. Research has assessed mother and father attributions, with more research on mothers, and attributions of both male and female children. Children with various disorders (i.e., enuresis, ADHD, ODD, CD, depression) have been assessed, as well as attributions of parents with various psychological disorders and parenting styles. At least three parental attribution review articles have been written in the past eleven years, focusing on existing

parental attribution research studies (Bugental et al., 1998; Joiner & Wagner, 1996; Miller, 1995).

Within the vast amount of parental attributional research, standardized methodology is lacking. The field of parental attributions is relatively new (approximately 20 years old), but established enough to the point where there should be more standardized research methodology in place. A thorough literature review yielded many studies with varying methodologies and even varying results. The following section will discuss key components of the parental attribution research field and, to date, what has and has not been researched.

Child Age

The first component to note is the age of the child subjects commonly researched when assessing parental attributions. Research studies have typically focused on parents of children between the ages of four through twelve (e.g., Dix et al., 1990; Dix et al., 1989; Dix et al., 1986; Dix & Reinhold, 1991; Geller & Johnston, 1995; Gretarsson & Gelfand, 1988; Hastings & Rubin, 1999; Johnston et al., 2000; Johnston et al., 1998; Johnston & Freeman, 1997; Johnston & Leung, 2001; Johnston & Patenaude, 1994; Nix et al., 1999; Sobol et al., 1989).

One of the reasons for choosing this age range includes the assessment of the development of self control, in relation to the ways in which parents perceive their children's behavior differently at different ages (Dix et al., 1986). Other reasons are that the older children are, the more likely they are to elicit dispositional attributions than are younger children (Dix & Grusec, 1985; Gretarsson & Gelfand, 1988) and that parents have had more experience with their children, thus they are able to better predict their

children's behavior, which encourages the use of dispositional attributions (Schneider, Hastorf, & Ellsworth, 1979 as cited by Gretarsson & Gelfand, 1988). Additionally, certain disorders (e.g., ADHD) for which parental attributions are assessed require a diagnosis of the disorder first (Johnston & Leung, 2001). Parents often become concerned about ADHD behaviors as their children reach three or four years of age (Forehand & Long, 2002). Thus, children must be old enough to receive an ADHD diagnosis, in order to participate in a study assessing children with ADHD.

A limited amount of research has focused on children aged four and under (e.g., Coplan et al., 2002; Knight, 2005; Slep & O'Leary 1998; Smith & O'Leary, 1995). Reasons for focusing on a younger sample include: replication of an even younger sample in hopes of generalizing the results to children of older ages (Knight, 2005), generalizability of results to families participating in prevention and early intervention programs (which would probably include young children) (Slep & O'Leary, 1998), and observability of child negative affect within the discipline context (Smith & O'Leary, 1995).

Within the realm of a research study, observing child misbehavior "live" can become increasingly difficult as children age because research has found that child negative affect within the discipline context occurs most frequently with toddlers (Roberts & Strayer, 1987). Therefore, the younger the sample (e.g., toddlers), the chances of directly observing child misbehavior increase. Within the parenting literature, there is an apparent lack of studies assessing parental attributions of young children (i.e., under age five). Further research of this age range is warranted.

Child Gender

The gender of a child has many implications and expectations from society as a whole. The majority of studies on parental attributions either fail to comment on the presence or absence of gender differences (e.g., Dix & Reinhold, 1991; Nix et al., 1999; Smith & O'Leary, 1995), report that no significant effects of gender were found (e.g., Coplan et al, 2002; Knight, 2001), or only assess parental attributions for one gender, thus prohibiting any gender comparison at all (Bickett et al., 1996; Geller & Johnston, 1995; Johnston & Leung, 2001). As Miller (1995) pointed out, for parental attributions, a child's gender has been a secondary variable, with few gender effects ever being reported.

Clearly in the minority, a study by Gretarsson and Gelfand (1988) specifically assessed maternal attributions of male versus female children's social behavior and personality characteristics, among other variables. The authors found that mothers attributed their female children's positive and negative behavior to their character rather than to the context, while they attributed their male children's behavior more often to the context. Thus, mothers viewed their daughter's behaviors as a result of internal attributions, whereas the behaviors of their sons were attributed to more external causes. As far as perceptions were concerned, mothers viewed their daughters as more innately helpful than their sons, and their sons as more responsible than their daughters for their actions.

Other child gender differences that research studies have identified are that adults' perceptions of children can be influenced by sex role stereotypes (Dweck, 1975). By age three, girls preferred housekeeping and doll play while boys preferred vehicle and gross

motor play (O'Brien, Huston, & Risley, 1983), and girls were perceived as much more innately helpful than were boys (Shigetomi, Hartmann, & Gelfand, 1981). Additionally, when an infant was introduced to adults as a girl, the adults engaged in interpersonal stimulation and nurturing play, but when the same infant was introduced to adults as a boy, the adults were more likely to engage in more active play with more masculine toys (Frisch, 1977). It is evident that gender differences on both the child's part, and the adult's part, exist with young children. There is a need for further research of child gender differences within parental attributions for children behavior.

Attribution Eliciting Structures

Within such a relatively new field that is lacking standardized methodology, the ways of eliciting parental attributions are numerous. Studies have utilized various methods, even combining methods within the same study. Additionally, some authors have elicited attributions in a certain fashion in one study and elicited them through a different fashion in a follow-up study. Causal attribution eliciting structures that have been used in the past include: videos of one's own child, videos of another child, request to recall a past incident of one's own child's behavior, and vignettes requiring imagination of one's own child. In their methodological and conceptual issues review article of measuring parental attributions, Bugental and her colleagues (1998) noted that the majority of attribution eliciting structures used self-report techniques with a questionnaire format serving as the attribution measurement. They also noted that self-report techniques commonly use written vignettes. Each of the eliciting structures will be discussed in further detail below.

The first eliciting structures to be discussed are watching a video of either one's own child or another child. Using a video attribution eliciting structure has advantages and disadvantages associated with it. Some of the beneficial aspects of using a video format include: close approximation with real-life scenarios, good attribution eliciting context for assessing affective and cognitive reactions which occurred during a real interaction (Gottman & Levenson, 1986), and control over the various contexts parents view, in order to allow for as little variability as possible (Johnston & Leung, 2001). Some of the disadvantages include: extreme time consumption, increased monetary expense, and useless data if sought after child behavior is not exhibited. Utilizing videos of child behavior is probably one of the richest ways to elicit causal attributions, but also the most expensive and time-consuming.

Watching one's own child versus watching another child also holds with it some advantages and disadvantages. Several studies have videotaped live interactions in a lab and then shown bits and pieces to parents (Johnston & Freeman, 1997; Johnston et al., 1998; Knight, 2005; Slep & O'Leary, 1998), while others have videotaped confederate parent-child interactions in advance to show participants when they arrive at the lab (Dix et al., 1990; Dix & Reinhold, 1991; Johnston & Leung, 2001; Smith & O'Leary, 1995). In order to make the context in which attributions are to be elicited as real as possible, videotapes of the actual subjects should be used, but if the authors are more concerned about consistency across subjects, then pre-taped confederates should be utilized.

Another format which has been used while eliciting parental attribution are free-recall events of various types of positive and negative child behavior (Gretarsson & Gelfand, 1988; Johnston et al. 2000; Johnston et al., 1998; Johnston & Freeman, 1997).

Oftentimes the researcher instructs a parent to recall a specific situation in which his/her child has displayed a certain type of behavior (i.e., sharing toys or screaming at a parent) and then he/she makes attributions about the recalled situation.

This attribution eliciting format has several advantages and disadvantages. Advantages include: attribution eliciting for situations the parent and child have actually experienced, thus applicability, and increased appropriateness for samples with parents from lower education levels (Bugental et al., 1998). Disadvantages include not remembering all of the events which happened in the behavior context, remembering events that happened in the behavior context which really did not exist, and lack of controllability among subjects' recalled situations. The free-recall attribution eliciting format is good for natural and realistic behavior, but this format allows variability among the situations about which parents make causal attributions (Johnston & Freeman, 1997).

The last format typically used by research to elicit attributions are vignettes. The vast majority of studies utilize vignettes that require the imagination of one's own child (e.g., Dix et al., 1989; Hastings & Rubin, 1999; Johnston & Patenaude, 1994; Coplan et al., 2002). Several different widely used vignette questionnaires have been developed which multiple research authors have utilized throughout their studies. These include: the Mother-Adolescent Attribution Questionnaire (MAAQ; Grace et al., 1993), the Maternal Attribution Questionnaire (MAQ; Knight, 2005), the Parental Style Attribution Questionnaire (PAQ; Sobol et al., 1989), the Parent Attribution Test (PAT; Bugental et al., 1989), and the Written Analogue Questionnaire (WAQ; Johnston & Lee, 2005).

Advantages of utilizing vignettes include: controllability of child behavior stimuli across parent participants and increased comparability of child behavior stimuli across

participants. The disadvantages of using written vignettes include: lack of “realness,” i.e., no guarantee that a participant’s child has engaged in stimuli behavior previously, and varying interpretations/imaginings of the same written scenario across parent participants. The majority of research studies on parental attributions have utilized written vignettes by themselves, or in conjunction with free recall and/or videos. The reasons for their use are numerous, but the main ones include controllability of stimuli, most efficient cost, and the least amount of time to collect data.

Relatively few studies have assessed whether the data collected from these methods (i.e., videos, recall, and written vignettes) yield similar patterns of data (i.e., external versus internal attributions or controllable versus uncontrollable attributions) (Johnston & Freeman, 1997; Knight, 2005). The study by Johnston and Freeman (1997) elicited maternal attributions using a video, recall, and vignettes. All eliciting structures were measured with Likert rating scales. The resulting attributions were found to be consistent with one another across the three formats. Conversely, the study by Knight (2005) elicited maternal attributions using written vignettes and a video. The author measured both with Likert rating scales. The resulting attributions from the two different formats were not found to be consistent with one another across the two formats.

Attribution Dimension Measurement

In order to determine the actual causal attribution dimensions parents make, from any of the attribution formats discussed, the real question now centers on how these different formats are measured. The only way to determine whether or not these three methods are comparable is to assess the outcomes measurements of the causal attributions elicited. Typically, causal attributions from video formats, free recall, and

written vignettes are all measured on either Likert scales or through open-ended response questions. Thus, further research on the comparability of Likert scale responses versus open-ended responses is warranted.

To begin, the number of points along a Likert scale varies from study to study, being determined by the author (Dix et al., 1986; Grace et al., 1993; Johnston & Patenaude, 1994; Nix et al., 1999). Each scale represents a continuum of one of the dimensions being assessed. Another option for measuring causal attributions is an open-ended response question whereby the researcher asks the parent subject a question along the lines of, “Why did your child do [insert behavior]?” The parent’s response is then coded according to a code of the researchers’ choice. To date, several different parental attributional coding systems are in place. Examples of these codes include: the Leeds Attributional Coding System (LEEDS; Stratton et al., 1988), the Spontaneous Attribution Coding System (SACS; Holtzworth-Munroe & Jacobson, 1984 as cited by Smith & O’Leary, 1995), and the Parental Attribution Coding System (PACS; Slep, 1997 as cited by Slep & O’Leary, 1998). Typically, the coding systems involve multiple researchers coding parental causal attributions among various dimensions and then hopefully having high inter-rater reliability.

Assessing whether a parent gives the same types of causal attributions after watching his/her child perform a behavior on a video versus being told to recall a time his/her child has performed a certain behavior versus reading a vignette about various child behaviors, is still in its early stages. Within the realm of the relatively few studies that have measured this, the same types of child behavior may have been rated, but not necessarily the exact same behavior across all three (or two) formats. These studies have

contributed information to the field by assessing broad parental attribution styles elicited from various causal attribution measurement formats. Further research on this matter is warranted.

Even fewer studies have compared measurement styles (Likert scales versus open-ended responses) than have assessed attribution formats. A study by Gretarsson and Gelfand (1988) solicited two positive and two negative child behaviors from each mother concerning her own child. They were then asked: 1) why her child had behaved in the manner that he/she did, and 2) to endorse ratings on a Likert-type scale about the same exact child behavior. The mothers' open-ended responses were coded and compared to their Likert rating scale responses. The two different formats yielded similar results. A study by Johnston and her colleagues (1998) compared the parental ratings of coded open-ended responses (attained from directed free-recall) with measurements made on a Likert rating scale (attained from written vignettes), for the same children behavior. Their results indicated that the two measurement formats yielded similar attributional responses. These studies indicated that for any given solicited child behavior, parents' open-ended attributions incorporated the same attributional dimensions that they would use to rate the same behavior as on a Likert attributional rating scale.

As far as the number of attributions parents are allowed to make, the deciding criterion lies in part on the researcher and the purpose of research being carried out. Likert scales are designed to measure multiple attribution dimensions, with one dimension being assessed on each scale. Thus, multiple attribution dimensions can be rated, but usually only one "cause" is assessed. This is a limitation, in that parents are often able to attribute their children's behavior to more than one cause, but because of the

ways in which researchers usually set up the rating scales, these scales only allow for assessment of one reason. Conversely, coding systems allow for multiple attributions to be assessed. When asked an open-ended question about why their child behaved in the way that they did, parents are free to give as few or as many attributions as they decide. Unfortunately, some parents may elaborate and provide multiple reasons, whereas other parents may only provide a single causal attribution. This can create problems for the researchers when coding the open-ended response material.

To date, the majority of studies have assessed multiple attribution dimensions stemming from one cause (e.g., Coplan et al, 2002; Dix and his colleagues; Grace et al., 1993; Nix et al., 1999; Sobol et al., 1989), while only a handful have allowed multiple causes to be provided by parents (Gretarsson & Gelfand, 1988; Johnston et al., 1998; Smith & O'Leary, 1995). It would be interesting, and ultimately vital in providing historical information for future researchers, to look at how the number of attributions parents naturally provide to an open-ended question compares to their single attribution ratings on a Likert scale, with multiple attributional dimensions.

Behavior Type

The final component to note within attributional research, is the focus of the elicited child behavior. Past studies have varied in the types of behavior that they have shown in videos, asked parents to recall, and portrayed in written vignettes. Generally, researchers have focused on positive and negative child behaviors. To date, most studies assess either negative-only child behaviors (Dix et al, 1986; Hastings & Rubin, 1999; Johnston & Patenaude, 1994), or negative and positive child behaviors (Gretarsson & Gelfand, 1988; Johnston et al., 1998, Johnston & Freeman, 1997; Johnston & Leung,

2001). When something unpleasant or unexpected happens, individuals are more likely to make causal attributions, because of the need for greater predictability. By making causal attributions for negative and unexpected events, people are able to restore a sense of control and predictability surrounding their environment (Taylor et al., 2006). Thus, this is the reason why researchers typically include negative child behaviors when eliciting parental attributions.

Some researchers have also included positive child behavior scenarios in order to see what the data yield. For example, when comparing positive child behaviors (i.e., compliance) to negative child behaviors (i.e., noncompliance), research has found that parents tend to rate prosocial behaviors as more internally caused, global, controllable, and stable, whereas parents are more likely to rate negative behaviors as more externally caused, uncontrollable, specific, and unstable (Dix et al., 1986; Johnston et al., 2000; Johnston et al., 1998; Sobol et al., 1989).

Response Biases

Attempting to portray oneself in a socially desirable manner causes one to fall prey to a response bias. A response bias is when an individual has a systematic tendency to respond in a certain manner, on some foundation other than the specific item content (Paulhus, 1991). Unfortunately, the reports of people's own and others' traits, behaviors, and attitudes may involve response biases, which then affects the measurement of certain variables. Socially desirable responding is a type of response bias.

As House (1980) discussed, causal attributions of successes and failures are affected by knowledge that one's attributions will be seen by other people. Within self-serving attributional biases, research supports the notion that individuals are more likely

to take credit for their successes, than they are to take responsibility for their failures. (Taylor et al., 2006) Additionally, the finding that parents generally make internal attributions for their childrens' successes and external attributions for their childrens' failures, is further evidence that parents are operating under a positive attributional bias (Mash & Johnston, 1999). Additionally, in a review of social desirability, Paulhus (1991) noted two main presentation types. There are those individuals who try to present themselves in a socially desirable fashion by simply presenting themselves in a positive light, and then there are those individuals who present themselves in a positive light and actually believe the positive light is true.

The interesting notion of positive and/or self-serving attributional biases (the idea that parents try to present themselves and their children in a more favorable light by either intentionally, or unintentionally, distorting the truth), or social desirability, has yet to be fully explored within the parental attribution literature is the concept. Research suggests that parents are not objective observers of their children's behavior, but rather under most circumstances, they are positively biased (Dix & Grusec, 1985; Gretarsson & Gelfand, 1988; Regan, Strauss, & Fazio, 1974). It is thought that with regards to their children, parents are positively biased because they want to maintain a positive image of not only themselves, but their children as well.

Several studies have noted the need for further research on the extent to which social-desirability presentation influences the causal attributions that parents provide for their children's behavior (e.g., Bugental et al., 1998; Johnston et al., 1998; Johnston & Freeman, 1997) Thus, authors of existing parental attribution research suspect response biases are taking place, but these biases have not been directly measured. The notion in

and of itself is a valid idea, but are parents really responding in a socially desirable manner? Future research should begin to delve into this topic.

Summary

In summary, there are several key points to consider within the parental attribution literature. First, the field is lacking standardized methodology for assessing parental attributions. Understanding the causes of children's behavior, or at least what parents attribute the causes to, is important for parent-child outcomes. Numerous studies have assessed parental attributions, with each study utilizing various designs or methods. In the early stages of research of a particular field, any progress forward is good progress, but the parental attribution literature is moving out of its early stages. Research in the field has been ongoing for approximately 20 years, thus there is a need for standardized methodology. The resulting progress of identifying standardized methodology would greatly benefit the entire parenting literature. There is a need to identify not only the best format for assessment (i.e., free recall, videos, or vignettes), but also the best causal attribution measurement tools (i.e., coded open-ended responses or Likert rating scales).

Secondly, there has been little research on gender differences within parental attributions. This includes boys versus girls, but maternal attributions versus paternal attributions as well. Past research has determined that due to the process of socialization, a difference in the treatment of boys versus girls is apparent. Accordingly, parents should make discriminating attributions between their male and female children, regarding their various behaviors. Attainment of this knowledge will help further gender difference research, as well as knowledge concerning important parent-child outcomes. Research has determined that the ways in which parents relate to their children not only affect the

children's well-being, but also the parent's well-being and the parent-child relationship as well, among other essential life components. Further research is warranted that assesses children gender differences in maternal attributions, in order to help add vital information to the parenting literature. Any additional information about the ways in which parents interpret and respond to their children's behavior can help researchers, therapists, and parents alike develop better parenting management techniques.

A third key summarization point is that relatively few studies have assessed very young children. The majority of research has focused on children aged four and older. It is true that the older children are, the more time parents have had to spend with their children, thus they are better able to predict how their children will act and the reasons that they acted that way. It is also important to understand these same sorts of things for younger children. By measuring the causal parental attributions of a younger children sample, vital parenting strategies will be pinpointed at an even earlier point in time. These strategies can then be studied in more detail and utilized, if appropriate, to help teach parents additional parenting resources.

Last, but not least, there is a hypothesized force acting upon parental causal attributions, and that is a response bias, namely that of social desirability. It is no surprise that most parents want to be perceived by others as good parents and their children perceived as good children. It is the need for approval within humans, by other humans, that drives individuals to want to portray a positive image of themselves to others. When researchers assess parental attributions, they are asking other individuals, who are typically strangers, to reveal personal information about themselves, their children, and their parenting styles. The average parent, though not necessarily deliberately, may

modify their answers in order to present themselves in a more positive light. This is a normal human tendency. Interestingly, knowing that a response bias among parents is likely occurring, researchers have done little to measure this bias or tease it apart. Future research should assess a parent's own personal social desirability, in order to delineate a link between wanting to be perceived as socially desirable and the reporting of causal attributions about one's child. The next section provides an overview of the present investigation.

CHAPTER III

CURRENT INVESTIGATION

Current Investigation

The present study was designed to look more in-depth at some of the methodological problems in measuring parental attributions. Since the purpose of this study had more of a methodological focus, the concern was not *if* parents naturally make attributions, but rather which attributions they made when solicited. In addition, the proposed study assessed whether the solicited attributions were parent-, or child-centered.

Whereas previous studies have generally utilized older child samples, the current investigation used children ages two to four. The present study assessed both positive and negative child behaviors in order to replicate past findings, as well as to determine if any new data patterns emerged. It was hypothesized that mothers would make dispositional attributions for their children's positive behavior, and situational attributions for their children's negative behavior. Based on the dimensions of dispositional and situational causal attributions, it was hypothesized that mothers would attribute their children's positive behaviors to internal, stable, and global characteristics, while they would attribute their children's negative behaviors to external, unstable, and specific characteristics.

Additionally, child gender differences were explored as this topic has been largely neglected in past parental attribution research. A study by Knight (2005) assessed the attributions of 30 mothers of 3- to 5-year-olds, and found no gender differences between the attributions mothers made for their daughters versus their sons. In addition, a study by Coplan and his colleagues (2002) looked at the parental attributions of 76 mothers of children aged 30 to 70 months, and found no significant child gender effects. A study by Gretarsson and Gelfand (1988) assessed the attributions of 60 mothers of children aged 4

to 12 years, and found gender differences. They determined that for all types of activities, boys were seen as more responsible than were girls.

Because results of past research have varied regarding gender differences (Coplan et al., 2002; Gretarsson & Gelfand, 1988; Knight, 2005) no specific hypotheses about child gender differences were made in the present study. It is important to point out that when younger child participants (2 to 5 years) were studied, no gender differences were found, but when older child participants (4 to 12 years) were studied, gender differences were found. Thus, the age of the child might affect whether or not gender differences were found. In order to further replicate past gender difference findings by researchers such as Coplan and colleagues (2002) and Knight (2005), gender differences were assessed for the younger age group (i.e., two to four years of age).

Orally read vignettes were used with the mothers in order to further replicate the correspondence of open-ended responses (format traditionally used with free recall to attain attributions) with Likert rating scales (format traditionally used with written vignettes to attain attributions), for the same positive and negative child behaviors. The child behaviors that a mother replied about in the open-ended question, “Why would your child act in this way,” were also the same child behaviors that a mother heard about in the vignettes and made causal attributions for on Likert rating scales. Through the attribution eliciting structure of orally presented vignettes, a direct comparison of coded open-ended responses with Likert rating scale attributional dimensions was possible.

In past research, limited studies have assessed the correspondence of various attribution eliciting formats with various attributional dimension measurements. In her study, Knight (2005) assessed maternal attributions elicited from written vignettes with

maternal attributions elicited from videos which depicted the subject and her child. The attributions elicited from the two formats did not yield similar patterns of causal attribution data. Conversely, two separate studies by Gretarsson and Gelfand (1988) and Johnston and colleagues (1998) compared open-ended responses attained from directed free recall with Likert rating scale responses attained from written vignettes and found that the two formats yielded similar data patterns. Thus, while the Knight (2005) study did not find high correspondence among two attribution eliciting structures (videos and written vignettes) measured with one type of dimension measurement (Likert rating scales), other studies (Gretarsson & Gelfand, 1988; Johnston et al., 1998) have found high correspondence among two attribution eliciting structures (free recall and written vignettes) measured with two types of dimension measurements (coded open-ended responses and Likert rating scales). In order to modify and further replicate past research, the current study compared two attributional dimension measurements (coded open-ended responses with Likert rating scales) from one attribution eliciting structure (vignettes). Based on the research of Gretarsson and Gelfand (1988) and Johnston and her colleagues (1998), a second hypothesis of the proposed study was that there would not be a significant difference between the attributions measured by the coded open-ended responses and the attributions measured by the Likert rating scales.

In coding mothers' attributions, the first important step was to categorize the causes among several different causal attributional dimensions. The LACS, for example, uses five dimensions: stability, globality, locus of causality, uniqueness, and control (Stratton et al., 1988). Stability, globality, locus of causality, and control were the same dimensions as defined in the "Types of Attributions" section discussion, while

uniqueness is defined by Stratton and his colleagues as whether or not it was something unique about the individual involved that caused the behavior. The LACS system also notes the outcome of the causal attribution (positive, negative, neutral, or undecidable), which is important in helping to determine the future outcomes and lasting effects of these attributions within the family structure (Stratton et al., 1988).

The current study uses four of the dimensions used in the LACS coding system: locus of causality, stability, globality, and controllability. These four dimensions were accounted for on the Likert rating scales, as well as in the code the researchers used to code the maternal causal attributional open-ended responses. It was also noted if the elicited causes were parent-centered or child-centered attributions. As described earlier, it is important to make a distinction between these two types of attributions.

As past research has shown, parents are likely to portray themselves and their children in a positive light, which has been interpreted as evidence of positive response biases. Interestingly though, positive response biases have not been widely measured within the parental causal attribution literature. Positive response biases are consistent with social desirability, thus, due to the need for research on response biases within the parental attribution literature, the proposed study assessed response biases on the most basic level, with a social desirability scale.

It was hypothesized that social desirability would be associated differently with the two types of child behaviors (positive and negative) and the corresponding causal attributions that were made. For positive child behaviors, it was expected that high social desirability scores would be associated with dispositional attributions, while for negative child behaviors, it was expected that high social desirability scores would be associated

with situational attributions. It was hoped that this study would be one of the first steps in measuring how much of the causal attributions are affected by a positive response bias. The implications of the proposed role of response biases are vast and could affect past, current, and future research on parental causal attributions.

CHAPTER IV

METHODOLOGY

Participants

Sixty-one mothers of children between the ages of 24 and 48 months were recruited. Since it was not possible to calculate a power analysis on a mixed design, the proposed number of participants was based on the sample sizes of similar previous research studies. Participants were initially recruited through local daycare and head start centers, flyers posted in the community, and child activity centers. The researcher then followed up through word of mouth advertising on any potential leads of interested participants. Flyers were posted in select locations in order to reach families of various income levels. For their participation, the mothers were compensated with a small coupon to a local business. In addition, every participant was entered into a drawing for one \$25.00 gift certificate to a local business. There was one gift certificate awarded for every 10 participants.

Telephone interviews were not conducted with 10 of the 61 mothers, due to scheduling difficulties; thus their data was excluded from further analyses. This resulted in a final sample of 51 mothers, Of these 51, 27 received the open-ended questioning condition first and 24 received the Likert rating scale condition first, for analyses of attributional measurement data.

Participating mothers ranged in age from 26 to 57 years of age ($M = 36.20$, $SD = 6.49$) and were predominately Caucasian (78.4%). Demographic information for the complete sample is presented in Table 1. Most mothers were married (88.2%). Mothers had a minimum education level of a high school diploma ($M = 15.78$, $SD = 1.36$); 39.2% were college graduates and 35.3% held advanced degrees. Mothers reported that their spouses has an average age of 37.31 years ($SD = 6.42$) and an average of 15.71 years of

education ($SD = 1.57$), which is equivalent to a high school diploma and over three years of college (60.4% held advanced degrees). Mothers had additional children in 84.3% of families ($M = .84$, $SD = .37$), with a mean of 4.14 people living in the home ($SD = .85$). Approximately half of the mothers lived in Oklahoma (51%).

The children ranged in age from 24 to 47 months ($M = 34.63$, $SD = 6.15$) and, like their mothers, were predominantly Caucasian (68.6%; see Table 2). Sixty percent were female.

Measures

Demographic questionnaire. All mothers completed a demographic questionnaire for descriptive purposes (Appendix A). This instrument assessed information about the participant and the spouse's or partner's age, ethnicity, highest education level completed, family income, and marital status. Additionally, information about the child's age, sex, and ethnicity was also obtained.

Eyberg Child Behavior Inventory (ECBI). The ECBI (Burns & Patterson, 1990; Eyberg & Pincus, 1999; Eyberg & Ross, 1978) is a 36-item scale that assesses the frequency of common problem behaviors of children ages 2-16 years. In addition, parents also note whether the common problem behaviors are perceived as problematic. Both an Intensity Score and a Problem Score are derived from this measure. The Intensity Score is the sum of the seven-point rating scales for each of the 36-items. The seven-point rating scales measure how frequently a particular behavior occurs. The Problem Score is the sum of the 36 items that are endorsed as problematic. Intensity Scores at or above 131 and Problem Scores at or above 15 indicate clinically significant behavior problems (Eyberg & Pincus, 1999). The ECBI has shown good validity in discriminating between

children with and without behavior problems (Burns & Patterson, 1990). The ECBI has good internal consistency, with coefficients of .98 for both the Intensity and Problem Scores (Robinson, Eyberg, & Ross, 1980). This measure is part of a standard battery that most studies in this lab utilize. It was included in the current investigation in order to preserve the continuity of data collection and also for descriptive purposes.

Parenting Scale (PS). The Parenting Scale (Arnold, et al., 1993) is a 30-item scale that assesses dysfunctional parenting in discipline situations of children ages 18 months to 4 years. Each of the 36 items is assessed with seven-point rating scales. A Total Score and three factor scores: Overreactivity, Laxness, and Verbosity, are derived from this measure. The authors have reported that the PS has shown adequate test-retest reliability, with coefficients of .82 (Overreactivity), .83 (Laxness), .79 (Verbosity), and .84 (Total). The PS has good internal consistency, [$\alpha = .84$]. Furthermore, the PS has good discriminative ability between groups of clinic and nonclinic families on the three factor scores. This measure is part of a standard battery that the majority of the studies in this lab utilize. It was included in the present study in order to preserve the continuity of data collection and also for descriptive purposes.

Maternal Attribution Questionnaire (MAQ). The MAQ (Knight, 2005) is a measure that assesses mothers' expectations and attributions of intentionality for their children's negative and positive behavior (Appendix B). More specifically, the MAQ was developed in order to assess mothers' attributions of internality, stability, globality, and controllability. It is based on the work of Dix and his colleagues (Dix et al., 1986; Dix et al., 1989) and Johnston and her colleagues (C. Johnston, personal communication, February 13, 2006). The MAQ utilizes vignettes that were adapted from both Dix's

previous research, as well as Johnston's previous research. Testing of the MAQ indicated that mothers understood all of the questions on the measure and believed the reality of all depicted scenarios. In addition, a range of responses were attained.

The MAQ also incorporates principles from the Written Analogue Questionnaire (WAQ) created by Johnston and her colleagues (C. Johnston, personal communication, February 13, 2006). The MAQ has four vignettes, two vignettes depicting positive behavior (pro-social and compliance) and two vignettes depicting negative behavior (oppositional and non-compliance). Each participant received a copy of the MAQ and were asked to rate four scenarios on each of the following attributional dimensions: internal/external, stable/unstable, global/specific, and controllable/uncontrollable. Mothers rated the items on a 1-7 Likert scale, with higher numbers indicating ratings of internality, stability, globality, and controllability.

The Likert rating scales from the WAQ served as the response format for this measure (C. Johnston, personal communication, February 13, 2006). In addition to the four vignettes with Likert rating scales that each participant completed on the MAQ, the experimenter orally administered comparable MAQ scenarios over the telephone (Appendix E). Alternate vignettes were developed in order to allow for the comparison of open-ended responses with Likert rating scales, without utilizing the same, exact scenarios across formats.

Marlowe-Crowne Form C (M-C Form C). Currently, there are several social desirability measures in existence, but the one of most applicability to the proposed study is the Marlowe-Crowne Social Desirability Scale (M-C SDS; Crowne & Marlowe, 1960). The M-C SDS was developed as a measurement of social desirability, including only

questions with minimal pathological and/or abnormal implications if responded to in either socially desirable or socially undesirable ways. The authors reported that the original 33-item M-C SDS has adequate test-retest reliability, with a correlation of .89. Further, the M-C SDS has good internal consistency, with a coefficient of .88. The scale was also found to be highly correlated with other social desirability scales.

Reynolds (1982) constructed a reliable and valid short form of the M-C SDS. It consists of a good, psychometrically-sound 13-item measure, which efficiently measures social desirability, created from the original 33-item test. This measure is known as the Marlowe-Crowne Social Desirability Scale Form C, and it is a practical short form to use to tap into social desirability assessment. This short-form provides researchers with an easy-to-administer, brief social desirability assessment tool, and thus was utilized in the current study. It was also used for descriptive purposes.

Materials

In order to record the oral administration of the comparable MAQ scenarios over the telephone, a microphone was used. One end of the microphone was attached to the telephone receiver, while the other end was attached to an audio recorder.

Attributional Code

The Leeds Attributional Coding System (LACS) was adapted in order to code the oral responses of the comparable MAQ scenarios that will be given over the telephone. The LACS coding system was manualized and published by Stratton and his colleagues in 1988. It was developed in the Leeds Family Therapy and Research Center, located in England, to aid the authors in coding causal beliefs spoken during natural communication. One of the benefits of using the LACS system is the ability to investigate

attributions made by one person about the behavior of another (i.e., parents about their children) (Munton, Silvester, Stratton, & Hanks, 1999). The LACS authors noted that whether the generated material is meaningful and useful is the true test of any coding system, and within their manual, the authors discuss a variety of examples to show that the LACS fully supports this requirement (Stratton et al., 1988).

According to a review of the LACS manual by Gallois (1991), there are several published moderate to good reliability studies on the code, validity data, and normative data for several different clinical samples. She also noted that the manual is clear, concise, and readable, which is definitely important in learning any new coding system. Unfortunately, Gallois does not discuss any reliability or validity data in her review, nor do Stratton and his colleagues (1988) in their “unpublished” LACS manual. The original LACS manual is not in press anymore, thus the current version available for viewing solely concerns itself with the extraction of attributions and dimensional coding. At this point in time, the LACS appears to be a well developed and easily applicable attributional coding system to utilize, thus the current study will adapt the method described within the LACS.

The modified version of the LACS included the coding of the following four causal attributional dimensions: internal/external, stable/unstable, global/specific, and controllable/uncontrollable (Appendix D). Each dimension was coded as a 0, 1, or 2, depending upon what the causal statement encompassed. For example, every causal attribution provided was coded on the internal/external dimension as: (0) external; (1) external and internal; or (2) internal. The other three dimensions were coded similarly.

The principle investigator transcribed all audio-taped interactions between the principle investigator and the participants. The transcribed statements were then coded by two undergraduate researchers. All coders underwent the same training process and they were trained until a criterion of 80% agreement was reached. In addition, all coders were kept blind to the hypotheses of the study. In order to assess inter-rater reliability, 25% (12 interactions) of the interactions were coded by two undergraduate research assistants. The two coders' sheets were then compared.

Inter-rater reliability was calculated using a kappa coefficient. For all of the twelve interactions, a kappa coefficient was tabulated for each of the measured attributional dimensions. Kappa coefficients were averaged across the interactions and did not significantly differ between conditions. Agreement using kappa ranged from .87 to 1.00 for all coded categories.

Procedure

The experimenter contacted mothers who expressed interest in participating in the current investigation. Prior to the initial contact, the participants were randomly assigned to the group that completed the vignettes with Likert rating scales first, then the vignettes with the open-ended question, or the group that completed the vignettes with the open-ended question first, followed by the vignettes with the Likert rating scales. The format sequence was counterbalanced across participants in order to evenly distribute any variance due to order effects. Completion of the questionnaires took approximately 25 minutes, while completion of the phone interview took approximately 15 minutes.

During the initial contact, mothers were asked for their home mailing address and phone number. They were then sent a packet of questionnaires to fill out in their home.

Included in the packet of questionnaires was an envelope with pre-paid postage so that the participants could promptly return their completed questionnaires. Once the principle investigator received a participant's completed packet, the participant was contacted to schedule the 15 minute phone interview. The phone interview consisted of two parts, the reading of vignettes followed by the asking for open-ended responses, and the reading of vignettes with the request to indicate attributional dimension ratings on an orally presented Likert rating scale. The format presentation was counterbalanced among participants in order to evenly distribute any variance due to order effects.

During the open-ended portion of the phone task, the investigator read four vignettes and then asked, "Why would your child act in this way?" If the mother's response was vague, the experimenter prompted the mother with a neutral question such as, "Could you please tell me more?" During the Likert scale portion of the phone task, the investigator read four structurally similar vignettes and then presented the attributional dimension scales from the MAQ individually and prompted the mother for her responses. The positive and negative child behaviors were presented in the same order on both the MAQ and the comparable MAQ scenarios. After completion of the oral administration of the vignettes, the participant was thanked for her time.

The packet of questionnaires contained an overview of the study (Appendix C), informed consent (Appendix D), and several brief questionnaires to complete, including the ECBI, PS, and M-C Form C.

CHAPTER V

RESULTS

Descriptive Information

Mean scores and standard deviations for all participants are presented in Table 3. Scores are presented for both the subsample that completed both portions of the study (i.e., questionnaire data and the telephone interview) and the subsample that only completed the questionnaire data.

Eyberg Child Behavior Inventory (ECBI). The ECBI yields a Problem score and Intensity score, with higher total scores indicating more child behavior problems and increased perceptions of the behaviors as more problematic. Mothers endorsed a mean of 5.04 child behaviors on the Problem scale ($SD = 4.10$). Two children received problem scores in the clinically significant range. On average, mothers rated the severity of problem behaviors in the non-significant range on the Intensity scale ($M = 84.62$, $SD = 15.13$), and no mothers rated the intensity of their children's problematic behaviors in the clinically significant range.

Parenting Scale (PS). The Parenting Scale yields a Total score and three factor scores (i.e., Laxness, Overreactivity, and Verbosity) with higher scores indicating more frequent use of dysfunctional disciplinary practices. Arnold et al. (1993) provided mean scores and standard deviations for their clinic samples. Mean factor scores for the current sample were below the control group mean scores for Laxness, Overreactivity, Verbosity, and the Total score. Two mothers scored in the clinically significant range on the Laxness factor, 19 mothers scored in the clinically significant range on the Verbosity factor, six mothers scored in the clinically significant range on the Overreactivity factor, and eight mothers scored in the clinically significant range on the Total score.

Marlowe-Crowne Form C (M-C Form C). The M-C Form C yields a maximum total score of 13, with higher scores indicating higher levels of socially desirable responding. The mean total score for the current sample was 7.27 ($SD = 3.09$). Scores ranged from 1 to 13, with 49% of the sample scoring ≤ 7 and 51% of the sample scoring ≥ 8 .

Conditions

Mothers were randomly assigned to one of two conditions that determined the presentation order of the attributional measurement format (i.e., open-ended responses versus Likert scale) they received during the telephone interview. Forty-seven percent of the sample received the Likert scales first, while 53 percent of the sample received the open-ended prompts first. Independent samples *t*-test analyses were conducted to determine if there were any differences among the groups in each order on demographic variables (i.e., parent age, spouse age, child age, and years of education), self-report questionnaires (i.e., ECBI, PS, and M-C Form C), MAQ responses, and/or alternate vignette responses (all *t*'s were nonsignificant). Further chi-square analyses were conducted to determine if there were any differences among the groups in each order on demographic variables (i.e., income, marital status, and ethnicity) (all χ^2 's were nonsignificant). An independent samples *t*-test and chi-square revealed no significant difference in the presentation order.

Furthermore, a series of independent samples *t*-tests were run on the questionnaire packet data in order to assess for any differences between the group of mothers who completed the telephone interview and the group who failed to complete the telephone portion of the study on demographics (i.e., parent age, spouse age, child age, and years of

education), and the self-report questionnaires (all t 's were non-significant). Chi-square analyses were also conducted to assess for any differences between the group of mothers who completed the telephone interview and the group who failed to complete the telephone portion of the study on other demographic variables (i.e., income, marital status, and ethnicity) (all χ^2 s were nonsignificant). An independent samples t -test and chi-square revealed no significant differences.

Results

A series of 2 (gender) x 2 (valence) x 2 (format) mixed design ANOVAs were conducted. Gender was a between-groups factor (female children versus male children), and valence (positive behavior versus negative behavior) and format (Likert rating scales versus open-ended responses) were within-subjects factors. So that the data from the two formats were on the same scale, z -score transformations were conducted on both the Likert rating scale responses and the coded open-ended responses. On the original formats, the Likert rating scales were in a 7-point format, while the coded open-ended responses were in a 3-point format. The z -score transformations changed both of the formats whereby 0 was the median and the scores then ranged from -1 to +1.

In addition, for the analyses, the four vignettes were collapsed into the general categories of positive behavior and negative behavior. After determining no significant differences between the two positive behaviors (a prosocial child behavior and a compliance child behavior) and two negative behaviors (a misbehavior child behavior and a noncompliance child behavior) the four behavior categories were averaged into two (i.e., positive and negative).

The four dependent variables (internal/external, stable/unstable, global/specific, and controllable/uncontrollable) were analyzed separately for child gender, positive versus negative behavior, and attribution measurement format. Separate univariate analyses were conducted, instead of a MANOVA on all of the dependent variables simultaneously, because each of the four dimensions is unique and previous research has been inconsistent in examining each in the same study. Univariate analyses made it possible to measure their unique contributions, and provide new information regarding patterns across these dimensions. The descriptive data for each of the dependent variables are listed by gender in Tables 4-7.

First, the hypothesis that there would be no significant differences on format for any of the attribution dimensions was tested. More specifically, it was hypothesized that there would not be a significant difference between the attributions measured by coded open-ended responses and attributions measured by Likert scales. This hypothesis was supported. There was no main effect of format on any of the causal attribution dimensions (all F s n.s.)

Second, the hypothesis that mothers' attributions would differ based on the valence of the behavior was tested. It was hypothesized that mothers would make dispositional attributions for their children's positive behavior, and situational attributions for their children's negative behavior. Based on the dimensions that make up dispositional and situational causal attributions, it was hypothesized that mothers would attribute their children's positive behaviors to internal, stable, and global characteristics, while they would attribute their children's negative behaviors to external, unstable, and specific characteristics. This hypothesis was not supported. There was no main effect of

valence on any of the internal/external, stable/unstable, global/specific, and controllable/uncontrollable dimensions. Mothers did not attribute their children's behavior differently for positive and negative behaviors.

The third hypothesis tested was that social desirability would be associated differently with the two types of child behaviors (positive and negative) and the corresponding causal attributions that were made. For positive child behaviors, it was expected that high social desirability scores would be associated with dispositional attributions, while for negative child behaviors, it was expected that high social desirability scores would be associated with situational attributions.

As a first step in directly measuring response biases (namely social desirability) within parental causal attributions, a series of Pearson product-moment correlations were calculated for the MC Form-C total scores and each of the attributional ratings for the internal/external, stable/unstable, global/specific, and controllable/uncontrollable dimensions. These are presented in Tables 8-11. A modified Bonferroni correction ($p = .013$) was conducted in order to control for any family-wise error rates. For the internal/external ratings, there was a significant correlation with MC Form-C total scores and positive child behaviors, as measured by Likert rating scales, on this dimension. For the stable/unstable ratings, there was a significant correlation with MC Form-C total scores and negative child behaviors, as measured by Likert rating scales, on this dimension. For the global/specific ratings, there was a significant correlation with MC Form-C total scores and positive child behaviors, as measured by coded open-ended responses, on this dimension, as well as a significant correlation between MC Form-C total scores and negative child behaviors, as measured by Likert rating scales, on this

dimension. For the controllable/uncontrollable ratings, none of the correlations with MC Form-C total scores was significant.

Therefore, the data were analyzed using separate ANCOVAs, with a 2 (valence) x 2 (format) mixed design for the internal/external, stable/unstable, and global/specific dimensions, with social desirability as a covariate with the appropriate dependent variables. A significant main effect was found for format ($F = 4.471, p = .04, df = 1$) and a significant interaction effect was found for format by MC Form-C total score ($F = 3.958, p = .05, df = 1$) on the internal/external dimension. This differs from the ANOVA, where no significant main effect of format was found for the internal/external dimension. No significant main or interaction effects of format or valence were found for the stable/unstable dimension. A significant main effect was found for format ($F = 5.054, p = .03, df = 1$) and a significant interaction effect was found for format by MC Form-C total score ($F = 5.358, p = .25, df = 1$) on the global/specific dimension. This differs from the ANOVA, where no significant main effect of format was found, for the global/specific dimension. The third hypothesis was partially supported. Social desirability was found to have a small effect on maternal causal attribution ratings, though no specific pattern was identifiable.

Additional analyses were also conducted to examine whether there were significant interactions among these factors. No significant interaction effects were found.

Finally, our exploratory analyses were addressed. In order to assess whether maternal attributions for male children differ from maternal attributions for female children, four separate ANOVAs were run. These univariate ANOVAs served to test for

the main effect of gender on each of the four dependent variables. No significant effects were found on any of the causal attributional dimensions (all F 's were non-significant). Thus, maternal attributions made for male children were similar to maternal attributions made for female children.

Of the codable attributions that mothers provided, 210 of them were child-centered and 23 were parent-centered. Furthermore, mothers often times provided multiple attributions on the open-ended responses, whereas by nature of the measurement tool, they only made one causal attribution on the Likert rating scales.

CHAPTER VI
DISCUSSION

The present study was designed to examine several issues associated with the assessment of parental attributions. First, the study sought to test the correspondence of two attribution measurement formats: Likert rating scales and coded open-ended responses. Further, the current investigation examined child gender differences, the assignment of positive and negative child behaviors to situational and/or dispositional attributions, the number of attributions made for each child behavior on the open-ended responses, and the causal attributions mothers make for their toddler-aged children. Lastly, the role of response biases, namely social desirability, was assessed, as this has largely been ignored in past research. The overall goal of this was to aid in the establishment of a standardized methodology in the assessment of parental attributions. Despite over 20 years of parental attribution assessment research, no standardized methodology exists.

Interpretation of Results

The current study found that the two causal attribution measurement formats (i.e., Likert rating scales and open-ended responses) yielded similar patterns of attributional data. This finding of the present study that there were no significant differences between the two measurement formats, suggests that a researcher can use either format and be confident that his/her results are not an effect of the measurement tool chosen. Furthermore, holding all else equal, a researcher can confidently compare his/her results utilizing one measurement format with the results of other studies utilizing the other measurement format. This finding is consistent with past research. Gretarsson and Gelfand (1988) found high correspondence between the two measurement formats utilizing the attribution eliciting structure of request to recall, while Johnston and her

colleagues (1998) found high correspondence between the two formats, but with two different eliciting structures (i.e., attributions elicited by vignettes that were measured by Likert scales and attributions elicited by request to recall that were measured by open-ended responses). This finding greatly adds to the literature as there are very few studies assessing the methodology component itself of assessing parental attributions, but there are many years of research on the topic area.

This result of the current study has several implications for parental attribution research. First, the finding that Likert scales and coded open-ended responses are yielding similar data patterns suggests that either format can confidently be utilized with the vignette eliciting structure. However, the feasibility of the two measurement formats may not be equal. The time required to train coders for the coding of the open-ended responses is a cumbersome task. In the present study, several months were spent training the coders. Once trained, each coder spent a significant amount of time coding each open-ended transcript, not to mention the amount of time that was spent transcribing the conversation between the mother and principal investigator. The time spent transcribing, training, and coding is easily eliminated with the use of Likert rating scales. Furthermore, the costs that were associated with the time spent on these three tasks (i.e., transcribing, training, and coding) could have been better used elsewhere since this study suggests that Likert rating scales provide us with very similar data.

Another key point to consider is that for each causal attribution made about the behavior in question through the open-ended response measurement format, trained coders coded that statement on four attributional dimensions (internal/external, stable/unstable, global/specific, and controllable/uncontrollable). The code that was used

required that each codable statement be coded on each of the four dimensions, no matter how many or how few words the statement contained, thus each attributional statement was “forced” to include all four dimensions. In reality, parents may not make attributions on multiple dimensions, and in fact there are many other attributional dimensions that the current study elected not to utilize (e.g., blame, distinctiveness, and competency). When a mother’s response was vague and included few words, the coders did their best to code the statement according to the script; however, some of the statements may not have truly encompassed all of the dimensions. Furthermore, some of the dimensions appeared to be interrelated with one another. For example, while both the global/specific and stable/unstable dimensions can be defined and coded individually, there is considerable overlap among the two. Likewise with the internal/external and controllable/uncontrollable dimensions there is considerable overlap. At times it was hard to distinguish between the two sets of attributional dimensions. Nonetheless, there were no significant differences between results from the Likert scales and open-ended response formats. Thus, although either method may be used, the Likert scale method is recommended because it is more efficient.

A final point worth consideration is the use of experimenter-determined vignettes versus a parent’s own recall. Past studies (e.g., Johnston et al., 1998) used both vignettes and request to recall, but debate exists as to whether experimenter-derived vignettes that ask a parent to imagine his/her child engaging in a certain behavior are realistic and/or applicable for parents. The implication of this is that researchers may be assuming the real-life applicability of vignettes for parents, while asking a parent to recall his/her own

incidence of behavior provokes an actual real-life situation experienced by the parent and child. Further research is warranted on this topic.

As Miller (1995) commented, very few studies report child gender effects. Studies generally fail to comment on the presence/absence of gender effects (e.g., Dix & Reinhold, 1991; Nix et al., 1999; Smith & O'Leary, 1995) or only assess parental attributions for one gender, thus prohibiting any gender comparison at all (e.g., Bickett et al., 1996; Geller & Johnston, 1995; Johnston & Leung, 2001).

There are a few studies that report on either the absence or presence of gender effects. Coplan and his colleagues (2002) and Knight (2005) reported no significant effects of gender in their studies, while Gretarrson and Gelfand (1988) found gender differences (i.e., for all types of activities, boys were seen as more responsible than were girls). Interestingly, Knight's (2005) study assessed the attributions of mothers of children aged 3-5 and the study by Coplan and his colleagues (2002) assessed the attributions of parents of children aged 30-70 months. Gretarrson and Gelfand (1988) assessed the attributions of mothers of children aged 4-12.

Thus, it appears that child age is related to whether parental attributions differ between male and female children. There is little evidence of gender effects below age four, but there is support that maternal attributions may differ for boys and girls of older ages. According to research, rates of problem behaviors in children begin to differ for boys and girls at about the age of five, with boys being rated higher by teachers on externalizing behaviors and being perceived as more problematic in the home and school, as compared to girls (Fagot & Leve, 1998). Thus, based upon both past attributional research and actual differences in child behavior problems, it is likely that at some point

the attributions that parents make for their children begin to diverge according to child gender. Further research needs to help clarify this issue and identify the age at which this likely happens.

As Dix and his colleagues (1986) found, parents believe that as their children age, the children's behavior is increasingly controlled by his/her personality dispositions. The current study found that mothers did not necessarily attribute their children's positive behavior to dispositional attributions, nor their children's negative behavior to situational attributions. Thus, in accordance with Dix and his colleagues, the age of the children in the present sample may still be too young for parents to conceivably perceive their child as having control over his/her positive and negative behaviors.

Furthermore, while research has found that parents attribute their children's positive behavior to dispositional characteristics and their children's negative behavior to situational characteristics (Dix et al., 1986; Johnston et al., 2000; Johnston et al., 1998; Sobol et al., 1989), this research has been conducted with parents of children aged 4-12 years. Thus, it seems highly likely that there is some unknown point of transition between the toddler years and preschool years where a parent increasingly perceives his/her child as having greater control over his/her behavior in certain situations.

The present study utilized a younger sample than has typically been used in past research. In fact, a very limited amount of research has focused on children aged four and under (e.g., Coplan et al., 2002; Knight, 2005; Slep & O'Leary 1998; Smith & O'Leary, 1995). By utilizing a younger sample, the present study was able to help add depth to the current literature by including one more study that assessed the maternal attributions of a

younger sample and thus made this information available in hopes of adding information about maternal attributions for children during childhood and across the age span.

For the clinician, the extension of this study to include younger children is good for the generalizability of results to families participating in prevention and early intervention programs (which would probably include young children) (Slep & O'Leary, 1998), and also the observability of child negative affect within the discipline context (Smith & O'Leary, 1995). Both of these two points are valuable for clinicians to consider because the focus of the parental attributions (i.e., parent- or child-centered) can have an effect on the conceptualization of case. For example, how much time should a clinician spend questioning a parent and/or child about their current problems? As the current study suggests, parents of younger children tend to make child-centered attributions and they tend not to exhibit response biases, thus a clinician may not want to spend as much time assessing attributions as he/she would with parents of older children.

Furthermore, when presenting a treatment rationale to a family, the clinician should pay close attention to the focus of attributions (i.e., parent- or child-centered) that a parent makes. If a parent tends to make parent-centered attributions, the clinician should present the treatment as a way for the parent to learn how to make changes in his/her own behavior and in the ways in which he/she interacts with the child. If a parent tends to make child-centered attributions, the clinician should present the treatment as a way for the parent to learn how to change his/her child's behavior and the ways in which the child interacts with the parent.

A key reason that it is so important for a clinician to actively pay attention to the types of attributions that a parent makes is because of the important outcomes associated

with the type of attributions. Research by Wahler and his colleague (1980) found that during parent training, insular mothers (i.e., mothers who had infrequent and aversive patterns of contact with the community) showed equivalent improvement to non-insular mothers (i.e., mothers who had daily community contacts), but they did not maintain their gains during a 4-month follow-up. Furthermore, he found that insular mothers, as compared to non-insular mothers, showed no change in their global, blame-oriented child behavior descriptions, and thus parent training was not beneficial for changing the attending behaviors of the insular mothers. Through the active listening and assessment of parental attributions, a clinician can help insure that his/her choice of treatment is the best plan for the individual family.

While the current study found that parents overwhelmingly provided child-centered attributions for both positive and negative behaviors, other research has shown that parents tend to attribute their children's positive behavior to dispositional attributions and their children's negative behavior to situational attributions (Dix et al., 1986; Johnston et al., 2000; Johnston et al., 1998; Sobol et al., 1989). Thus, as a clinician, careful attention needs to be paid to not only the age of the child, but any attributional biases that may be taking place on either the part of the parent, or the child if he/she is old enough to voice his/her own sentiments.

It is also important to note that while the current study did not find any gender differences or attributional assignment biases (i.e., positive behavior is dispositional in nature and negative behavior is situational in nature), it is very important for a parent to be aware of the tendencies that do exist. As has been previously mentioned, parents do make differential attributions for their female versus male child (Dweck, 1975;

Gretarrson & Gelfand, 1988; Frisch, 1977; O'Brien, Huston, & Risley, 1983; Shigetomi, Hartmann, & Gelfand, 1981) and they do attribute their children's positive behavior to dispositional characteristics and negative behavior to situational characteristics (Dix et al., 1986; Johnston et al., 2000; Johnston et al., 1998; Sobol et al., 1989). By being aware of these biases, a parent can ensure that he/she is accurately assessing his/her own attributions and the resulting punishment/praise that they deal out.

Past research has not focused on whether the attributions parents make are child-centered or parent-centered, but this is an interesting thing to note when parents are given the choice. Despite the valence of the behavior, positive or negative, the current study found that the mothers overwhelmingly provided child-centered attributions. This could have several implications. For starters, the focus of the parental attributions (i.e., parent- or child-centered) could reflect the parents' conceptualizing and thinking about things. If a parent tends to make parent-centered attributions he/she is likely reflecting on his/her own strategies for problem behaviors or explanations for when things go right. When a parent makes a child-centered attribution, he/she is likely focusing on the child's ability to do something and the child's ability to have control over the situation. Child-centered attributions may be indicative of a parent's realization that his/her child is developing self-control and that the child is in charge of his/her behavior. Additionally, the type of attribution made could impact a parent's choice of discipline or reinforcement. For example, if a parent attributes a child's bad behavior to his/her own poor parenting skills, then the child will likely not be punished, or not punished as harshly. Conversely, if a parent attributes a child's bad behavior to the child, then the punishment will likely be harsher.

Lastly, mothers' socially desirable responding was assessed with a social desirability measure, the Marlowe-Crowne Form C (M-C Form C). The results of the current study found that when the total score from the M-C Form C was correlated with each of the causal attributional dimensions separately, there was a significant correlation between the M-C Form C and the following behavior valence, measurement format, and attribution dimension: 1) positive child behaviors, as measured by Likert rating scales, on the internal/external dimension, 2) negative child behaviors, as measured by Likert rating scales, on this stable/unstable dimension, 3) positive child behaviors, as measured by coded open-ended responses, on the global/specific dimension, and 4) negative child behaviors, as measured by Likert rating scales, on the global/specific dimension. Despite the significant effects on four of the correlations, there were 16 nonsignificant correlations. Thus, it appears that social desirability has a very small effect on maternal attribution ratings.

When follow-up analyses were conducted on each of these significant correlations with the social desirability score as a covariate, two of the attributional dimensions (internal/external and global specific) yielded significant effects of format. The interpretation of this finding is somewhat unclear as this study was among the first to assess for socially desirable responding within the measurement of parental attributions. It is interesting to note that during coder training and actual coding, it was challenging to tease apart the attributional dimensions and define them separate from one another, and thus finding significant results on only two of the dimensions is hard to explain. It could be that socially desirable responding does have an effect on some dimensions but not others, or more likely, that additional research is warranted on this topic.

In summation of all of the results, the current study has found and suggested many points and conclusions. While the overall effects of responding in a socially desirably fashion are minimal, the results may reflect a different pattern with an older child sample. Young children (i.e., two- and three-year-olds) are expected to misbehave, be noncompliant, and get into trouble. As the child gets older, the expectations for obedient and positive behavior increase. In the current study, the mothers were likely not embarrassed to admit that their child does these behaviors because these behaviors are acceptable by society for this young age. However, with older children misbehaving and being noncompliant, a more socially desirable response bias may be apparent as parents try to present themselves and their children in a positive light, as society typically does not accept the same misbehavior rates for 12-year-olds as it does for two-year-olds. The idea that children are sometimes merely seen as an extension of the parent (i.e., if my kid is bad, it is because I am a bad parent) may still be a valid argument. This may be the case with older children and as this study was an initial study looking at socially desirable responding, further research is warranted looking at the same age range (two- and three-year-olds), as well as older child samples. A clinician should carefully consider this when conceptualizing a case and/or working with a parent/child dyad.

Furthermore, the gender of the child could have likely had an effect on any response biases. As past research has shown, gender differences begin to emerge in children older than the current sample utilized, thus the current sample may not have been old enough to detect gender differences, thereby resulting in socially desirable responding.

Another reason that the current study showed minimal effects of a response bias may be the focus of the attributions made (i.e., parent- or child-centered). Mothers overwhelmingly attributed their children's positive and negative behavior to the child. It is thought that if a parent were to make more parent-centered attributions a different response bias pattern may emerge, such that parents might attribute their children's positive behavior to the parent and their children's negative behavior to the child. Also with an older child sample, there might be more of a variety in the focus of the attributions. It is highly likely that the age of the current sample had some sort of effect on the focus of the attributions made, such that it is accepted by society for young children to act in any sort of way (positive or negative) without too much negative perception from society.

The different pattern of attributions that might emerge for an increase in the number of parent-centered attributions, and more likely in an older child sample, would likely affect the situational and dispositional patterns of attributions made. While the current study did not find a consistent situational/dispositional pattern to the data, past research has found this (Dix et al., 1986; Johnston et al., 2000; Johnston et al., 1998; Sobol et al., 1989). It is noteworthy that all four of the studies listed were with children in the age range of 4-12 years.

Limitations and Strengths

There are several limitations to the study that must be noted. First, the positive and negative child behaviors in the vignettes were not counterbalanced among the participants in order to ensure that no order effects were taking place. It is possible that order-effects may have influenced the results, but the current results are still thought to be

valid because both the attribution measurement formats for the positive and negative behaviors were short in length, able to be completed quickly, and administered in the exact same format to every participant. In the present study, every participant received the same behavior valence order with both measurement formats.

Another limitation is that the behavior scenarios that were used with the Likert rating scales and open-ended response were not assessed for comparability prior to collecting data. For instance the positive compliance behavior of either putting away puzzle pieces (vignette used with Likert rating scale) or washing hands after playing outside (vignette used with open-ended responses) may not have been equivalent, as some mothers throughout data collection commented that their child would wash his/her hands because he/she loves playing in water. In order to be certain that the vignettes from each format are comparable, research needs to be done in order to assess the comparability of the two.

Another possible limitation of the study is the oral format in which the vignettes were presented. The research literature needs to further explore the use of oral vignettes, as no studies were found that used the attribution eliciting structure of orally presented vignettes, only written vignettes. Orally presented vignettes may or may not be different from written vignettes, but only research will tell. While it is possible that the way in which the vignettes were used affected the data that were gathered, they were used consistently across both measurement formats in order to allow for comparability across the two, which is a strength. In addition, the eliciting structure of oral vignettes yielded similar patterns of data across the two measurement formats.

One limitation of the Likert scales used to measure parental attributions is the number of attributions that the parent is allowed to provide. Few studies have allowed parents the opportunity to provide multiple attributions (Gretarrson & Gelfand, 1988; Johnston et al., 1998; Smith & O’Leary, 1995). On Likert rating scales, parents are typically allowed to make one causal attribution. Measurement formats that utilize open-ended responses allow the parent to potentially provide numerous attributions. The current study found that when given the opportunity (i.e., open-ended responses) mothers tended to provide more than one attribution, which they could not do on Likert scales. Thus, the question arises, are the two formats equal in this respect? However, a couple of considerations must be taken into account. In theory, Likert scales could allow for multiple attributions to be made, if the researcher prompted the parent to do so and designed his/her Likert scale to measure multiple attributions. Typically though, Likert scales only solicit and measure one causal reason. The ability of Likert scales to measure multiple attributions is not fully explored in the literature and further research on this topic is warranted.

Futhermore, while the present study allowed the mothers to make as many attributions as they wanted on the open-ended responses, only the first attribution was analyzed. Thus, while the open-ended response format allowed for multiple attributions to be made, the current study only utilized the first codable solicited attribution. The format of this study is consistent with past research (i.e., Gretarrson & Gelfand, 1988; Johnston et al., 1998). The results also suggest that when able to do so, parents often naturally provide more than one attribution, which may be a negative implication for Likert rating scales since in their current format they are not designed to measure

multiple attributions. Future research should focus on the direct comparison of these two measurement formats, while accounting and adjusting for the number of attributions made.

Also, for both the Likert scale and open-ended response misbehavior vignette, the mother was told to imagine that her child cut and colored on a valuable object (i.e., for the Likert scale it was a favorite magazine and for the open-ended responses it was a family picture). The majority of the mothers were able to imagine these scenarios, but a handful reported that either their child would not do this or that they do not let their child have scissors. Thus, since these two vignettes were not considered age-appropriate by all of the mothers in the sample, they may not have been the best misbehavior scenarios to utilize. Also, the fourth open-ended response vignette was intended to depict a typical toddler compliance situation. The vignette described a child who washed his/her hands thoroughly after playing outside when asked to do so. Unfortunately, several mothers noted that their children would do this not because they were compliant, but because they love playing with water and washing their hands. Thus, this vignette was probably not the best compliance situation since developmentally it appears that toddlers see washing their hands as fun, and may be less related to following the rules. Future research should focus on the comparability of the two sets of vignettes.

A final limitation of the study is that the sample was predominantly high socioeconomic status, with the majority of the participants in the highest income range and having earned at least a college education. In addition, the children were in the average range overall with regard to behavior problems. As a function of the high child behavior functioning levels, the participants are not from the population that is most

likely to be referred or to seek treatment for parenting difficulties or problems with child behavior. Furthermore, the limited socioeconomic range and behavior problem range of the current sample may have impacted the range of data, and as a result significant differences were not detectable. As a result, the conclusions drawn from this study cannot be generalized to the population of all mothers with children between the ages of 24-47 months. Rather, the results are more applicable to families with these same demographic characteristics. At this point, it is unclear if the results from a clinic sample or families with differing demographics than the current sample would respond in the same manner. Further research on this topic is warranted.

With that being said, a strength of the current sample is the variety in geographic locations from which the sample came. Approximately half of the sample came from a medium-sized (60,000) mid-west college town, which means that the other half came from a handful of other states. It is important to note that not all US states were represented in the present sample, but a wider variety than is typically seen in maternal attribution research were represented. While the socioeconomic status range was limited, the geography of the sample is much more conducive to generalizing the results of the current study to mothers of toddlers with similar demographic data (i.e., socioeconomic status and education level) in other US states.

The current study used a standardized procedure for the assessment of maternal attributions utilizing two different measurement formats, which is another strength. In order to directly compare the two measurement formats, the eliciting structure needs to be the same across formats, which it was in the present study. Past research has compared parental attribution measurement formats and found similar results, but with two different

eliciting structures (Johnston et al., 1998). The high correspondence rates of the measurement formats from the current study is a strong finding in that other third variables (i.e., different eliciting structures, different non-comparable behaviors) were held constant.

Another strength of the study is that it is a logical extension of past research and it was conducted in a well-controlled manner. For instance, in order to directly compare Likert rating scales with coded open-ended responses, only one attribution eliciting structure was utilized (i.e., orally presented vignettes), while other studies have used two different eliciting structures to compare two measurement formats (Johnston et al., 1998). The present study also assessed for many other factors that could have affected the attained attributions (i.e., gender, age, social desirability, and behavior valence).

The measurement of social desirability in the current study is definitely a strength, as this has not been done in past research, yet many researchers have noted a need for it (Bugental et al., 1998; Johnston et al., 1998; Johnston & Freeman, 1997). Some parents respond in a socially desirable manner and are not considered objective observers of their children's behavior, rather they are positively biased (Dix & Grusec, 1985; Gretarrson & Gelfand, 1988; Regan, Strauss, Fazio, 1974). Thus, this study was one of the first to directly measure social desirability and report on its effects. The important implication of recognizing socially desirable responding within parental attribution research is the question of validity of parental responses. If attribution research can distinguish between those parents who respond in a socially desirable manner versus those who do not, then the field as a whole can advance by not only noting this, but focusing on the non-biased

responses. Regardless, both biased and non-biased responses yield a wealth of information.

Finally, the current study included many variables in order to further replicate past research, as well as to provide additional research. Few studies assess whether the attributions provided are parent- or child-centered, gender differences (or at least the reporting of gender differences), and the attribution assessment for such a young sample (toddlers), all of which the present study assessed/included.

Future Directions

The assessment of parental attributions has been around for approximately two decades, but a standardized methodology for the assessment of parental attributions is still lacking. By comparing two measurement formats (i.e., Likert rating scales and coded open-ended responses), the current study demonstrated that the two measurement formats highly correspond with one another, yielding similar patterns of data. While this finding is a step in the right direction for developing a standardized methodology, it also brings up many directions for future research.

Few studies have assessed the correspondence of these two measurement formats. This research needs to be replicated, as well as replicated with older child samples. Comparisons need to be conducted between the three attribution eliciting structures (i.e., videos, vignettes, request to recall) with only one measurement format, as well as with each eliciting structure and the two measurement formats. In addition, research needs to be conducted in order to determine that experimenter-determined vignettes are comparable to a parent's own recall. Through the direct comparison of all of the eliciting

structures and measurement formats, the field will be one step closer to establishing a standardized methodology for the assessment of parental attributions.

Research also needs to be conducted with younger child samples. As previously mentioned, the majority of parental attribution research has been conducted with older child samples, thus there is a need for more samples utilizing younger children. Furthermore, parental attribution research should report on gender effects, either their presence or absence. Very few studies include this data in their published studies and it is important to note. Likewise, future research should assess for parent- and child-centered attributions when parents are not instructed as to which type of attribution to provide. It is important to assess for as the type of attributions that a parent provides because it can tell a clinician many things about the interactions among a family. This could have very important clinical and treatment outcomes. It would also be interesting to see the type (i.e., parent- or child-centered) of attribution parents tend to make for older children.

Furthermore, research needs to be conducted with fathers, as the majority of research is currently with mothers (Edgington, 1998). It would be interesting to assess all of the components of the present study (i.e., format, behavior valence, gender, age, number of attributions made, parent- versus child-centered attributions, and social desirability) with fathers. This data would be useful not only by itself, but also as a comparison with the maternal data. It would greatly add to the literature.

Lastly, future studies should include a measure of social desirability and assess for this response bias. As Johnston and her colleagues (1998) commented, it is vital to measure and evaluate the degree to which parental attributions are influenced by an attempt to respond in a socially desirable manner. It is not inconceivable to think of a

child as a natural extension of his/her parent, thus it would make sense that a parent would want to portray his/her child in a positive light. As this study was one of the first to assess for socially desirable responding in the assessment of parental attributions, future research should replicate this work. The results of the current study suggest that mothers are responding in a somewhat socially desirable manner with their young children, but much work is needed in order to explore this new component of parental attribution research in greater detail.

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APPENDICES

APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

Please fill in the blanks below. All responses will be kept confidential.

1. Your relationship to child:

- Biological parent
- Step-parent
- Adoptive parent
- Other

2. Your age: _____

3. Your sex: Male _____ Female _____

4. Your ethnicity:

- | | |
|------------------------------|--|
| _____ Caucasian | _____ American Indian _____
Tribe or Nation |
| _____ African-American | _____ Biracial _____
Please Describe |
| _____ Hispanic / Latino | _____ Other _____
Please Describe |
| _____ Asian / Asian-American | |

5. Your highest level of education completed (circle year):

- | | | | | | | | | |
|-------------------|-------------|----|----|----|---|---|---|---|
| (Grade school) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| (High school) | 9 | 10 | 11 | 12 | | | | |
| (College) | 13 | 14 | 15 | 16 | | | | |
| (Graduate School) | 17 and over | | | | | | | |

6. Your occupation: _____

7. Your total family income per month (check one):

- | | | |
|-------------------------|-----------------------|-----------------------|
| _____ Less than \$1,000 | _____ \$1,000-\$2,000 | _____ \$2,001-\$3,000 |
| _____ \$3,001-\$4,000 | _____ \$4,001-\$5,000 | _____ over \$5,000 |

8. Marital status (check one):

- | | | | |
|---------------|---------------------------|-----------------|--------------|
| _____ Married | _____ Divorced | _____ Separated | _____ Single |
| _____ Widowed | _____ Living with partner | | |

9. If married or living with partner, please provide the following information about your spouse/partner:

a. Spouse/Partner's relationship to child:

- Biological parent
- Step-parent
- Adoptive parent
- Other

b. Spouse/Partner's age _____

c. Spouse/Partner's sex: Male _____ Female _____

d. Spouse/Partner's ethnicity:

_____Caucasian	_____American Indian _____	Tribe or Nation
_____African-American	_____Biracial _____	Please Describe
_____Hispanic / Latino	_____Other _____	Please Describe
_____Asian / Asian-American		

e. Spouse/Partner's highest level of education completed (circle year):

(Grade school)	1	2	3	4	5	6	7	8
(High school)	9	10	11	12				
(College)	13	14	15	16				
(Graduate School)	17 and over							

f. Spouse/Partner's occupation: _____

10. Please provide the following information about the child participating in this study:

a. Date of birth: _____ (mo/day/yr) b. Today's date: _____ (mo/day/yr)

c. Child's sex: Male _____ Female _____

d. Child's ethnicity:

_____Caucasian	_____American Indian _____	Tribe or Nation
_____African-American	_____Biracial _____	Please Describe
_____Hispanic / Latino	_____Other _____	Please Describe
_____Asian / Asian-American		

11. Does the child have siblings?

_____ No _____ Yes

If yes:

Age (in years)	Sex (please circle)		Living in the home (please circle)	
_____yr(s)	M	F	Yes	No
_____yr(s)	M	F	Yes	No
_____yr(s)	M	F	Yes	No
_____yr(s)	M	F	Yes	No

Including you and your child, how many people are living in your home? _____

APPENDIX B
MATERNAL ATTRIBUTION QUESTIONNAIRE

Maternal Attribution Questionnaire

Directions: Please imagine yourself and your child in the situations that follow. If such a situation happened to you, what do you feel would have caused it?? While events may have many causes, I want you to pick only one major cause, if this event happened to you. Keep this one cause, or reason, in your mind as you answer some questions about the cause.

Situation 1: You go into your kitchen and pick up your favorite magazine that arrived yesterday in the mail. You find that (child's name) has drawn in it and has cut pictures out of it.

1. How much of (child's name) behavior was caused by something not at all within his/her control versus something within his/her control?

1	2	3	4	5	6	7
Not at all within his/her control				Completely within his/her control		

2. How much of (child's name) behavior was caused by something about other people or the situation versus something about him/her?

1	2	3	4	5	6	7
Something about other people/the situation				Something about the child		

3. Was the reason that (child's name) did this something that is specific to this situation versus something that happens in many situations?

1	2	3	4	5	6	7
Specific to this situation				Happens in many situations		

4. Was the reason that (child's name) did this something that is a one time thing or something that is likely to happen again in the future?

1	2	3	4	5	6	7
A one time				Will happen again thing in the future		

Situation 2: You and your family are eating dinner at the kitchen table. After putting a helping of food on (child's name) plate, he/she politely responds by saying, "Thank you!"

1. How much of (child's name) behavior was caused by something not at all within his/her control versus something within his/her control?

1	2	3	4	5	6	7
Not at all within his/her control					Completely within his/her control	

2. How much of (child's name) behavior was caused by something about other people or the situation versus something about him/her?

1	2	3	4	5	6	7
Something about other people/the situation					Something about the child	

3. Was the reason that (child's name) did this something that is specific to this situation versus something that happens in many situations?

1	2	3	4	5	6	7
Specific to this situation					Happens in many situations	

4. Was the reason that (child's name) did this something that is a one time thing or something that is likely to happen again in the future?

1	2	3	4	5	6	7
A one time					Will happen again thing in the future	

Situation 3: (Child's name) is noisily playing pretend with another child. You have an important telephone call to make regarding an error on your bank statement, so you tell (child's name) to play quietly so that you can make the phone call. (Child's name) continues to yell and make noise.

1. How much of (child's name) behavior was caused by something not at all within his/her control versus something within his/her control?

1	2	3	4	5	6	7
Not at all within his/her control						Completely within his/her control

2. How much of (child's name) behavior was caused by something about other people or the situation versus something about him/her?

1	2	3	4	5	6	7
Something about other people/the situation						Something about the child

3. Was the reason that (child's name) did this something that is specific to this situation versus something that happens in many situations?

1	2	3	4	5	6	7
Specific to this situation						Happens in many situations

4. Was the reason that (child's name) did this something that is a one time thing or something that is likely to happen again in the future?

1	2	3	4	5	6	7
A one time						Will happen again thing in the future

Situation 4: After putting together a puzzle with (child's name), it is time for you to go fix lunch. You leave the room and tell (child's name) to put all the puzzle pieces back in the box. You check back in 5 minutes and (child's name) has put away all of the puzzle pieces.

1. How much of (child's name) behavior was caused by something not at all within his/her control versus something within his/her control?

1	2	3	4	5	6	7
Not at all within his/her control						Completely within his/her control

2. How much of (child's name) behavior was caused by something about other people or the situation versus something about him/her?

1	2	3	4	5	6	7
Something about other people/the situation						Something about the child

3. Was the reason that (child's name) did this something that is specific to this situation versus something that happens in many situations?

1	2	3	4	5	6	7
Specific to this situation						Happens in many situations

4. Was the reason that (child's name) did this something that is a one time thing or something that is likely to happen again in the future?

1	2	3	4	5	6	7
A one time						Will happen again thing in the future

APENDIX C
ALTERNATE VIGNETTES

Alternative 1: You walk into the living room and see your most recent family photographs on the floor. You discover that your child has drawn on them and cut them apart.

Alternative 2: You are pushing your child on a swing in your backyard. After your child gets off to go down the slide, he/she politely responds by saying, "Thank you!"

Alternative 3: Your child is noisily playing a game with another child. You need to answer the knock at the door to speak with the delivery person who is picking up your package, so you tell your child to play quietly so that you can speak with the delivery person. Your child continues to yell and make noise.

Alternative 4: After playing outside with your child, it is time for you to fix dinner. You go to the kitchen and tell your child to go and wash his/her hands in the bathroom. Your child immediately goes and washes his/her hands thoroughly.

APPENDIX D
ATTRIBUTIONAL CODING SYSTEM

Attributional Coding Script

“Max and his mom are at the grocery store in the checkout lane. Max asks his mom for a pack of gum and when his mom tells him no, he throws a full-out temper tantrum.” Why would Max act in that way?

- Because he loves gum.
- Cause I sometimes buy him gum when we are at the grocery store.
- Max would never throw a temper tantrum in public.
- Probably because his sister pushed him down like she always does.
- I don't know.
- He wouldn't because he has good manners.
- In our household we encourage open self-expression, so he's just acting how I've raised him.
- He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.
- Because he is two.
- He wouldn't.
- Well, I probably was really busy that day and hadn't given him much attention.
- Because he wanted me to buy him the gum.
- Oh, he learned that from his older sister.
- I'm not sure what you are asking.
- Cause he is spoiled rotten and screams every time I tell him no.
- He was sick.
- He wouldn't do that cause I have raised him to be respectful.
- I was too busy running errands so I did not have time to put him down for a nap.
- He is not allowed to chew gum.

Step #1:

-Determine if the statement is an attribution. Circle your choice on the code sheet. If the statement is an attribution, proceed to step #1A, but if the statement is not an attribution, proceed to the next statement.

-Rules for determining whether a statement is an attribution:

- 1) Does the statement provide an indication of the relationship between events, outcomes, and/or behaviors, and their causes?
- 2) Does it provide a reason for a behavior/event?
- 3) Does it provide a cause of a behavior/event?
- 4) Does it contain the word “because” or “cause”?

Step #1A:

-Determine if the attribution is specifically a causal statement for the causal behavior. If the causal statement is an attribution for some other behavior, put a star (*) next to the statement number and do not code the statement further.

-Rules for determining whether the causal statement is about the causal behavior:

- 1) Does the statement provide a cause for the child's behavior in the vignette?
- 2) Is the causal statement a reason why the child behaved in the way he/she did?

Examples:

Y-Because he loves gum.
 Y-Cause I sometimes buy him gum when we are at the grocery store.
 N-Max would never throw a temper tantrum in public.
 Y-Probably because his sister pushed him down like she always does.
 N-I don't know.
 *Y-He wouldn't because he has good manners.
 Y-In our household we encourage open self-expression, so he's just acting how I've raised him.
 Y- He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.
 Y-Because he is two.
 N-He wouldn't.
 Y-Well, I probably was really busy that day and hadn't given him much attention.
 Y-Because he wanted me to buy him the gum.
 Y-Oh, he learned that from his older sister.
 N-I'm not sure what you are asking.
 Y-Cause he is spoiled rotten and screams every time I tell him no.
 Y-He was sick.
 *Y-He wouldn't do that cause I have raised him to be respectful.
 Y-I was too busy running errands so I did not have time to put him down for a nap.
 N-He is not allowed to chew gum.

Step #2:

-Determine if the attributional statement is parent-centered or child-centered. Circle your choice on the code sheet.

-Rules for determine whether a statement is parent-centered or child-centered:

- 1) If the cause is something about the child, then it is child-centered.
 -If the statement refers to anything other than the respondent, the statement should be coded as child-centered (contains: "that day" "her sister" "the neighbor")
- 2) If the cause is something about the parent, then it is parent-centered.
 -For the statement to be coded as parent-centered, the respondent must indicate in some fashion that the causal statement he/she provides is about himself/herself (contains: "I" "me" "we" "us" "our")

Examples:

C-Because he loves gum.
 P-Cause I sometimes buy him gum when we are at the grocery store.
 C-Probably because his sister pushed him down like she always does.

 P-In our household we encourage open self-expression, so he's just acting how I've raised him.
 C- He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.
 C-Because he is two.

P-Well, I probably was really busy that day and hadn't given him much attention.

C-Because he wanted me to buy him the gum.

C-Oh, he learned that from his older sister.

C-Cause he is spoiled rotten and screams every time I tell him no.

C-He was sick.

P-I was too busy running errands so I did not have time to put him down for a nap.

Step #3 Stable/Unstable:

-Determine the stability of the behavior. Circle your choice on the code sheet.

--Definition of the stable/unstable dimension: Is the cause something that will happen again in the future (stable), or something that was a one time thing (unstable)?

-Stable [2]: The cause will happen again in the future. (contains: "always" "almost always" as well as statements about likes and dislikes)

-Both [1]: The cause happens sometimes, but not all the time. (contains: "sometimes" "typically" "often" "probably" as well as statements about age) (contains temporary and/or certain sensory states relating to hunger, being tired, hearing, and seeing)

-Unstable [0]: The cause was likely a one time thing. (isolation to a single event or contains: "rare" "that day" as well as statements about illness)

-Examples:

2-Because he loves gum.

1-Cause I sometimes buy him gum when we are at the grocery store.

2-Probably because his sister pushed him down like she always does.

2-In our household we encourage open self-expression, so he's just acting how I've raised him.

0-He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.

1-Because he is two.

0-Well, I probably was really busy that day and hadn't given him much attention.

1-Because he wanted me to buy him the gum.

2-Oh, he learned that from his older sister.

2-Cause he is spoiled rotten and screams every time I tell him no.

0-He was sick.

0-I was too busy running errands so I did not have time to put him down for a nap.

Step #4 Global/Specific:

-Determine how global or specific the behavior is. Circle your choice on the code sheet.

--Definition of the global/specific dimension: Is the cause something that will affect a lot of situations/areas of the person's life (global), or something unique about this situations/area (specific)?

-Global [2]: The cause affects lots of situations/areas. (multiple/constant states—values, morals, rules, learned behavior, and personality traits)

-Both [1]: The cause is present in some situations/area, but not others. (affects multiple situations, plural—mornings)

-Specific [0]: The cause is unique to this particular situation/area. (affects a single situation, singular—morning)

-Examples:

0-Because he loves gum.

1-Cause I sometimes buy him gum when we are at the grocery store.

2-Probably because his sister pushed him down like she always does.

2-In our household we encourage open self-expression, so he's just acting how I've raised him.

0-He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.

1-Because he is two.

0-Well, I probably was really busy that day and hadn't given him much attention.

0-Because he wanted me to buy him the gum.

2-Oh, he learned that from his older sister.

2-Cause he is spoiled rotten and screams every time I tell him no.

0-He was sick.

0-I was too busy running errands so I did not have time to put him down for a nap.

Step #5 Internal/External:

-Determine the locus of causality of the behavior. Circle your choice on the code sheet.

--Definition of the internal/external dimension: Is the cause something within or about the person (internal), or something about someone else or the environment/situation (external)?

-Internal [2]: The cause is something about the person.

-Both [1]: The cause is about the person and the environment/situation or other people.

-External [0]: The cause is something about another person or the environment.

-Examples:

2-Because he loves gum.

1-Cause I sometimes buy him gum when we are at the grocery store.

- 0-Probably because his sister pushed him down like she always does.
- 2-In our household we encourage open self-expression, so he's just acting how I've raised him.
- 1-He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.
- 2-Because he is two.
- 1-Well, I probably was really busy that day and hadn't given him much attention.
- 2-Because he wanted me to buy him the gum.
- 2-Oh, he learned that from his older sister.
- 2-Cause he is spoiled rotten and screams every time I tell him no.
- 2-He was sick.
- 1-I was too busy running errands so I did not have time to put him down for a nap.

Step #6 Controllable/Uncontrollable:

-Determine the controllability of the behavior. Circle your choice on the code sheet.

--Definition of the controllable/uncontrollable dimension: Is the cause something within the person's control (controllable), or something outside of the person's control (uncontrollable)?

-Controllable [2]: The cause is something the person can control.

-Both [1]: The cause is sometimes under the person's control, but not always.

-Uncontrollable [0]: The cause is something outside of the person's control.

-Examples:

- 2-Because he loves gum.
- 2-Cause I sometimes buy him gum when we are at the grocery store.
- 0-Probably because his sister pushed him down like she always does.
- 2-In our household we encourage open self-expression, so he's just acting how I've raised him.
- 1-He usually gets an afternoon nap, but that afternoon must have been a rare occurrence.
- 0-Because he is two.
- 1-Well, I probably was really busy that day and hadn't given him much attention.
- 2-Because he wanted me to buy him the gum.
- 2-Oh, he learned that from his older sister.
- 2-Cause he is spoiled rotten and screams every time I tell him no.
- 0-He was sick.
- 1-I was too busy running errands so I did not have time to put him down for a nap.

Step #7:

-Go to the next statement and start back at step #1 ☺

APPENDIX E
STUDY OVERVIEW

Dear Parent,

Thank you for your interest in our current study and agreeing to help me with my research project on parenting. As we discussed on the phone, I am interested in learning parent's views on why they believe their children behave the way that they do. Enclosed you will find a consent form and several questionnaires. There is an extra copy of the consent form for you to keep for your own records. Our phone number is listed on the consent form, and you can call us at any time if you have any questions. A postage-paid envelope is also enclosed for you to return the questionnaires.

The paper-and-pencil measures you will be asked to complete will ask about the following information: your and your partner/spouse's age and education level, your marital status and ethnicity, your and your partner/spouse' work status (i.e., employed full-time, part-time, or not at all), the number of people in your home, your estimated family income, and your child's date of birth and ethnicity. You will also be asked to fill out forms about your child's behavior. When filling out the forms about your child's behavior you will be asked to read statements that describe common situations parents find themselves in and you will be asked to rate how you typically respond. In addition, you will be asked to rate how frequently your child does each of 36 different behaviors and whether or not each behavior your child does is a problem for you. On another form, you will be asked to read 13 statements and then answer "True" or "False" for whether or not the behavior describes you.

Several of the questionnaires will ask you about one specific child. The child needs to be between the ages of 24 to 48 months. If you have more than one child this age, please pick only one child and keep this child in mind for all of the questionnaires.

We know your time is precious and we appreciate you the taking time to fill-out this packet. Please return the completed packet of questionnaires (including the informed consent) so that we can do the phone interview portion of this study. Once we have your finished packet and we have completed the phone interview, we would like to send you a gift for giving up your time. Additionally, you will be entered into a \$25.00 gift certificate drawing at that time. We can also send you a copy of the results of our study if you are interested.

Thanks you again! If you have any questions, please call us at (405) 744-6064.

Sincerely,

Cynthia Hodges

Dr. Maureen Sullivan

APPENDIX F
INFORMED CONSENT FORM

INFORMED CONSENT

Project Title: Reasons Children Behave the Way They Do: Assessment of Maternal Attributions

Investigators: Maureen A. Sullivan, Ph.D. and Cynthia A. Hodges, B.A.

I, (print name) _____, hereby authorize or direct Cynthia A. Hodges, B.A., or associates or assistants of her choosing, to perform the following treatment or procedure.

Purpose

The current research project entitled “Reasons Children Behave the Way They Do: Assessment of Maternal Attributions” is being done at Oklahoma State University (OSU) as part of the requirements for the completion of Cynthia A. Hodges’ masters degree from the Psychology Department. Ms. Hodges is a graduate student, and her advisor is Dr. Maureen Sullivan. The purpose of the current research is to look at the various reasons parents believe their children engage in positive behaviors and typical misbehaviors.

Procedures

All participants will be asked to complete both the packet of forms and the phone interview portion of the study. You will first be asked to promptly fill out all of the questionnaires in the packet thoroughly and then mail the packet back to the investigator. A pre-paid envelope will be included for you to use in order to mail the packet back in. One week after sending the packet in the mail, the researcher will contact you to answer any questions that you may have and to also schedule the phone interview portion of the study. Completion of the packet will take approximately 25 minutes and the completed packet must be received by the researcher before the phone interview can take place. The phone interview will consist of two parts and you will receive specific instructions prior to each part. During each part, the researcher will read you various positive child behaviors and typical misbehaviors that your child is likely to have engaged in. You will then be asked why you believe your child engaged in those behaviors. The phone interview will take no longer than 25 minutes and it will be audiotaped.

The paper-and-pencil measures you will be asked to complete will ask about the following information: your and your partner/spouse’s age and education level, your marital status and ethnicity, your and your partner/spouse’ work status (i.e., employed full-time, part-time, or not at all), the number of people in your home, your estimated family income, and your child’s date of birth and ethnicity. You will also be asked to fill out forms about your child’s behavior. When filling out the forms about your child’s behavior you will be asked to read statements that describe common situations parents find themselves in and you will be asked to rate how you typically respond. In addition, you will be asked to rate how frequently your child does each of 36 different behaviors and whether or not each behavior your child does is a problem for you. On another form,

you will be asked to read 13 statements and then answer “True” or “False” for whether or not the behavior describes you.

There are no known risks associated with this project which are greater than those ordinarily encountered in daily life.

Duration of Participation

Overall, you can expect to be involved in the study for approximately 50 minutes. Completion of the packet in the privacy of your own home should take about 25 minutes and the phone interview portion should take no longer than 25 minutes. Your participation is completely voluntary and you may stop at any time.

Confidentiality

In order to protect your confidentiality, all information you provide to the researcher will be marked with subject numbers rather than names. All information will be stored in a locked file cabinet in the lab. This consent form, which includes your name, will be kept separately from all of the other information you provide. Data will be kept for as long as it is scientifically useful. The American Psychological Association suggests that five years post publication of the data is an appropriate amount of time to keep it. Therefore, audiotapes and questionnaire data will be kept up to five years. At the end of the five-year period, data will be destroyed and audiotapes will be erased, unless you provide consent for the audiotape of your participation to be used for future training purposes within the Child Behavior Laboratory. (Please refer to the statement at the end of this consent form). This data will always be kept in a locked file cabinet in the lab.

The OSU IRB has the authority to inspect consent records and data files to assure compliance with approved procedures.

In addition, confidentiality will be maintained except under specified conditions required by law. For example, current Oklahoma law requires that any ongoing child abuse (including sexual abuse, physical abuse, and neglect) of a minor must be reported to state officials. In addition, if an individual reports that he/she intends to harm himself/herself or others, legal and professional standards require that the individual must be kept from harm, even if confidentiality must be broken. Finally, confidentiality could be broken if materials from this study were subpoenaed by a court of law.

Benefits of Participation

There are several benefits to participation in this study. Your participation will help to answer a research question that has not been previously studied. The results will provide information about the best ways to study the reasons parents believe their children engage in various positive behaviors and typical misbehaviors. As a parent of a young child, it is possible that you may benefit directly from this knowledge because of the important outcomes associated with the reasons you believe your child engages in the behaviors that he/she does. The reasons you believe your child engaged in a particular behavior has important implications for how you respond behaviorally and emotionally, as well as the overall quality of the parent/child relationship.

Table 1.

Sample Characteristics: Mothers

<i>Ethnicity</i>	n = 51	
Caucasian	40	78.4%
African American	1	2.0%
Hispanic/Latino	3	5.9%
Asian/Asian American	4	7.8%
Biracial	3	5.9%
<i>Marital Status</i>		
Married	45	88.2%
Divorced	3	5.9%
Living with Partner	3	5.9%
<i>Family Monthly Income</i>		
<\$1,000	1	2.0%
\$1,000-\$2,000	3	5.9%
\$2,001-\$3,000	4	7.8%
\$3,001-\$4,000	6	11.8%
\$4,001-\$5,000	12	23.5%
>\$5,000	25	49.0%
<i>Spouse/Partner's relationship to child</i> (n = 48)		
Biological Parent	45	88.2%
Adoptive Parent	3	5.9%
<i>State of Residence</i>		
Arizona	2	3.0%
California	8	15.7%
Colorado	6	11.8%
Florida	3	5.9%
Georgia	2	3.9%
Iowa	1	2.0%
Idaho	1	2.0%
North Dakota	1	2.0%
New Mexico	1	2.0%
Oklahoma	26	51.0%

Table 2.

Sample Characteristics: Children

<i>Child Ethnicity</i>	n = 51	
Caucasian	35	68.6%
African American	1	2.0%
Hispanic/Latino	1	2.0%
Asian/Asian American	5	9.8%
Biracial	9	17.6%
<i>Child Sex</i>		
Female	31	60.8%
Male	20	39.2%

Table 3.

Group Characteristics

	Telephone Interview and Questionnaire Packet Sample (n = 51)		Questionnaire Packet Only Sample (n = 10)	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
<i>Eyberg Child Behavior Inventory</i>				
Problem Score	5.04	4.10	8.60	6.33
Intensity Score	84.62	15.13	86.50	20.24
<i>Parenting Scale</i>				
Laxness Factor Score	2.11	.51	2.40	.56
Overreactivity Factor Score	2.33	.59	2.48	.40
Verbosity Factor Score	3.08	.81	3.34	.58
Total Score	2.50	.49	2.69	.26
<i>Marlowe-Crowne Form C</i>				
Social Desirability Total Score	7.27	3.09	5.90	2.08

Table 4.

Internal/External Dimension Ratings by Gender

BOYS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = -.019 <i>SE</i> = .193	<i>M</i> = .005 <i>SE</i> = .156	<i>M</i> = -.007 <i>SE</i> = .128
<i>Open-Ended</i>	<i>M</i> = .123 <i>SE</i> = .178	<i>M</i> = .070 <i>SE</i> = .124	<i>M</i> = .096 <i>SE</i> = .115
	<i>M</i> = .052 <i>SE</i> = .112	<i>M</i> = .038 <i>SE</i> = .103	
GIRLS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = -.100 <i>SE</i> = .162	<i>M</i> = -.049 <i>SE</i> = .131	<i>M</i> = -.075 <i>SE</i> = .107
<i>Open-Ended</i>	<i>M</i> = -.114 <i>SE</i> = .150	<i>M</i> = .099 <i>SE</i> = .104	<i>M</i> = -.007 <i>SE</i> = .097
	<i>M</i> = -.107 <i>SE</i> = .094	<i>M</i> = .025 <i>SE</i> = .087	

* All scores are presented as *z*-scores. Positive *z*-scores indicate attributions that were more internal, while negative *z*-scores indicate attributions that were more external.

Table 5.

Stable/Unstable Dimension Ratings by Gender

BOYS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = -.005 <i>SE</i> = .138	<i>M</i> = .084 <i>SE</i> = .180	<i>M</i> = .039 <i>SE</i> = .107
<i>Open-Ended</i>	<i>M</i> = .064 <i>SE</i> = .174	<i>M</i> = .215 <i>SE</i> = .184	<i>M</i> = .140 <i>SE</i> = .135
	<i>M</i> = .029 <i>SE</i> = .131	<i>M</i> = .150 <i>SE</i> = .147	

* All scores are presented as *z*-scores. Positive *z*-scores indicate attributions that were more stable, while negative *z*-scores indicate attributions that were more unstable.

GIRLS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = .116 <i>SE</i> = .116	<i>M</i> = .051 <i>SE</i> = .151	<i>M</i> = .083 <i>SE</i> = .090
<i>Open-Ended</i>	<i>M</i> = -.055 <i>SE</i> = .146	<i>M</i> = -.153 <i>SE</i> = .154	<i>M</i> = -.104 <i>SE</i> = .114
	<i>M</i> = .030 <i>SE</i> = .110	<i>M</i> = -.051 <i>SE</i> = .123	

Table 6.

Global/Specific Dimension Ratings by Gender

BOYS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = .118 <i>SE</i> = .190	<i>M</i> = -.104 <i>SE</i> = .177	<i>M</i> = .007 <i>SE</i> = .137
<i>Open-Ended</i>	<i>M</i> = .073 <i>SE</i> = .172	<i>M</i> = .022 <i>SE</i> = .188	<i>M</i> = .048 <i>SE</i> = .132
	<i>M</i> = .096 <i>SE</i> = .145	<i>M</i> = -.041 <i>SE</i> = .133	
GIRLS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	<i>M</i> = -.103 <i>SE</i> = .160	<i>M</i> = .152 <i>SE</i> = .148	<i>M</i> = .025 <i>SE</i> = .115
<i>Open-Ended</i>	<i>M</i> = -.101 <i>SE</i> = .144	<i>M</i> = -.070 <i>SE</i> = .158	<i>M</i> = -.086 <i>SE</i> = .111
	<i>M</i> = -.102 <i>SE</i> = .122	<i>M</i> = .041 <i>SE</i> = .112	

* All scores are presented as *z*-scores. Positive *z*-scores indicate attributions that were more global, while negative *z*-scores indicate attributions that were more specific.

Table 7.

Controllable/Uncontrollable Dimension Ratings by Gender

BOYS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	$M = .031$ $SE = .191$	$M = -.013$ $SE = .165$	$M = .009$ $SE = .146$
<i>Open-Ended</i>	$M = .034$ $SE = .181$	$M = -.001$ $SE = .172$	$M = .017$ $SE = .133$
	$M = .033$ $SE = .126$	$M = -.007$ $SE = .133$	
GIRLS			
	Positive Behavior	Negative Behavior	
<i>Likert Scale</i>	$M = -.057$ $SE = .160$	$M = .040$ $SE = .139$	$M = -.008$ $SE = .122$
<i>Open-Ended</i>	$M = -.051$ $SE = .152$	$M = .086$ $SE = .145$	$M = .017$ $SE = .112$
	$M = -.054$ $SE = .160$	$M = .063$ $SE = .112$	

* All scores are presented as z -scores. Positive z -scores indicate attributions that were more controllable, while negative z -scores indicate attributions that were more uncontrollable.

Table 8.

Correlations between the Marlowe-Crowne Form C and the Internal/External Dimensions

Behavior Valence		Marlowe-Crowne Form C
Positive Behaviors	Likert Ratings	$r = .328, p = .019^*$
	Open-Ended Responses	$r = -.066, p = .659$
Negative Behaviors	Likert Ratings	$r = .186, p = .191$
	Open-Ended Responses	$r = -.138, p = .340$

* Significant at the 0.05 level (2-tailed).

Table 9.

Correlations between the Marlowe-Crowne Form C and the Stable/Unstable Dimensions

Behavior Valence	Marlowe-Crowne Form C
Positive Behaviors	
Likert Ratings	$r = -.034, p = .811$
Open-Ended Responses	$r = .033, p = .826$
Negative Behaviors	
Likert Ratings	$r = -.374^{**}, p = .007$
Open-Ended Responses	$r = -.113, p = .434$

** Significant at the 0.01 level (2-tailed).

Table 10.

Correlations between the Marlowe-Crowne Form C and the Global/Specific Dimensions

Behavior Valence	Marlowe-Crowne Form C
Positive Behaviors	
Likert Ratings	$r = -.056, p = .696$
Open-Ended Responses	$r = .299, p = .041^*$
Negative Behaviors	
Likert Ratings	$r = -.402, p = .003^{**}$
Open-Ended Responses	$r = -.090, p = .534$

* Significant at the 0.05 level (2-tailed).

** Significant at the 0.01 level (2-tailed).

Table 11.

Correlations between the Marlowe-Crowne Form C and the Controllable/Uncontrollable Dimensions

Behavior Valence		Marlowe-Crowne Form C
Positive Behaviors	Likert Ratings	$r = .264, p = .061$
	Open-Ended Responses	$r = .050, p = .739$
Negative Behaviors	Likert Ratings	$r = .259, p = .067$
	Open-Ended Responses	$r = -.094, p = .516$

IRB

Oklahoma State University Institutional Review Board

Date: Thursday, November 02, 2006
IRB Application No AS06128
Proposal Title: Reasons Children Behave the Way They Do: Assessment of Maternal Attributions

Reviewed and Processed as: Expedited

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/1/2007

Principal Investigator(s)

Cynthia A. Hodges
215 North Murray
Stillwater, OK 74078

Maureen Sullivan
215 N Murray
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,



Sue C. Jacobs, Chair
Institutional Review Board

VITA
Cynthia Anne Hodges
Candidate for the Degree of Master of Science

Thesis: REASONS CHILDREN BEHAVE THE WAY THEY DO: ASSESSMENT OF
MATERNAL ATTRIBUTIONS

Education

Oklahoma State University, enrolled in the clinical psychology doctoral program, APA
accredited, Stillwater, Oklahoma, August 2005-present

Completed the requirements for the Master of Science in Psychology (Clinical
emphasis) December 2007

Ph.D. expected: December 2010

University of Northern Iowa, Cedar Falls, Iowa

Bachelor of Arts, December 18, 2004, Major: Psychology, Minors: Family Services
and Marketing

Cumulative G.P.A. 3.78/4.0 Summa Cum Laude, Major G.P.A. 3.97/4.0

Clinical Experiences

Psychological Associate at the Child Study Center at the University of Oklahoma Health
Sciences Center, July 2007-Present Dr. Robin Gurwitch, Ph.D.

--Conducted developmental and intellectual assessments of children exposed
prenatally to drugs and/or alcohol

Psychological Associate in the Psychology Services Center at Oklahoma State
University, August 2005-present

Research Experience

Principle Investigator in Dr. Sullivan's Child Behavior Lab, Oklahoma State
University, Department of Psychology, August 2006-December 2007, for Maureen
Sullivan, Ph.D.

--Designed, implemented, oversaw, ran participants, analyzed and wrote up the work
for a thesis project that examined maternal attributions

Research Assistant and Project Coordinator in Dr. Hartung's Disruptive Behavior
Disorders Lab, Oklahoma State University, Department of Psychology, October 2006-
December 2007, for Cynthia Hartung, Ph.D. and Jennifer Callahan, Ph.D.

--Oversaw and helped run participants for a mental retardation malingering study

Research Assistant in Dr. Hartung's Disruptive Behavior Disorders Lab, University of
Wyoming, November 2006-present, for Cynthia Hartung, Ph.D.

--Conducted a comprehensive literature review on maternal and paternal
discrepancies on various child-report measures

--Assisted in the analysis of a large data set collected over several years

Teaching Experience

Instructor for Introductory Psychology, Oklahoma State University, Department of
Psychology, August 2006-May 2007, William Scott, Ph.D.

Name: Cynthia Anne Hodges
Institution: Oklahoma State University

Date of Degree: December, 2007
Location: Stillwater, Oklahoma

Title of Study: REASONS CHILDREN BEHAVE THE WAY THEY DO:
ASSESSMENT OF MATERNAL ATTRIBUTIONS

Pages in Study: 126

Candidate for the Degree of Master of Science

Major Field: Clinical Psychology

Scope and Method of Study:

The current investigation looked at the attributional responses provided by 51 mothers of children between the ages of 24-48 months. Attributions regarding both positive and negative child behaviors were elicited with orally presented vignettes and they were measured with two measurement formats: Likert rating scales and coded open ended responses. The data yielded from the two measurement formats were then compared. Additionally, the valence of the behavior presented in the vignettes and child gender were examined. Lastly, as an initial step in the assessment of socially desirable responding within maternal attribution research, social desirability was explored.

Findings and Conclusions:

The current study found that causal attributional data measured by Likert rating scales and coded open-ended responses yielded similar results, suggesting that the two formats are comparable and either is useful. However, the feasibility of the two measurement formats may not be equal. The time spent transcribing, training coders, and coding is easily eliminated with the use of Likert rating scales. It was also found that for children in this young age range, mothers do not make different attributions for their childrens positive behavior and negative behavior. Furthermore, the attributions that mothers made for their female children versus their male children were not significantly different. It is highly likely that the similarity in types of attributions made for positive and negative behaviors and the similarity in attributions made about female and male children is due to the age of the children used in the current investigation. There is little evidence of gender effects or valence effects below the age of four, but there is support that maternal attributions may differ by type of behavior and for boys and girls of older ages. It is likely that at some point the attributions that parents make for their children begin to diverge according to gender and an unknown point of transition between the toddler years and preschool exists when a mother increasingly perceives her child as having great control over his/her behavior in certain situations. Lastly, in the measurement of response biases, the current investigation found that social desirability has a very small effect on attribution ratings. Thus, additional research is warranted on this topic as this study was among the first to assess for socially desirable responding within the assessment of maternal attributions.

ADVISER'S APPROVAL: Dr. Maureen A. Sullivan
