THE EFFECT OF NURTURANCE AND VERBOSITY ON CHILD COMPLIANCE IN BOTH A PROACTIVE AND PROHIBITIVE SITUATION

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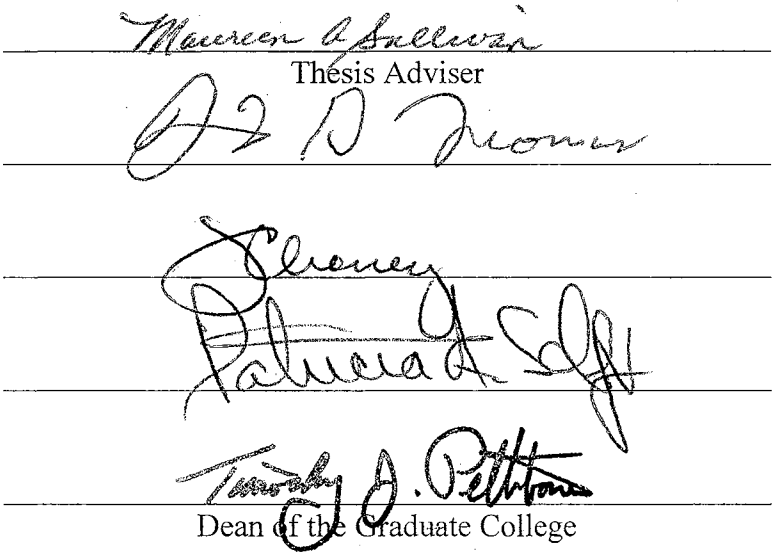

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CHAPTER I

INTRODUCTION

Overview

Child noncompliance is a problem which every parent faces with his or her child. Parents can employ a variety of techniques ranging from divergence of attention to long rationales. However, one of the most widely employed techniques is verbal reprimands. These reprimands can vary in length from being short, "Pick up the toys" to long "Pick up the toys like I asked you to do." Research regarding the effectiveness of reprimands has been disputed. Some research shows that short, immediate, and firm reprimands are effective whereas other state that long reprimands are more effective. The majority of studies examining reprimands have been in prohibitive situations, not proactive situations. It appears that the amount of verbosity the mother employs affects child compliance. Few studies have been specifically controlled for verbosity in order to determine its exact effects. In addition, no studies have directly compared the effects of verbosity in both a proactive and prohibitive task.

One parental factor which typically enhances the effectiveness of verbal reprimands is nurturance. Nurturance has been defined as maternal affection, interactional statements, encouragement, level of interaction, and statements of approval. Predominantly, nurturance consists of interactional statements coupled with praise. Most

studies conducted in prohibitive situations find nurturance as being a facilitative factor. It can be expected that nurturance would also serve a facilitative role in proactive situations. Few to no studies have directly compared the role of nurturance on child compliance in both a proactive situation and a prohibitive situation.

The present paper will address the role nurturance and length play in gaining child compliance in a controlled setting. First, literature addressing parenting techniques and child compliance will be presented. This portion of the paper will contain definitions used to describe compliance, the importance of developmental compliance, and an examination of numerous parenting techniques, predominantly verbal reprimands. Next, the paper will examine the role nurturance has on child compliance. The final portion of the literature review will specifically examine the role verbosity has on child compliance. The remainder of the paper will focus on the current investigation of the effects of nurturance and verbosity on child compliance in both a proactive and prohibitive situation.

Statement of the Problem

Most children will engage in some form of aggressive, highly active, or noncompliant behavior as part of normal development. Often, behavior problems peak about the age of three and continue to decline through the preschool years. Many behavior problems exhibited by normal preschoolers are due to the developmental stage or hurdles which the child is facing (Forehand & Wierson, 1993). The biggest hurdle which preschoolers often face is establishing autonomy and independence from their caregiver. As preschoolers tackle the hurdle of autonomy, many of their behaviors may be seen in

the form of noncompliance. Noncompliance has been defined in many ways with some proposing that it is a "coercive response" elicited by the child to which the parent must respond. This cycle between the child and the parent may be maintained if a parent is unable to manage the noncompliance with effective parenting strategies (Patterson, 1982). Since children going through normal development display high levels of noncompliance, noncompliance is a prevalent problem for most parents, especially at the age of the "terrible twos." Studies by Lytton and Zwirner (1975) and by Minton, Kagan, and Levine (1971) found that parents engage in disciplinary situations in the home with their toddler children at a rate of once every 3 to 9 minutes. While outside the home, parents may encounter more frequent undesirable behavior, such as once every .8 minutes in a supermarket (Holden, 1983). It appears that parents encounter disciplinary acts with their children quite often both inside and outside the home. If continued noncompliance is partly due to unskillful parental management of child behavior, this indicates that compliance can be achieved if a parent knows which disciplinary techniques are effective in successful management of child behavior.

Even though noncompliance is part of a child's normal development, if high levels of noncompliance are present for an extended period of time, it can have detrimental effects on the child. For example, noncompliance is a pervasive problem among children referred to psychological clinics (Forehand, 1977). If a parent cannot adequately manage his/her child, this may place the child at risk for physical abuse due to frustration that parents experience due to chronic noncompliance. In addition, the parent's self-esteem may be affected, and the risk increases that the child will require more control later (Holden, 1983). Fagot (1988) found that children can also experience

long-term effects due to the parent's perceptions of the behavior and the disciplinary techniques used to deal with the behaviors. Long-term effects of noncompliance on children can include coercive family interactions, poor peer relationships, and academic problems (Patterson, DeBaryshe, & Ramsey 1989). Thus, in order to prevent these long-term effects, parents need to employ the most effective parenting techniques to gain high levels of compliance.

While there are many factors which influence child noncompliance (e.g., child temperament), research has indicated that certain parental disciplinary techniques decrease noncompliant behavior in a child while others enhance compliant behavior. Green, Forehand, and McMahon (1979) studied 20 mother and child dyads when the children were between the ages of 3.9 and 8.3 years. Half of the children were classified as clinically deviant, and the other half were classified as normal. During the study, the mother and child were observed in a playroom where the mother was instructed to make the child look compliant or noncompliant upon command. It was found that both deviant and normal group mothers could manipulate compliance or noncompliance in the children by changing the antecedents and consequences of the child's behavior. More specifically, if mothers wanted noncompliance, the mothers used poor commands or stop commands. Poor commands were classified as being commands in which compliance is difficult or impossible to achieve, such as making requests which the child is not able to do due to his or her age or level of development. Stop commands were commands which were intended to inhibit the behavior or prevent a behavior from occurring. When mothers wanted compliant behavior, more suggestions or questions were used to induce

obedience. Thus, it is apparent that the use of certain parental techniques may either increase or decrease the amount of noncompliance seen in children.

In conclusion, the above findings show that noncompliance is 1) a normal developmental stage, 2) due at least partly to unskillful management of child behavior, 3) has long-term effects on the child, and 4) can be decreased by certain parental techniques. Thus, in the following section, the effectiveness of various parenting techniques in facilitating child compliance will be examined. More specifically, the most widely used parenting technique of reprimands will be examined, with a focus on the controversy over the role of verbosity in gaining child compliance.

Purpose of the Study

The proposed study had two primary goals. The first goal was to examine the effects of nurturance on young child compliance in both a proactive situation and a prohibitive situation. Participants were assigned to either a high nurturance condition or to a low nurturance condition. Past studies have defined nurturance as engagement of the child in conversation, praise, physical affection, smiling, and other displays of positive affect of the mother to the child. In this study, nurturance will consist of interaction and praise statements. Therefore, nurturance in this study included behaviors in which the mother engaged the child in conversation, used positive tone of voice, displayed pleasant expressions, and issued praise statements.

The second goal was to compare the effect of verbosity of verbal reprimands and directives on compliance and noncompliance in toddlers in both a proactive and prohibitive task. Previous studies have indicated that verbosity may have a negative

effect on child compliance. The effect of verbosity on child compliance in a proactive situation has not been studied extensively. However, one study indicated that verbosity did not have an inhibitory or faciliatory effect on child compliance in a proactive task. Due to these results, the present study had participants engage in both a prohibitive task (refraining from touching forbidden objects and engaging in appropriate play) and a proactive task (toy clean-up). In each task, participants were assigned to one of two conditions, high verbosity (frequent, long directives) or low verbosity (infrequent, short directives). Directives were given once every minute for the high verbosity condition and once every two minutes for the low verbosity condition. Long directives were 11 words or more, and short directives were 7 or fewer words. This allowed for the examination of the effect which verbosity had on child compliance. Physical prompts and modeling were held constant across all conditions.

A 2 (high vs low nurturance) by 2 (high vs low verbosity) by 3 (free play vs. toy clean-up vs. forbidden objects task) mixed-design was utilized in which task was a within-subjects factor and nurturance and verbosity were the between-subjects factors. Ten mothers and their children were assigned to each condition. The independent variables were the level of nurturance (high vs. low), level of verbosity (high vs. low), and type of task (free play vs. toy clean-up vs. forbidden object). The dependent variables were the observed child behaviors which included: % compliance (% of intervals containing appropriate play in the forbidden objects task, % of intervals containing picking up appropriately in the toy clean-up task); % noncompliance (% rates touching forbidden objects in the forbidden objects task, % of intervals containing toy contact in the toy clean-up task, and % rates leaving the area in both tasks); % of intervals

containing solicitation for attention; and % of intervals containing negative affect. Please consult Table 1 (Appendix A).

Numerous hypotheses were examined in this study. First, it was hypothesized that there will be a main effect of nurturance. It was hypothesized that children in the high nurturance condition would be more compliant and less noncompliant than children in the low nurturance condition. Lytton and Zwirner (1975) found that positive actions such as smiling, hugging, and playing with the child and neutral controls such as neutral speech or regular maternal behavior facilitated compliance. This may be due to the level of engagement which is created in situations of high nurturance.

Secondly, a main effect of verbosity was hypothesized. If high verbosity is viewed as being negative and controlling, it was predicted that children in the high verbosity condition would be more noncompliant and less compliant than children in the low verbosity condition. This is consistent with Crockenberg and Litman's (1990) findings that power assertion in the form of negative control such as threats, physical interventions, and anger were associated with defiance. However, if high verbosity is viewed as a form of engagement, it was expected that children in the high verbosity condition would be more compliant and less noncompliant than children in the low verbosity condition.

Third, a nurturance by verbosity interaction effect was hypothesized. If verbosity is considered as being inhibitory (threat, controlling), it was predicted that children in the low verbosity/high nurturance condition would be more compliant and less noncompliant than children in the high verbosity/low nurturance condition. Children in the high verbosity/high nurturance condition would be less compliant and more noncompliant than

children in the low verbosity/low nurturance condition. However, if verbosity is considered facilitative (level of engagement), it was predicted that children in the high nurturance/high verbosity condition would be more compliant and less noncompliant than children in the high nurturant/low verbosity condition. Children in the low nurturance/low verbosity condition would be more noncompliant and less compliant than children in the low nurturance/ high verbosity condition.

Fourth, a main effect was predicted for task. It was expected that compliance rates would differ in the proactive and prohibitive tasks. More specifically, it was expected that children in the proactive task would be less compliant and more noncompliant than children in the prohibitive task since maternal "dos" are more challenging than maternal "don'ts."

Fifth, a verbosity by task interaction effect was predicted. It was expected that rates of compliance would vary as a function of level of verbosity. More specifically, it was expected that children receiving high levels of verbosity would be less compliant and more noncompliant in the forbidden object task than in the toy clean-up task. Children in the low verbosity condition would be more compliant and less noncompliant in the forbidden objects task than in the toy clean-up task.

Sixth, a nurturance by task interaction effect was predicted. Because nurturance is facilitative, it was expected that nurturance would differentially enhance or facilitate the effects of the task on child compliance levels. There would be a greater increase in compliance and a greater decrease in noncompliance from the proactive to the prohibitive tasks for children in the high nurturance condition compared to children in the low nurturance condition.

Seventh, a nurturance by verbosity by task interaction effect was predicted. However, no specific hypotheses were made. These were exploratory in nature.

CHAPTER II

REVIEW OF THE LITERATURE

Compliance

In studies to determine the efficacy of certain parenting techniques, researchers have produced numerous operational definitions of compliance. Initiated compliance is defined as the presence of an observable cue, reflecting the beginning of compliance within 5 seconds of the termination of the maternal command (Davies, McMahon, Flessati, & Tiedman, 1984). Others have defined compliance as the termination of a misbehavior for 20 seconds immediately following a maternal response (Holden, 1983). Compliance can also be seen as obedience to a parental directive, reparation of misdeeds, or an attempt to regain parental affection (Chapman & Zahn-Waxler, 1982). Kochanska and Aksan (1995) categorize compliance into two types, wholehearted or situational. Wholehearted compliance occurs when the child complies due to a feeling of internal commitment, fully recognizing the maternal agenda as his or her own. Situational compliance, on the other hand, occurs when the child is cooperative and nonoppositional with the parent, but lacks a sincere commitment. The type of compliance which a child initiates indicates the child's motivational level of either wanting to accept or reject the parent's requests.

Noncompliance

Just as compliance can be observed in many ways, so can noncompliance. For example, a child may appear noncompliant by failing to comply with parental requests by simply ignoring the request, such as continuing to play with the toys rather than picking them up. On the other hand, a child may appear noncompliant by defying the request by saying, "No," or tantruming. These behaviors may appear to be more active forms of noncompliance. Thus, looking at the multiple ways which compliance and nnoncompliance may be observed, researchers are interested in not only the amount of time it takes for a child to achieve a desired behavior, but also which techniques and situations facilitate the act of child compliance.

Parameters of Parenting

Extensive research examining the effectiveness of different parenting techniques has found that different techniques have different effects on child compliance. Parents can employ techniques such as reprimands which are statements that direct children to engage in a specific task or to refrain from engaging in a specific task. Techniques such as verbal reprimands, distraction, and social construction of situations are effective ways of controlling child compliance, whereas in certain situations, ignoring a child and power assertion are not effective means of controlling child compliance.

One ineffective parental technique is the act of ignoring a child. When parents ignore children, they withhold attention in the hope that the misbehaviors will cease. Many parents may find this effective in some situations in which the misbehavior is

attention-seeking or parental attention has been acting as secondary reinforcement. However, in other situations, ignoring is ineffective. In his supermarket study, Holden (1983) found that parents who ignored their children had less compliance than those who used other proactive techniques such as diverting the child's attention or engaging the child in an alternative activity. Davies, McMahon, Flessati, and Tiedman (1984) studied the effectiveness of two behavioral techniques, verbal rationales and/or modeling, with 80 mothers and their children aged 36 to 54 months and 66 to 90 months. The dyads were observed in a laboratory playroom where the mothers issued 20 commands to their children. The mothers were also taught to ignore the children following noncompliance to the maternal command. In all four conditions which mothers could be assigned, mothers were taught to engage their children in conversation prior to the first command. After the first command, mothers in the control group would do nothing. Mothers in the ignore group would ignore their children, and mothers in the ignore plus rationale group ignored their children followed by a rationale. Finally, mothers in the ignore, modeling, and rationale group engaged in all three behaviors with their children. It was found that children in the ignore category initiated compliance less than children in the other conditions of modeling and rationale. Interesting enough, no difference was found in the level of compliance between children in the ignore condition and in the control condition. This indicates that ignoring the child is not better at gaining child compliance than no technique at all. Research indicates that ignoring is an ineffective technique in trying to gain child compliance but only in situations where the misbehavior is not attention-seeking.

Power assertive techniques also appear to be ineffective in controlling child misbehavior. Power assertive techniques are typically defined as any negative control consisting of verbal threats, physical interventions, or the use of anger. A study by Crockenberg and Litman (1990) examined parenting both in a home and laboratory setting with 95 mothers and their 2 1/2-year-old children. They examined maternal control strategies in relation to child autonomy. This was done by measuring children's defiant, compliant, and self-assertive behavior. It was found that power assertion in the form of negative controls such as threats, physical intervention and anger were associated with more defiance in both settings. Other studies have also found that defiant behavior was associated with highly power assertive parental control strategies such as anger, harshness, or excessive control, particularly physical intervention (Crockenberg, 1987, cited in Crockenberg & Litman, 1990; Kuczynski, 1984; Lytton, 1980, cited in Crockenberg & Litman, 1990). A study conducted by Lytton and Zwirner (1975) of 136, 2 1/2-year-old male twins and singletons was conducted in a home setting in order to examine parental antecedents of child compliance. It was found that physical control (slap, physical restraint, or restriction) and negative action (expression of criticism, threat, or displeasure) facilitated noncompliance more than compliance. Compliance was facilitated by positive action (expressions of love or approval) and neutral action (neutral speech). Not only does physical control increase noncompliance, but it also decreases the effectiveness of commands when added to simple commands (Lytton, 1979). Thus, the above studies show that power assertive techniques increase child noncompliance and, when paired with commands, may decrease the effectiveness of commands.

As shown above, ignoring a child and power assertion are two techniques which inhibit child compliance. However, other parenting techniques facilitate child compliance. One such parenting technique is divergence of attention. Holden (1983) studied 24 middle class mothers and their 2 1/2-year-old children in a naturalistic setting at the grocery store. He found that mothers who used proactive controls, such as divergence of attention or the use of alternative objects, had children who exhibited fewer undesired behaviors while in the supermarket. The most effective strategy used by mothers in the study was the divergence of the child's attention from possible problem objects. Reid, O'Leary, and Wolff (1994) conducted a study of 20 mothers and their 17- to 39-month-old-children. The dyads were observed in a laboratory setting where the mothers used either distraction then reprimands or reprimands followed by distraction in response to the child's misbehavior. It was found that overall, distractions were not as effective in suppressing misbehavior when compared to reprimands. However, the effectiveness of distraction was enhanced following a reprimand as compared to when it preceded reprimands. Also, children displayed more negative affect when they were distracted first and then reprimanded. Thus, distraction is an effective parenting technique which achieves higher rates of compliance and less negative affect by the child if used following verbal reprimands.

One parenting technique which facilitates compliance is modeling. The study mentioned above by Davies, et al., (1984) examined the effectiveness of two behavioral parenting techniques, verbal rationales and/or modeling. It was found that children in the modeling and rationale groups were more compliant than children in the ignoring and control groups. Also, increased maternal satisfaction was reported with these two

procedures, and children understood the contingencies better in these two groups than in the other two. It appears that modeling or social construction is a successful technique. However, because no differences were found between the rationale and rationale plus modeling conditions, modeling did not improve compliance beyond the improvement brought on by the rationale. This supports the conclusion that even though modeling improved compliance rates with reprimand, modeling alone was not enough to cause improved compliance beyond the use of a reprimand.

Verbal Reprimands

The most effective parental technique which parents typically employ is verbal reprimands. The effectiveness of reprimands has been highly studied. Reprimands can be given in the form of commands, rationales, or explanations. Many parents use commands of "do" or "don't" in order to try to end the child's misbehavior. Kochanska and Aksan (1995) conducted a study of 103 toddlers aged 26 to 41 months. They were observed in both a lab setting and in a home setting. "Do" statements require compliance to perform an active task, such as putting toys away. "Don't" statements are those that require the child to refrain from a prohibited behavior such as not touching an attractive toy. They found that maternal "dos" were more challenging than "don'ts." Children put the toys away less often when the mothers suggested the topic with a "do" statement than if the mothers started out prohibiting the child with a "don't" statement. This suggests that more noncompliance would occur with a direct increase in maternal "dos." Also, if both mother and child had positive affect, then it was more likely that the child would internalize the correct behavior more easily, meaning that the child would perform certain

tasks without the mother present to guide the child's behavior. Based on the findings from this study, mothers need to use more positive affect and use more "don'ts" if they want high compliance levels with their children.

As mentioned above, the study by Green, et al., (1979) was conducted with 20 mother-child pairs with the children between the ages of 3.9 and 8.3 years of age. Ten of the pairs were classified as nonclinic, and ten pairs were classified as deviant. It was found that poor or vague commands given to inhibit behavior were faced with greater noncompliance when compared to mothers who utilized suggestions or question commands. Pfiffner and O'Leary (1989) conducted a laboratory study of 40 children aged 19 to 31 months and found that immediate, short, and firm reprimands were better than delayed, long, and gentle reprimands in initiating child compliance, but were associated with increased negative affect when under high nurturant conditions. Thus, the above two studies point out that short, firm, immediate reprimands are more effective as compared to poor reprimands which tend to be delayed and long; this could be caused by lack of clarity.

The amount of reasoning given with the verbal reprimands is another important factor which affects child compliance levels. Holden (1984) in his naturalistic supermarket study of 24 mothers and their 2 1/2-year-old children found that mothers most often used power assertion with reason (70% of the time). Children terminated their requests for objects or gross motor behaviors 68% of the time when mothers used reasoning compared to 24% of the time when mothers did not respond, to 26% when mothers acknowledged the child's wish. This study suggests that reasoning or power assertion with reasoning are effective in gaining compliance, especially when compared

to power assertion alone, consent, or acknowledgment. Kuczynski (1984) conducted a naturalistic lab study of 64 mother-child dyads with children 4 years of age where he examined the socialization goals of the mothers. He found that mothers who wanted long-term compliance used longer reprimands and different kinds of explanations than mothers wanting short-term behavior. Children in the long-term condition were more compliant and less negativistic than children in the short-term condition. Reasoning in the long term condition increased child compliance more effectively than techniques such as power assertions. This could be due to the fact that mothers tended to use reasoning more often in a more nurturant way to reach long-term compliance than mothers in the short-term compliance group. Davies, et al., (1984) studied 40 children in two age groups, ranging from 3 to 4 1/2 years to 5 1/2 to 7 years and their mothers. They found that children who received rationales or rationales with modeling were more compliant than children being ignored or unpunished. Lytton and Zwirner (1975) found that in a naturalistic study of 46, 25- to 35-month-old-children, compliance was highest with the use of suggestion and decreased with the use of commands and reasoning. Clark (1996) examined 33 mothers and their children aged 18- to 30-months in a laboratory setting in order to see the effects of reasoning and nurturance on child compliance both in the mother's presence and absence. She found that children in the reasoning condition did not differ from children in the no reasoning condition in rates of appropriate play, touch of forbidden objects, or in the amount of leaving the area. However, Munn (1998) conducted a study 31 mothers and their children aged 32 to 45 months examining the effects of reasoning on compliance in both a novel and a familiar task. She found that using reasons in combination with directives did not result in significantly different rates of compliance in

both a novel and familiar task. Thus, some studies above show that noncompliance is not related to reasoning, whereas other studies show that reasoning is an effective technique for gaining compliance if a mother wants long-term compliance.

Nurturance

Numerous outside factors can hinder the effectiveness of the disciplinary technique. However, one factor which facilitates the effectiveness of reprimands in gaining compliance is nurturance. Pfiffner and O'Leary (1989) conducted a laboratory study of 40 mothers and their 18- to 31-month-old children. In this study, nurturance was defined as engaging the child in active play, using encouragement, showing physical affection, or issuing positive feedback. It was found that in a proactive, free play situation, children in the high nurturant conditions played a significantly greater percentage of the time than children in the low nurturant conditions where the mother was engaged in completing a questionnaire. This may be due to the level of engagement between the mother and the child in the high nurturant condition. However, there was more negative affect in the high nurturant immediate, short, firm reprimand condition as compared to high nurturant delayed, long, gentle reprimand condition. Perry (1997) conducted a study with 45 mothers and their 24 to 46 month old children which examined the effects of child negative affect on maternal mood and behavior during discipline encounters. She found that children in the high nurturant group did not differ from children in the low nurturant group in rates of negative affect when engaged in a prohibitive situation. In addition, it was found that amount of nurturance did not affect levels of appropriate play, amount of solicitation for mother's attention, or levels of

misbehavior (touching forbidden objects or leaving the area). Clark (1996) examined the effects of reasoning and nurturance on child compliance. Thirty-three, 18- to 30-month-old children and their mothers participated in the study. It was found that children in the high nurturant conditions did not differ in rates of appropriate play, touching forbidden object, or the number of times children left the area. However, she found that children in the high nurturant condition displayed higher levels of negative affect. This finding may be due to the fact that if in a nurturant condition in both proactive and prohibitive situations, children may find the immediate, short, firm command to be more aversive than if they were in a low nurturant condition.

Other researchers have considered the amount of affection as an indicator of nurturance. Lytton and Zwirner's study (1975) of 136, 2 1/2-year-olds found that in a proactive situation, positive actions (hugging, smiling, playing with child) and neutral controls (neutral speech or regular maternal behaviors) facilitated compliance more than noncompliance. Also, Lytton (1979) found that positive action (defined as expressions of love or approval, hugging, and smiling) boosted the effects of command-prohibitions on compliance, but decreased noncompliance in prohibitive situations.

Other researches, on the other hand, have considered level of engagement or level of interaction an indicator of nurturance. Studies examining the level of engagement indicate that the more a mother engages her child, the better the outcomes will be for that child. More specifically, Hann, Osofsky, and Culp (1996) conducted a study examining preschool outcomes (cognitive linguistic) of preschool children of adolescent mothers. It was found that maternal behaviors consisting of maternal positive affect and dyadic verbal reciprocity were directly related to preschool cognitive and linguistic functioning

in the children. Kahen, Katz, and Gottman, (1994) conducted a study examining the ways in which parenting behavior during parent-child interactions was related to children's ability to interact with other children. It was found that parental intrusiveness, use of derisive humor, and low levels of engagement (amount of responsiveness and level of interaction) were associated with children's level of negativity, especially during peer interactions. A more long term study was conducted by Gjerde, Block, and Block (1991) which examined the relationships between parent-child interactions during preschool and depressive symptoms in the children at age 13 years. It was found that positive engagement, or how much the mother interacted with the child, was positively correlated with children's depressive symptomatology at age 13. Thus, the above studies suggest that level of engagement plays an important role in child behavior.

Finally, other studies defined nurturance by the level of responsiveness which parents give to their children. Stayton, Hogan, and Ainsworth (1971) conducted a study of 25, 1-year-old infants and their mothers. The pairs were observed at three-week intervals for four hours in their homes. Mothers were rated on scales of sensitivity-insensitivity, acceptance-rejection, and cooperation-interference. They found that early obedience was related to the sensitivity of maternal responsiveness to infant signals. This means that children whose mothers were more sensitive, accepting, and cooperative had greater compliance to commands in prohibitive situations than those whose mothers were insensitive, rejecting, or interfering. Parpal and Maccoby (1985) examined 39 children aged 2 to 4 years in order to see the effect of three kinds of mother-child interaction on child compliance. Mothers and children where classified into one of the following: responsive play where the mother engaged in activity with the child and complied with

the child's behavior, free play where the mother was to play with the child like she did at home, and noninteractive where the mother sat at a table filling out questionnaires. They found that children in the responsive play condition had higher child compliance than children in the other two groups. This could be due to the higher levels of warmth, nurturance, and maternal responsiveness. Therefore, nurturance in the forms of affection and interaction facilitates the effectiveness of reprimands which may be due to the level of engagement between the mother and child which is created with high levels of nurturance.

Results from the nurturance studies above indicate that nurturance plays a different role in different situations. The majority of the studies above indicate that nurturance plays a facilitative role in prohibitive situations. Few of the studies above were conducted in proactive situations. The few which were conducted with proactive situations indicated that nurturance was also facilitative in that children engaged in more appropriate play during free play situations. Therefore, it appears that nurturance may serve a different function in proactive situations than it does in prohibitive situations.

Verbosity

As stated above, the most frequently utilized parenting technique is verbal reprimands. Verbal reprimands can be very short ("Pick up the toys") or very long ("Pick up the toys. I said pick up the toys for mom.") Numerous hypotheses have been proposed regarding the reasons for their effectiveness. Some suggest length constitutes a major role in effectiveness. This may be due to the fact that longer reprimands engage the child more than shorter reprimands. Although numerous hypotheses have been made

regarding the reasons for reprimand efficacy, few studies have controlled the length of reprimands when examining the effects on child compliance. One of the first parenting studies to control for length was the study by Pfiffner and O'Leary (1989). They conducted a laboratory study of 40 children aged 18 to 31 months. Mothers gave reprimands which were controlled in length, ranging from short to long. They found that immediate, short, firm reprimands were superior to delayed, long, gentle reprimands in not only controlling misbehavior, but also in decreasing the likelihood of transgressions. A negative consequence of using short, firm, and immediate reprimands is that these reprimands were associated with more negative affect in the child, if the mothers were engaged in highly nurturant interactions with the child. When the nurturance level was low, there was not as much negative affect, suggesting that nurturant mothers may be reinforcing their own child's negative affect. Results from this study suggest that length of reprimands plays a role on child compliance. However, it is difficult to determine whether the length, the immediacy, or tone of voice used facilitated the compliance levels.

Length of reprimands appears to be an important factor, but more research is needed to clarify its exact role in disciplinary encounters. One early measure which detects the effects of lengthy discipline encounters is the Parenting Scale. The Parenting Scale (Arnold, O'Leary, Wolff, & Acker, 1993) was designed to assess dysfunctional parenting. This scale contains a verbosity factor which measures the length of parental response and the amount the parent relies on talking. Verbosity scale factor scores were significantly related to levels of child misbehavior as reported by mothers on the Child Behavior Checklist (Achenbach, 1992). Verbosity scores were significantly correlated

with the observed maternal behaviors and disciplinary mistakes (Arnold, et al., 1993). However, verbosity scores were not found to be associated with high levels of observed child misbehavior. Blundell (1997) examined verbosity scale scores on the Parenting Scale versus the observed length of the mother's reprimands in a laboratory setting. Twenty-six mothers and their 24- to 59-month-old children participated in a laboratory study consisting of a toy-clean-up task. It was found that scores on the verbosity scale were significantly correlated with the average amount of words spoken per stream, the average amount of time per stream, the maximum number of words spoken, and the maximum amount of time spent speaking. The study indicated that observed maternal behavior was consistent with the mothers' self-reports on the Parenting Scale. This supports the validity of the verbosity factor. Thus, verbosity is related to maternal behaviors; however, it is unknown which role length of the reprimands plays in child compliance.

Sullivan, Nichols-Anderson, Perry, Blundell, and Munn (1997) examined 66 mothers and their children aged 24 to 59 months in order to see the effect that maternal verbosity has on child compliance in a toy-clean-up task in a naturalistic observation. In this study, maternal verbosity was defined as any verbalization given by the mother to the child. Content of the verbalization was not distinguished. It was found that observed maternal verbosity was not related to picking up the toys, toy contact, or to child noncompliance. Observed verbosity was also not related to the mothers' scores on the verbosity factor of the Parenting Scale. However, verbosity was related to child negative affect. Thus, this observational study showed that maternal verbosity was not related to

child compliance. However, it cannot be determined if content of the verbalizations played a role in these findings since verbalizations contained more than just reprimands.

Studies of the Verbosity scale of the Parenting Scale suggest that length plays a role in child compliance. These results were obtained in prohibitive situations. Therefore, it is unknown whether or not these same inconsistencies would exist when looking at the effects of verbosity in other proactive situations. Blundell (2000) conducted a study in order to examine the effects of verbosity and nurturance in a proactive situation. Thirty-eight mothers and their children aged 18 to 36 months participated in a laboratory study consisting of a toy clean-up phase. It was found that verbosity and nurturance did not significantly affect child compliance levels. In the above studies using naturalistic observations, verbosity is related to observed maternal behaviors; however, in manipulations of verbosity, it does not significantly affect compliance levels. However, it is unclear how verbosity would affect compliance in both proactive and prohibitive tasks.

CHAPTER III

METHODS

Participants

Forty-six mothers and their children, aged 24 to 36 months, served as participants. Participants were recruited from day-care centers, newspaper advertisements, birth announcements from the local newspaper, and flyers posted on campus and in the community. Six mothers were dropped because they served as participants during the pilot portion of the study so that the experimenter could test and modify the protocol. Three mothers were dropped because their children scored within the clinical range on the CBCL. No mothers were dropped because they failed to follow protocol. This resulted in four experimental conditions, with 9, 9, 9, and 10 participants respectively.

The children in the study had a mean age of 40.38 months, with a range of 32 to 42 months. There were 22 male and 15 female children in the study with both genders being distributed as evenly as possible across the conditions. The majority of participants were Caucasian (94.29 %) with 5.71% biracial. The average Hollingshead score of the participants was 43.19, which indicates that participants were of upper Middle class, business professionals. Children's Externalizing T-scores on the Child Behavior Checklist 2/3 (CBCL/2-3) fell within the normal range. Scores ranged from 30 to 70, with a mean score of 50.13. Parental ECBI Frequency Scores fell within the normal

range. Total frequency scores ranged from 64 to 142, with a mean score of 99.92. The Total Problem Score also fell within the normal range with total scores ranging from 0 to 14, with a mean score of 3.41. Parental responses on the Parenting Scale yielded a total score ranging from 2.97 to 4.33, with a mean score of 3.45 which fell within the normal range. The mother's mean age was 31.40 years with a range of 20 to 45 years. Approximately 83.79 % of the participants were married, while 13.51 % were single, and 2.70 % endorsed other (cohabiting or divorced).

In order to ensure that there were not pre-existing differences between-groups, several analyses were conducted. One-way Analyses of Variance (ANOVAs) with group as the between-groups factor were conducted for age of child, age of mother, and child CBCL/2-3 Externalizing T-Score. The four experimental conditions did not differ on these measures. In addition, Chi Square tests were conducted for gender of child, ethnicity, family income, and marital status by experimental condition. The results indicate that all four experimental conditions were comparable in demographic characteristics; thus, there were no confounds resulting from these variables.

Materials

Demographic Questionnaire

For descriptive purposes, mothers completed a demographics questionnaire (Appendix B). Information regarding the participant's level of education, age, occupation, ethnic background, income, and characteristics of each family member were

assessed. This questionnaire also gathered information about the development of the child.

Child Behavior Checklist/2-3 (CBCL/2-3)

The CBCL/2-3 (Achenbach, 1992) is a 100-item scale, using a three-point rating to assess emotional and behavior characteristic of children between the ages of two and three. A Total Problem T-score is produced in addition to a T-score for Externalizing and Internalizing behaviors. A T-score of 67 or greater indicates that a child is functioning in the clinical range. Achenbach (1992) reported that the CBCL/2-3 has both adequate reliability and validity. The present study was restricted to a non-clinic population and excluded participants who scored 67 or greater on any of the three scales.

Eyberg Child Behavior Inventory (ECBI)

The Eyberg Child Behavior Inventory (ECBI) (Burns & Patterson, 1990; Eyberg & Ross, 1978) is a 36-item scale which identifies specific behavior problems in children aged two to sixteen as reported by their parents. The ECBI yields two scores: a problem score and an intensity score. The problem score consists of the sum of 36 items based on a two-point rating scale which measure the parent's interpretation of whether or not the child's behavior is a problem. The intensity score consists of the sum of 36 items utilizing a seven-point rating scale, measuring how frequently a particular behavior occurs. The ECBI is significantly correlated with observation of parent-child interactions and with Externalizing scores on the Child Behavior Checklist/2-3 (Boggs, Eyberg, & Reynolds, 1990). The ECBI also has adequate reliability and validity for discriminating

between children with and without behavior problems (Boggs, et al, 1990). Information from this questionnaire was part of another study and was used for descriptive purposes only.

Parenting Scale

The Parenting Scale is a 36-item rating scale using a seven-point rating, which assesses dysfunctional parenting strategies used with children aged eighteen months to four years (Arnold, et al., 1993) The Parenting Scale yields a Total score and three factor scores: Laxness, Overreactivity, and Verbosity. High Total scores indicate dysfunctional discipline. Arnold et al. (1993) reported that scores on the Parenting Scale were significantly correlated with scores on the CBCL/2-3. They also found that scores on the Parenting Scale were correlated with parenting strategies coded in laboratory observations. The Parenting Scale has adequate reliability and internal consistency (Arnold, et al., 1993). The Parenting Scale is a valid measure for distinguishing between clinic and nonclinic groups on laxness, overreactivity, and Total scores. Validity for the verbosity factor is mixed. Information from the Parenting Scale was used for descriptive purposes.

Apparatus

A Panasonic VHS video camera, Model #AG-1250-P, was used to record mother and child behaviors during the three phases. Since the experimenter was observing the ongoing interaction in an adjacent room, a Panasonic color monitor, Model #BTS1300N, was used. A Bug-in-the-ear TM device (Model B-312, Farrall Instruments, Inc.) which

consisted of a microphone and hearing aid set-up was used in order for the experimenter to give on-going instructions to the mother regarding how to respond to her child and what to say. Such prompting allowed for experimenter control and manipulation between conditions.

Waiting Room

The study occurred in a 17' by 8' room with chairs, low tables, toys, and a telephone. Toys used for the toy clean-up task includes plastic blocks, plastic cars, and plastic figures, and were placed in a plastic bin during the toy-clean-up task. Throughout both tasks, forbidden objects consisting of cookies, typewriter, mobile, wind chime, globe, and pencil caddy was utilized.

Observational Code

An observational code was utilized to record the mother and child behaviors seen in videotaped interactions in 10-second intervals. Maternal behaviors coded included: the number of directives regarding the toys (Dt), such as, "Pick up the toys;" reprimands and directives regarding the child leaving the area and touching forbidden objects (Dl), such as, "Come finish picking up the toys" or "Don't touch the cookies;" and reprimands and directives for other classifiable behaviors (Do), such as, "Sit by mommy." All directives were also coded for length (long or short). Directives were scored as long if they consisted of 11 or more words. Directives were scored as short if they consisted of seven or fewer words. Praise (P) was coded when the mother issues a praise statement such as, "I like the way you are picking up the toys." Modeling (M) was coded when the mother

helped or demonstrated to the child how to pick up the toys or play with the toys. Interaction (I) was coded when the mother engaged in any other type of conversation or nonverbal contact with the child, and physical prompt (PP) was coded if the mother was required to use physical contact to bring the child back into the designated area or prevent the child from climbing on the furniture.

Child behaviors which were coded included: compliant behaviors of picking up appropriately (Pa), when the child picked up the toys correctly and appropriate play (Ap), when the child played with the toys appropriately while refraining from touching forbidden objects. Noncompliant behaviors were also coded which included toy contact (Tc), when the child had contact with toys unrelated to picking the toys up and placing them in the bin; touching forbidden objects (Fo), when the child touched forbidden objects; and leaving the area (La), when the child went outside the designated area. Other child behaviors which were coded included negative affect (Na), which was any defiance, whining, temper tantruming, or crying by the child and solicitation for attention (Sa), which was any attempt of the child to gain his/her mother's attention.

Pairs of undergraduate students enrolled in psychology research credits served as observers and were trained in the observational codes for this study. The observers were blind to the hypotheses and independently coded the videotaped interactions in 10-second intervals. The observers were trained until they reached a criterion of 90% agreement on all coded behaviors. Coders independently viewed each tape twice, once to code child behaviors and again to code maternal behaviors. Intervals in which one or more disagreements exist were then marked on the coding sheets by the experimenter. The coders independently reviewed the discrepant intervals and rechecked the marked

behaviors. If the coder determined an error had occurred in his or her coding, the coding was changed to be consistent with the coding definitions. If the coder determined his or her original coding was correct, the coding was left as it is marked the first time. Percent agreement (between observers) with kappa corrections was calculated for each of the measured maternal and child behaviors for 100% of the observations. Average kappa values for the coded maternal and child behaviors were calculated. Average kappa values for the maternal behaviors ranged from 90.64 for prompt to 98.44 for praise. Average kappa values for the coded child behaviors ranged from 88.46 for solicitation of attention to 98.86 for picking up appropriately. Overall, these kappa values indicated that both the maternal and child behaviors studied were accurately and reliably coded by the observers.

Data tabulation occurred after kappa-corrected reliability values were calculated. For each subject, one observer's coding sheets were randomly selected to be used in data tabulation. (See Table 1, Appendix A to see how data tabulation was completed).

Procedure

For the first 20 participants, random assignment was utilized to assign them to one of four experimental conditions: high nurturance/high verbosity, low nurturance/low verbosity, high nurturance/low verbosity, and low nurturance, high verbosity. The last 20 participants were matched as closely as possible on gender, age, and ethnicity, and assigned to one of the four conditions described above in order to ensure equal distribution across the four conditions. Each mother-child dyad participated in a single laboratory visit lasting approximately one hour. In each laboratory visit, the dyad participated in a free play task, toy clean-up task, and forbidden objects task. The order

of the toy clean-up task and forbidden objects task was counter balanced in order to prevent order effects.

General Protocol

Each mother and child dyad met in the anteroom of the laboratory. A research assistant played with the child while the experimenter read an overview of the study from a script and obtained consent (Appendix C). After obtaining consent, the experimenter gave standardized instructions regarding the free play phase and demonstrated the use of the bug-in-the-ear. This introduction to the study lasted approximately 10 minutes.

Free-Play Protocol

This phase of the study lasted approximately 10 minutes. During this phase, both the mother and the child were placed in the observation room, and the mother was instructed to play and interact with her child as she does at home. This phase served as not only a "warm-up" period for both the mother and child by allowing the dyad to become comfortable with the surroundings, but also as a time to implement the first nurturance manipulation. Children in the high nurturance condition received a nurturance statement once every minute while children in the low nurturance condition received a nurturance statement once every two minutes while the mother sat in a chair.

First Break

A brief break lasting approximately 5 minutes occurred between the free-play phase and the forbidden objects phase which allowed the experimenter to get the room set up for the next phase. During this time, the mother was also given scripted instructions for the toy clean-up phase. In addition, the mother was instructed on the purpose and usage of the telephone which was used during this phase as a method to keep mother busy.

Forbidden Object Protocol

This phase of the study lasted 10 minutes. One half of the participants received the forbidden objects protocol first, and the second half of the participants received the toy clean-up protocol first. During this phase, the mother was cued via the bug-in-the-ear as to exactly what to say to her child. The child engaged in a task which required him or her to play with the toys while not touching forbidden objects which were placed around the room. The mother briefly engaged the child with the toys (1 to 2 minutes). When cued, the mother removed herself stating that she needs to make a phone call. She instructed the child to continue to play with the toys. At this point, the mother was instructed not to interact with her child. The mother continued to talk on the phone while giving cued comments at a rate determined by the condition. Solicitations for attention were ignored. The experimenter viewed the mother and child on the monitor at all times. If the child became upset, the mother was instructed to attend to the child's needs.

Finally, the mother received her final cue which indicated when this phase was completed.

Second Break

After completing the forbidden objects phase, the mother and child were brought back into the anteroom so that the experimenter could prepare the room for the toy clean-up phase. In addition, the mother was given scripted instructions which explained the next phase. This lasted approximately 5 minutes.

Toy Clean-Up Protocol

This phase of the study lasted 10 minutes. One half of the participants received the toy clean-up first, and the other half of the participants received the forbidden objects protocol first. Like the forbidden objects phase, the mother was cued via the bug-in-the-ear exactly what to say to her child. This time, the child engaged in a toy clean-up task which required him or her to clean up the toys and place them in a plastic bin. There were no forbidden objects during this phase. In the beginning, the mother was instructed to model the task twice for her child. After modeling twice, the mother removed herself stating that she has to make one last phone call. However, the child was instructed to finish picking up the toys and place them in the plastic bin. At this point, the mother was instructed not to interact with her child. The mother continued to talk on the phone while giving cued comments at a rate determined by the condition. If a child solicited his or her mother's attention, the mother briefly responded by directing the child to the task. All solicitations following the first one were ignored. The experimenter continued to

view the mother and child on the monitor at all times. If the child became upset during this phase, the mother was instructed to attend to the child's needs. The mother was cued when this phase was complete.

Verbosity. Directives were given to the mother via the bug-in-the-ear. Length of these directives were determined by condition. The directives consisted of various statements telling the child to pick up the toys or play with the toys. Reasons were not included with the directives because reasons may confound the results. Directives for picking up the toys were given once every minute for the high verbosity group and once every two minutes for the low verbosity condition. Directives for leaving the area and touching forbidden objects were given each time the child displayed one of these behaviors; therefore, the rate varied with the child's level of noncompliance.

Nurturance. Interaction and praise statements were also given to the mother via the bug-in-the-ear. Interaction and praise statements were statements which engaged the child in conversation with the mother combined with praise. Mothers in the high nurturance condition issued statements once every minute, whereas mothers in the low nurturance condition issued a statement once every two minutes.

Factors Held Constant. Modeling was held constant. At the beginning of both the forbidden objects and toy clean-up phases, all mothers modeled the appropriate behaviors of either playing appropriately or picking up the toys twice for their children. Physical prompts were only used if the child left the designated area or if he or she climbed on the tables. The first time the child left the area, the mother was instructed to physically get the child, bringing him or her into the camera's view. This was always followed by a

directive to play with the toys or pick up the toys depending on the phase. If the child climbed on the tables, the mother was cued to physically move the child to prevent possible harm. This was followed by a reprimand and a directive to play with the toys or pick up the toys.

Debriefing

After completing the study, the assistant played with the child while the mother completed the questionnaires. After completing the questionnaires, the mother was interviewed and given the opportunity to ask questions she may have about the study. The debriefing (Appendix C) began with a general statement, such as "At the end of the study, we like to get feedback from parents. What did you think?" In addition, the mother was asked specific questions such as "Did your child behave in his or her typical manner? Was the study realistic?" The mother was given a packet containing the following: copy of the consent form, copy of parent letter which she could give to friends or neighbors, a list of community referral sources, and numerous coupons from local businesses. In addition, the child was given a small prize. Both mother and child was given thanks for their time and participation. At this point, their participation was complete.

CHAPTER IV

RESULTS

Manipulation Checks

Maternal behaviors of reprimands/directives, physical prompts, and prompts were tabulated by the average number of times or the mean rate of these behaviors. Maternal behaviors of interaction, praise, and modeling were tabulated by the percent of intervals in which the behavior occurred. The measures of compliance of the child's picking up appropriately, playing appropriately, and toy contact were tabulated for percent of occurrence. Noncompliant child behaviors of toy contact, leaving the area, and touching forbidden objects were computed for percent of occurrence.

A series of 2 by 2 by 3 mixed-design ANOVAs were conducted for each of the observed maternal behaviors in order to insure that the experimental manipulations were implemented correctly. Nurturance (high vs. low) and verbosity (high vs. low) were between-groups factors, and task was the within-subjects factor. (For means for these maternal behaviors, see Table 2 through Table 9, Appendix A).

Nurturance Factor

The nurturance factor involved rates of maternal interaction and praise. Mothers in the high nurturance conditions were instructed to interact with their children twice as much than mothers in the low nurturance conditions. Thus higher rates of maternal interaction were expected for the high nurturance conditions than for the low nurturance conditions. Differences in interaction were expected between the nurturance conditions in the free play phase, toy clean-up phase, and forbidden objects phase. It was predicted that there would be a main effect of nurturance on percent of interaction and praise, no main effect of verbosity on percent of interaction and praise, and no main effect of task on percent interaction and praise. No nurturance by verbosity interaction effect was predicted. No nurturance by task interaction effect and no verbosity by task interaction effect were predicted. No nurturance by verbosity by task interaction effect was predicted on percent interaction and praise.

In order to document that the nurturance manipulation was implemented correctly, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was conducted with the observed maternal behavior of interaction as the dependent variable. A main effect of nurturance on percent of interaction was obtained (F (1,32) = 1241.32, p = .001) with mothers in the high nurturance condition interaction at a greater level than mothers in the low nurturance condition. A main effect of verbosity on percent of interaction was also obtained (F(1,32)= 4.400, p = .04), with mothers in the low verbosity condition interacting with their children more than mothers in the high verbosity condition. A main effect of task on percent interaction was obtained (F(1,32) = 903.140, p = .001) with

mothers in the free play task giving significantly higher amounts of interaction compared to the toy clean-up task and the forbidden objects task. No nurturance by verbosity interaction was obtained. A nurturance by task interaction effect was obtained ($F(1,32) = 810.485$, $p = .001$). A verbosity by task interaction was not obtained, and no nurturance by verbosity by task interaction was obtained. Thus, the maternal interaction results indicate that the nurturance manipulation was implemented correctly because the level of interaction varied by nurturance as well as by level of verbosity and type of task.

In order to document that the nurturance manipulation was implemented correctly, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was conducted with the observed maternal behavior of praise as the dependent variable. A main effect of nurturance on percent praise was obtained ($F(1,32) = 209.97$, $p = .001$) with mothers in the high nurturance condition engaging in higher levels of praise than mothers in the low nurturance condition. A main effect of verbosity on percent praise was not obtained, but a main effect of task on percent praise was obtained ($F(1,32) = 22.217$, $p = .001$) with mothers in the free play task engaging in significantly higher amounts of praise compared to the toy clean-up task and the forbidden objects task. No nurturance by verbosity interaction was obtained. A nurturance by task interaction was obtained ($F(1,32) = 14.549$, $p = .001$). A verbosity by task interaction was not obtained, and no nurturance by verbosity by task interaction was obtained on percent praise. Thus, the maternal praise results indicate that the nurturance manipulation was implemented correctly because the level of praise varied by nurturance as well as by task.

Verbosity Factor

The verbosity manipulation was implemented only during the toy clean-up task and forbidden objects task and involved mothers giving their children either high levels of directives or low levels of directives not contingent on their behavior. Directives ranged in length from being very long in the high verbosity condition to very short in the low verbosity condition. Thus, higher rates of directives were expected for the high verbosity conditions with a ratio of 2 to 1. No main effect of nurturance was predicted on the mean rate of reprimands/directives, a main effect of verbosity was predicted on the mean rate of reprimands/directives, no main effect of task was predicted on the mean rate of reprimands/directives, no nurturance by verbosity interaction effect was expected on the mean rate of reprimands/directives, and no nurturance by task interaction effect was expected on the mean rate of reprimands/directives. No verbosity by task interaction effect was expected on the mean rate of reprimands/directives, and no nurturance by verbosity by task interaction effect was expected on the mean rate of reprimands/directives.

To verify that the verbosity manipulation was implemented correctly, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was conducted with the observed maternal behavior of directives as the dependent variable. There was no main effect of nurturance on the mean rate of directives. As expected, a main effect of verbosity on the mean rate of directives was obtained ($F(1,32) = 11.305$, $p = .002$) with mothers in the high verbosity conditions engaging in a higher percent of directives than mothers in the low verbosity conditions. A main effect of task was obtained on the mean

rate of directives ($F(1,32) = 85.960$, $p = .001$) with mothers in the toy clean-up task engaging in a higher percent of directives than in the forbidden objects task. As predicted, no nurturance by verbosity interaction was obtained. A nurturance by task interaction was obtained ($F(1,32) = 4.840$, $p = .035$). No verbosity by task interaction effect was obtained. However, a nurturance by verbosity by task interaction effect was obtained ($F(1,32) = 4.163$, $p = .049$). Results indicate that verbosity was implemented correctly.

Factors Held Constant

The maternal behaviors of physical prompt, prompts, and modeling were held constant across all conditions. The first factor which was held constant was physical prompt. Physical prompts occurred when a mother physically removed a child from a dangerous situation, such as climbing on the table, or physically brought the child back into the designated area. Since this factor was held constant, no differences in the mean rate of physical prompt were expected across the conditions. It was predicted that there would be no main effect of nurturance on the mean rate of physical prompt, no main effect of verbosity on the mean rate of physical prompt, and no main effect of task on the mean rate of physical prompt. No nurturance by verbosity interaction effect was expected, and no nurturance by task interaction effect was predicted. No verbosity by task interaction effect and no nurturance by verbosity by task interaction effect were predicted on the mean rate of physical prompt.

In order to ensure that physical prompts were held constant, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was utilized with the maternal behavior of

mean rate of physical prompt as the dependent variable. No main effect of nurturance on the mean rate of physical prompt was obtained. In addition, no main effect of verbosity on the mean rate of physical prompt was obtained. A main effect of task was obtained on the mean rate of physical prompt ($F(1,32) = 5.426$, $p = .026$) with mothers in the toy clean-up task issuing a higher level of physical prompts compared to the other tasks. No nurturance by verbosity interaction effect was obtained, and no nurturance by task interaction effect was obtained. No verbosity by task interaction effect was obtained, and no nurturance by verbosity by task interaction effect was obtained. The results indicate that the maternal behavior of physical prompt was held constant across the condition, but varied by task.

Prompts occurred when a mother demonstrated how to engage in a task or direct a child. Since this factor was held constant, no differences in the mean rate of prompts were expected across the conditions. It was predicted that there would be no main effect of nurturance on the mean rate of prompt, no main effect of verbosity on the mean rate of prompt, and no main effect of task on the mean rate of prompt. No nurturance by verbosity interaction effect was predicted, and no nurturance by task interaction effect was predicted. No verbosity by task interaction effect and no nurturance by verbosity by task interaction effect were predicted on the mean rate of prompt.

In order to ensure that prompts were held constant, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was utilized with the maternal behavior of mean rate of prompt as the dependent variable. A main effect of nurturance on the mean rate of prompt was obtained ($F(1,32) = 34.810$, $p = .001$) with mothers in the high nurturance condition engaging in higher levels of prompts than mothers in the low

nurturance condition. No main effect of verbosity on the mean rate of prompt was obtained. A main effect of task was obtained on the mean rate of prompt ($F(1,32) = 4.728$, $p = .037$) with mothers in the free play task engaging in a higher level of prompts compared to the other tasks. No nurturance by verbosity interaction effect was obtained, but a nurturance by task interaction was obtained ($F(1,32) = 28.393$, $p = .001$). No verbosity by task interaction effect was obtained, and no nurturance by verbosity by task interaction effect was obtained. The results indicate that the maternal behavior of prompt was held constant across verbosity, but varied by nurturance and by task.

The final maternal behavior held constant was modeling which was defined as any behavior in which the mother showed where or how to do something. Since modeling was held constant across all conditions, no differences were expected between the conditions. It was predicted that there would be no main effect of nurturance on percent of modeling, no main effect of verbosity on percent of modeling, and no main effect of task on percent of modeling. No nurturance by verbosity interaction effect, no nurturance by task interaction effect, no verbosity by task interaction effect, and no nurturance by verbosity by task interaction effect was predicted on percent of modeling.

In order to ensure that modeling was held constant across all conditions, a 2 (nurturance) by 2 (verbosity) by 3 (task) mixed-design ANOVA was utilized with the maternal behavior of percent modeling serving as the dependent variable. As expected, there was no main effect of nurturance on percent of modeling and no main effect of verbosity on percent of modeling. No main effect of task was obtained on the percent modeling . No nurturance by verbosity interaction effect was obtained, and no nurturance by task interaction effect was obtained. No verbosity by task interaction effect was

obtained, and no nurturance by verbosity by task interaction effect was obtained. Thus, modeling was held constant across all conditions.

Experimental Analyses

Main Analyses

As documented in the manipulation checks, the nurturance and verbosity manipulations were successful. Therefore, separate 2 (nurturance) by 2 (verbosity) by 2 (task) mixed-design ANOVAs were conducted to examine the effects of the independent variables on child behavior. First, child compliance, or picking up appropriately and appropriate play, was examined. A main effect of nurturance was predicted. More specifically, children who received high levels of nurturance were expected to be more compliant than children who received low levels of nurturance because nurturance facilitates compliance. A main effect of verbosity on percent compliance was predicted. It was expected that if high verbosity were viewed as being negative and controlling, children in the high verbosity condition would exhibit lower levels of compliance because high levels of reprimands and directives used with high power assertive techniques inhibit compliance. However, if verbosity were viewed as a form of engagement, it was expected that children in the high verbosity condition would be more compliant and less noncompliant than children in the low verbosity condition. It was also predicted that there would be a main effect of task on percent compliance with children in the proactive task being less compliant than children in the prohibitive task.

In addition to the main effects described above, numerous interaction effects were predicted to have a significant effect on child compliance. First, a nurturance by verbosity interaction effect was predicted. If verbosity were viewed as being threatening, it was expected that children in the low verbosity/ high nurturance condition would be more compliant and less noncompliant than children in the high verbosity/low nurturance condition. Children in the high verbosity/high nurturance condition would be less compliant and more noncompliant than children in the low verbosity/low nurturance condition. However, if verbosity is considered facilitative, it was expected that children in the high nurturance/high verbosity condition would be more compliance and less noncompliant than children in the high nurturance/low verbosity condition. Children in the low nurturance/low verbosity condition would be more noncompliant and less compliant than children in the low nurturance/high verbosity condition. A nurturance by task interaction effect was predicted. Because nurturance is facilitative, it was expected that nurturance would differentially enhance or facilitate the effects of the task on child compliance levels. A verbosity by task interaction effect was predicted. It was expected that children receiving high levels of verbosity would be less compliant and more noncompliant in the forbidden objects task than in the toy clean-up task. Children in the low verbosity condition would be more compliant and less noncompliant in the forbidden objects task than in the toy clean-up task. A nurturance by verbosity by task interaction effect was predicted, but no specific hypotheses were made. (Please see Table 10 through Table 14, Appendix A for mean child behaviors.)

To test these hypotheses, the following analyses were conducted. A 2 (nurturance) by 2 (verbosity) by 2 (task) mixed-design ANOVA with nurturance and

verbosity as the between-groups factors and task as the within-subjects factor was conducted with the observed child behavior of percent picking up appropriately and percent of playing appropriately as the dependent variable. A main effect of nurturance was not obtained on percent compliance, meaning that children who received high levels of nurturance did not differ in the amount of time they spent picking up the toys or playing appropriately as compared to children who received low levels of nurturance. A main effect of verbosity on percent compliance was also not obtained. Specifically, children who received low levels of verbosity were not more compliant than children who received high levels of verbosity. However, a main effect of task on percent compliance was also obtained ($\underline{F}(1,32) = 26.206$, $\underline{p} = .001$) with compliance rates varying significantly across tasks. No nurturance by verbosity interaction effect was obtained on percent compliance, and no nurturance by task interaction was obtained on percent compliance. No verbosity by task interaction effect was obtained on percent compliance. However, a nurturance by verbosity by task interaction effect was obtained on percent compliance ($F(1,32) = 5.605$, $p = .024$). Thus, there was a significant difference on percent compliance based on the type of task and on the combination of nurturance, verbosity and task, but not on the level of nurturance or level of verbosity individually. (Please see Table 15 through Table 19, Appendix A, for Analyses of Variance results.)

In order to determine if significant differences in compliance levels existed between the low nurturance condition and the high nurturance condition at low levels of verbosity during the toy clean-up task and between the low nurturance condition and high nurturance condition at high levels of verbosity during the forbidden objects task, two-tailed independent samples t-tests were utilized. Results revealed no significant

differences in compliance levels when comparing high nurturance condition to the low nurturance condition under low levels of verbosity in the toy clean-up task ($t[16] = 1.894$, $p = .076$). Results also revealed no significant differences in compliance levels when comparing the high nurturance condition to the low nurturance condition under high levels of verbosity during the forbidden objects task ($t(17) = 1.848$, $p = .082$). (Please see Appendix D for graph of interaction effect.)

Second, the effects of nurturance, verbosity, and type of task on noncompliance, specifically the percent of time children spent touching forbidden object and the percent of time they spent engaging in toy contact was examined. A main effect of nurturance on percent noncompliance was predicted. Specifically, children who received high levels of nurturance would be less noncompliant than children who received low levels of nurturance because nurturance facilitates compliance. A main effect of verbosity on percent noncompliance was predicted. If high verbosity is viewed as being negative and controlling, it was predicted that children in the high verbosity condition would be more noncompliant than children in the low verbosity condition. However, if high verbosity is viewed as a form of engagement, it was expected that children in the high verbosity condition would be more compliant and less noncompliant than children in the low verbosity condition. A main effect of task was also predicted. It was predicted that compliance rates would significantly differ in the proactive and prohibitive tasks with the proactive task resulting in more noncompliant behavior since maternal "dos" are more challenging than maternal "don'ts."

In addition to above main effects, numerous interaction effects were also predicted on percent noncompliance. First, a nurturance by verbosity interaction effect

was predicted. If verbosity were viewed as being threatening, it was expected that children in the low verbosity/ high nurturance condition would be less noncompliant and more compliant than children in the high verbosity/low nurturance condition. Children in the high verbosity/high nurturance condition would be less compliant and more noncompliant than children in the low verbosity/low nurturance condition. However, if verbosity is considered facilitative, it was expected that children in the high nurturance/high verbosity condition would be more compliant and less noncompliant than children in the high nurturance/low verbosity condition. Children in the low nurturance/low verbosity condition would be more noncompliant and less compliant than children in the low nurturance/high verbosity condition. A nurturance by task interaction effect was predicted. Because nurturance is facilitative, it was expected that nurturance would differentially enhance or facilitate the effects of the task on child compliance levels. A verbosity by task interaction effect was predicted. It was hypothesized that compliance rates would vary as a function of the level of verbosity and type of task. A nurturance by verbosity by task interaction effect was predicted, but no specific hypotheses were made.

In order to test these hypotheses, a 2 (nurturance) by 2 (verbosity) by 2 (type of task) mixed-design ANOVA with nurturance and verbosity as the between-groups factors and task as within-subjects factor was conducted with the observed child behaviors of toy contact and touching forbidden objects. Results indicate no main effect of nurturance and no main effect of verbosity on percent noncompliance. However, a main effect of task on percent noncompliance was obtained ($F(1,32) = 28.270$, $p = .001$) with children being more noncompliant in the toy clean-up task. In addition, no nurturance by task and no

verbosity by task interaction effects were obtained on percent noncompliance. No nurturance by verbosity by task interaction effect was obtained on percent noncompliance. Thus, percent of toy contact and percent touching forbidden objects significantly varied based on the type of task, but not on the level of nurturance or verbosity.

Third, the effects of verbosity and type of task on another form of noncompliance, specifically leaving the area was examined. A main effect of nurturance on percent leaving the area was predicted. It was predicted that children who received high levels of nurturance would be more compliant and less noncompliant than children who received low levels of nurturance. A main effect of verbosity on percent leaving the area was predicted. It was expected that children in the low verbosity condition would exhibit lower levels of leaving the area because high levels of reprimands and directives used with high power assertive techniques inhibit noncompliance. A main effect of task was predicted. More specifically, it was predicted that compliance rates would significantly differ in the proactive task and the prohibitive task with the proactive task being more difficult for children to comply.

In addition, numerous interaction effects were hypothesized regarding their effect on child noncompliance, specifically leaving the area. A nurturance by verbosity interaction effect was predicted. If verbosity were viewed as being threatening, it was expected that children in the low verbosity/ high nurturance condition would be less noncompliant and more compliant than children in the high verbosity/low nurturance condition. Children in the high verbosity/high nurturance condition would be less compliant and more noncompliant than children in the low verbosity/low nurturance

condition. However, if verbosity is considered facilitative, it was expected that children in the high nurturance/high verbosity condition would be more compliant and less noncompliant than children in the high nurturance/low verbosity condition. Children in the low nurturance/low verbosity condition would be more noncompliant and less compliant than children in the low nurturance/high verbosity condition. A nurturance by task interaction effect was predicted. Because nurturance is facilitative, it was expected that nurturance would differentially enhance or facilitate the effects of the task on child compliance levels. A verbosity by task interaction effect was also predicted. It was predicted that children receiving high levels of verbosity would be more noncompliant in the forbidden object task than in the toy clean-up task. Children in the low verbosity condition would be less noncompliant in the forbidden objects task than in the toy clean-up task. A nurturance by verbosity by task interaction effect was predicted; however, no specific hypotheses were made.

In order to test these hypotheses, a 2 (nurturance) by 2 (verbosity) by 2 (type of task) mixed-design ANOVA was utilized with nurturance and verbosity as the between-groups factors and task as the within-subjects factor. The child behavior of leaving the area served as the dependent variable. Analyses revealed no main effect of nurturance, no main effect of verbosity, and no main effect of task on percent leaving the area. In addition, no nurturance by verbosity interaction effect, and no nurturance by task interaction effect was obtained. However, a verbosity by task interaction effect was obtained ($\underline{F}(1,32) = 4.48$, $\underline{p} = .042$) with children who received high levels of verbosity in the proactive task being more noncompliant than children who received low levels of verbosity in the proactive task, who received high levels of verbosity in the prohibitive

task, and who received low levels of verbosity in the prohibitive task. No nurturance by verbosity by task interaction effect was obtained on percent leaving the area. Results indicate a significant difference emerges in percent leaving the area due to changes in the combination of the level of verbosity and type of task.

Exploratory analyses were conducted to determine whether nurturance, verbosity, and type of task affect rates of children's negative affect. A 2 (nurturance) by 2 (verbosity) by 2 (type of task) mixed-design ANOVA was utilized with nurturance and verbosity as the between-groups factors and task as the within-subjects factor. The child behavior of negative affect served as the dependent variable. Analyses revealed no main effect of nurturance on percent negative affect, no main effect of verbosity on percent negative affect, and no main effect of task on percent negative affect. In addition, no nurturance by verbosity interaction effect was obtained, and no nurturance by task interaction effect was obtained. No verbosity by task interaction was obtained on percent negative affect, and no nurturance by verbosity by task interaction effect was obtained. Results indicate no significant differences in percent negative affect due to differences in the level of nurturance, level of verbosity, or type of task.

Exploratory analyses were also conducted on the child behavior of solicitation for attention. Since these analyses were exploratory, no hypotheses were made. A 2 (nurturance) by 2 (verbosity) by 2 (type of task) mixed- design ANOVA was utilized with nurturance and verbosity as the between-groups factors and task as the within-subjects factor. The child behavior of solicitation for attention served as the dependent variable. Analyses revealed no main effect of nurturance on percent solicitation for attention, and no main effect of verbosity on percent solicitation for attention. No main effect of task on

percent solicitation for attention. No nurturance by verbosity interaction effect was obtained, and no nurturance by task interaction effect was obtained. No verbosity by task interaction effect was obtained on percent solicitation for attention, and no nurturance by verbosity by task interaction effect was obtained on percent solicitation for attention. Thus, the level of nurturance, level of verbosity, and the type of task did not significantly affect the percent of time children spent soliciting for attention.

Debriefing

Results of the debriefing questionnaire indicated that mothers identified little to no difference between their behavior and their child's behavior during the study. Specifically, when asked about how realistic the waiting room situation was, 2.7 % of mothers reported that the situation was almost realistic, 10.8% reported that it was somewhat realistic, 62.2% reported it was similar to a typical waiting room, and 24.3% reported it was very realistic.

When asked about how typical their child's behavior was, 2.7% endorsed that their child's behavior was almost typical. Sixteen percent of mothers reported that their child's behavior was somewhat typical, 35.1% reported their child's behavior was typical, and 45.9% reported their child's behavior was very typical. Mothers were also asked to report on how typical their behavior was in the study. Results indicate that 16.2% of mothers felt their behavior was almost typical, 29.7% reported their behavior was somewhat typical, 40.5% reported their behavior was typical, and 13.5% believed their behavior was very typical.

Questions were also asked about the amount of praise the mothers were required to give as well as the length of the reprimands. Results indicate that 18.9% mothers felt the amount of praise they were cued to give was almost the same as how much they praise at home. Results also indicated that 37.8% of mothers felt the amount of praise they were cued to give was about the same as the amount they typically employ, and 18.9% of mothers felt as if the amount of praise they were cued to give was the same as the amount they give at home. Twenty-four percent of mothers felt that they typically issue more praise to their children at home.

In regard to the length of the reprimands mothers were cued to give, 2.7% of mothers felt that the reprimands they were cued to give were longer than the reprimands they give at home. Ten percent of mothers reported that the length of reprimands were almost the same length, 43.2% reported the reprimands were about the same length, and 29.7% reported that length of the reprimands were the same. Thirteen percent of mothers, however, reported that they give longer reprimands than the ones they were cued to give. Overall, results suggest that mothers saw little to no difference in their behavior and their child's behavior in the laboratory as compared to their behaviors in the home.

Discussion

The present study was designed to examine the effects of nurturance and verbosity on child behavior during two task phases, a toy clean-up task and a forbidden object task. Nurturance was manipulated across the initial free play task as well as in the toy clean-up task and the forbidden objects task. However, verbosity was manipulated across only the toy clean-up task and the forbidden objects task. Results of the manipulation checks

indicate that nurturance and verbosity were manipulated successfully. Therefore, the results of the study can be examined in relation to the specific hypotheses proposed regarding levels of nurturance and verbosity as well as the type of task.

First, results of this study indicate that compliance rates were not significantly affected by the level of nurturance. Specifically, children who received high levels of nurturance did not significantly differ from children who received low levels of nurturance in their compliance level. This is inconsistent with previous research which found that nurturance facilitates compliance (Parpal & Maccoby, 1985; Pfiffner & O'Leary, 1989). However, it is consistent with previous research which found that the amount of nurturance does not significantly affect the compliance levels of children (Clark, 1996; Perry, 1997; Blundell, 2000). Results of the study did not confirm the proposed hypothesis that children in the high nurturance condition would be more compliant and less noncompliant than children in the low nurturance condition.

There are many explanations for these results. First, nurturance does not appear to significantly affect child compliance levels when it is used alone. This may have been due to the way nurturance was manipulated in the present study. In the present study, mothers were assigned to either a high nurturance group or a low nurturance group. Even though the ratio was at 2 to 1, the level of nurturance may have been too similar between the two groups to detect a difference, meaning that children in either condition were receiving a moderate amount of nurturance. Secondly, given the sample in the present study, it is unknown what the level of nurturance used by each mother was prior to the study. It may be that mothers who participated in the study gave moderate amounts of nurturance outside of the laboratory. When the children participated in the study, the

amount of controlled nurturance they were given was not significantly different than the amount of nurturance they typically receive at home, which would not allow for a strong examination of the effects of nurturance. Overall, results of this study suggest that nurturance does not affect compliance levels when used alone, but it may significantly affect compliance levels if used with certain parenting strategies.

Results of the present study also found that compliance rates were not significantly affected by the level of verbosity when used alone. Specifically, children who received low levels of verbosity did not significantly differ from children who received high levels of verbosity in their compliance levels. This is inconsistent with previous research which suggested that shorter reprimands were more effective at gaining compliance in young children, with longer reprimands being associated with child misbehaviors (Achenbach, 1992; Arnold, O'Leary, Wolff, & Acker, 1993; Pfiffner & O'Leary, 1989). However, these results are consistent with other research which found that verbosity did not significantly affect compliance rates in either a prohibitive task or a proactive task (Blundell, 2000; Sullivan, et al., 1997).

There are several explanations for these results. First, the level of verbosity does not significantly affect children's compliance levels in a proactive task or a prohibitive task. This does not support the proposed hypothesis as well as a select few studies which suggested that longer reprimands, or higher levels of verbosity, facilitate child noncompliance. Studies which endorse this finding believe that longer reprimands or higher levels of verbosity lend themselves to focusing too much attention on misbehavior, meaning that it allows children to learn that they get more attention, albeit negative attention, when being noncompliant.

It also appears that the role of verbosity does not differ when it is used in a prohibitive situation or in a proactive situation like proposed. The present study found that compliance rates did not differ based on the amount of verbosity provided in the proactive task and the prohibitive task. Even though two types of tasks were utilized, the behaviors requested of the children in each task were familiar to them such as playing with the toys and picking up the toys. A previous study completed by Munn (1999) found that compliance levels differ based on the familiarly of the task. It is unknown if verbosity plays a different role in a familiar task compared to a novel task. For example, in familiar task, verbosity may play a negative role, meaning that it reinforces children's negative behaviors. However, in a novel task, verbosity may play a facilitative role because the child needs more assistance to learn the task compared to already knowing how to complete a familiar task. Even though verbosity does not appear to play a different role in a proactive task compared to a prohibitive task, it is unknown what role verbosity plays in interactions where parents are trying to teach a new task compared to children already having the knowledge to complete a familiar task.

Next, child compliance was found to be significantly affected by the type of task when examined alone. It was found that children were more compliant in the prohibitive task as compared to the proactive task. This finding is consistent with results of a previous study which directly compared proactive vs. prohibitive statements which found that maternal "dos" were more challenging for children than maternal "don'ts" (Kochanska & Aksan, 1995). Not only did the results of the present study confirm previous research findings, but it also supported the proposed hypothesis that children would be more noncompliant in the proactive situation as compared to the prohibitive

situation. However, even though a significant nurturance by task interaction effect and a verbosity by task interaction effect was not obtained on compliance, a nurturance by verbosity by task interaction effect was obtained on compliance.

There are several reasons for the present findings. First, when examined alone, the type of task does play a role in compliance. This supports the hypothesis that children would be more compliant and less noncompliant in the prohibitive task than they would be in the proactive task. This also supports previous research which found that maternal "dos" which are used in proactive situations are more difficult for children to comply with than maternal "don'ts" which are used in prohibitive situations. This may be due to the fact that in a proactive situation, children can either comply or not comply by picking up the toys. However, in a prohibitive situation, children may engage in other alternative behaviors which technically are "not compliant." For example, in the prohibitive task, children were told to not touch the no nos, but instead play with the toys. In this situation, as long as the children were not touching the no-nos, they were being compliant. Children in a prohibitive situations may engage in other behaviors such as walking around the room, soliciting mother's attention, or playing with the toys and still be compliant because they are not touching the no-nos.

Secondly, the present results may have been obtained due to the type of toys used in each task. When children began the forbidden objects task, they were given a new bucket of toys, being specifically instructed as they entered the room not to touch the forbidden objects. Because the children were given new toys, this may have been stimulating enough to enhance their ability to refrain from touching the forbidden objects or "no-nos."

As stated above, compliance levels were not significantly affected by the level of nurturance and verbosity when examined independently, but were affected by the type of task when examined alone. However, when these factors were combined in certain combinations, results of the present study found that the specific combinations of these three factors had a significant effect on child compliance levels. Specifically, when verbosity and the type of task were combined, it was found that it significantly affected the amount of time children spent leaving the designated area. More specifically, it was found that children who received high levels of verbosity spent a greater percent of time leaving the designated area during the proactive task as compared to children who received low levels of verbosity in the proactive task as well as children who received high levels of verbosity and low levels of verbosity in the prohibitive task. Also, when nurturance, verbosity, and type of task were combined, they significantly affected the amount of time children spent picking up the toys and playing with the toys appropriately. More specifically, it was found that children who received high levels of verbosity/low levels of nurturance in the forbidden object phase were more compliant than children who received differing levels of nurturance and verbosity in the toy clean-up task. Therefore, the present results support the idea that when combined in specific combinations, these three factors will significantly affect compliance levels.

There are numerous explanations for these results. First, these results suggest that when trying to determine whether a parenting technique is effective, one must take into consideration the effects of numerous parenting strategies in combination of one another. One parenting technique may not be effective when utilized alone, but when utilized in combination, efficacy may be achieved, especially when considering whether the

parenting strategy is implemented in a proactive vs. a prohibitive task. Secondly, these results suggest that one must consider the issue of preexisting levels of maternal child interactions and nurturance. Pre-existing levels of maternal child interactions and nurturance may have overridden or influenced the effects of the present study despite random assignment to groups. Thirdly, this finding suggests that the role of context is important when examining not only child behaviors, but also parent behaviors. In one situation, parents may employ certain parenting strategies based on their child's behavior, whereas in another situation, parents may employ a different parenting strategy that corresponds with their child's behavior. One parenting strategy may be effective in one situation on certain child behaviors but not in another situation on different child behaviors.

The present study also examined two exploratory child behaviors where no specific hypotheses were made. Results of the study found that the child behavior of solicitation for attention was not significantly affected by the level of nurturance, level of verbosity, and the type of task. This is inconsistent with previous research which found that children solicited for their mother's attention when mothers were busy (Clark, 1996; Munn, 1999). In addition, results of study also found that the amount of negative affect was not significantly affected by the level of nurturance, the level of verbosity, or by the type of task. Children who received high levels of verbosity did not display greater amounts of negative affect as compared to children who received low levels of verbosity. It was also found that children did not display higher amounts of negative affect in the prohibitive task as compared to the proactive task. However, it is possible that no significant differences were found in the amount of negative affect displayed because this

was a low occurring behavior in this study. Thus, there was no significant difference in the amount of time children spent soliciting for attention or engaging negative affect based on the level of nurturance, level of verbosity, and type of task.

CHAPTER V

SUMMARY AND CONCLUSIONS

Several conclusions regarding the effects of nurturance and verbosity on child compliance in a prohibitive and proactive task can be drawn from the findings of the present study. First, nurturance did not facilitate compliance levels of children in the present study. Children who received high levels of nurturance were not more compliant than children who received low levels of nurturance. Secondly, verbosity, or the length of reprimands and level of engagement, did not significantly affect children's compliance levels. Children who received high levels of verbosity were not more noncompliant than children who received low amounts of verbosity. Thirdly, compliance levels varied significantly based on the type of task. More specifically, children were more compliant and less noncompliant in the prohibitive forbidden object task as compared to the proactive toy clean-up phase. This study demonstrated that specific parenting techniques may not be effective in gaining child compliance when used alone. However, when utilized in combination with other parenting techniques, efficacy may be achieved, especially if one considers the type of task. Most importantly, this study documents the importance of context when examining child and parental behaviors. Parents may employ different strategies based on their child's behavior and the situation. One strategy

may work on a specific child behavior in a specific context, whereas another strategy may work on a different child behavior in another specific situation.

The limitations of the present study suggest several directions for future research. This study was conducted with predominantly upper middle class, Caucasian families whose toddlers were between 32 and 42 months of age. Because it is unknown if these same results would have been obtained with children of various ethnicities, various socio-economic classes, or various ages, it is recommended that future studies incorporate a wider sample to see if the results are generalizable across different samples. Secondly, the present study employed high levels of experimental control. Given this, the results of the present study may not reflect those results which may be obtained in a naturalistic setting. It is recommended that future studies attempt to examine these two factors in both a controlled laboratory setting as well as in the naturalistic setting of the home to see if results differ based on the amount of experimental control and the setting. Thirdly, the present study utilized two types of tasks, a prohibitive and a proactive task. As stated above, both of the tasks, playing with toys and picking up the toys, were familiar to the children. Because Munn (1999) documented that the familiarity of the task affects compliance rates, it is recommended that future research examine the effects of nurturance and verbosity using familiar and novel tasks.

Next, the present study controlled the length of the reprimands when examining verbosity. Because length does not appear to play a significant role in compliance, it may be beneficial for future studies to examine other aspects of reprimands such as the content to see if this affects child compliance levels. Finally, preexisting differences, despite random assignment, may have affected the present results. Individual child variable such

as temperament, cognitive abilities, or language development and parent variables such as the level of nurturance were not examined in this study. Because these variables may have a significant impact on children's compliance levels, it would be beneficial for future studies to evaluate the effects of independent child variables and parent variables on child compliance.

Conclusions

The conclusions from the present study were strengthened due to several factors. First, the present study was a highly controlled study, unlike previous studies which were primarily naturalistic observations or lab tasks, where length and level of nurturance was not controlled. Because this study was controlled, other factors which may influence the dependent variable in uncontrolled studies were eliminated. Secondly, the present study successfully manipulated both nurturance and verbosity, and examined their effects on numerous child behaviors. Thirdly, the present study attempted to obtain ecological validity. In the present study, a debriefing questionnaire was used in order to obtain information per mother's report regarding the similarity of maternal and child behaviors in the study compared to outside the laboratory. Mothers endorsed that their behaviors as well as their children's behaviors were similar to their behaviors outside of the laboratory. Finally, the present study was one of the first to directly manipulate and compare the effects of nurturance and verbosity on both a prohibitive and a proactive task in a controlled laboratory setting.

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APPENDIXES

APPENDIX A

TABLES

Table 1

Compliance and Noncompliance by Task

Type of Task	Toy Clean-Up	Forbidden Object
Compliance	% Pa	% Ap
Noncompliance	%Tc % La	% Fo % La
Other	% Sa % Na	% Sa % Na

Note: % Pa = percent picking up appropriately, %Ap = percent appropriate play, %Tc = percent toy contact, %Fo = percent touching forbidden objects, %La = percent leaving the area, % Sa = percent solicitation for attention, and % Na = percent negative affect.

Table 2

Mean Rates and (Standard Deviations) of the Maternal Behavior Dt

	Nurturance					
	Low			High		
	Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity						
Low	.93 (1.21)	15.39 (3.46)	10.54 (1.44)	.00 (.00)	17.22 (7.43)	11.67 (1.57)
High	.36 (.72)	21.66 (4.64)	19.62 (1.62)	.00 (.00)	23.62 (2.90)	19.81 (2.94)

Note: Dt = Directive toy, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task.

Table 3

Mean Rates and (Standard Deviations) of the Maternal Behavior Dl

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	.00 (.00)	.37 (.74)	9.07 (7.64)	.00 (.00)	.50 (.81)	8.49 (3.27)
	High	.19 (.56)	.56 (.84)	7.96 (6.33)	.00 (.00)	.93 (1.21)	17.04 (9.27)

Note: Dl = Directive leaving the area and touching forbidden objects, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task.

Table 4

Mean Rates and (Standard Deviations) of the Maternal Behavior Do

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	.00 (.00)	1.57 (2.93)	.19 (.56)	.00 (.00)	.00 (.00)	.16 (.51)
	High	.19 ((.56)	.00 (.00)	.36 (.72)	.19 (.56)	.74 (1.21)	.19 (.56)

Note: Do = Directive other, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task.

Table 5

Percent of Intervals and (Standard Deviations) of the Maternal Behavior I

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	21.10 (2.04)	15.78 (4.32)	21.50 (5.73)	96.17 (4.65)	25.73 (4.18)	26.83 (2.78)
	High	21.66 (2,04)	15.85 (2.25)	17.59 (2.06)	92.59 (9.09)	22.78 (4.56)	26.11 (4.25)

Note: I = Interaction, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task

Table 6

Percent of Intervals and (Standard Deviations) of the Maternal Behavior P

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	10.36 ((1.61)	12.50 (3.47)	9.44 (1.18)	28.24 (7.98)	18.05 (2.72)	17.00 (2.05)
	High	10.18 (2.43)	12.15 (.90)	9.25 (1.20)	23.33 (7.45)	19.32 (2.59)	17.04 (2.17)

Note: P = Praise, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task

Table 7

Mean Rates and (Standard Deviations) of the Maternal Behavior Pt

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	4.44 (3.13)	4.90 (2.14)	7.96 (2.17)	21.00 (14.06)	8.04 (4.66)	8.50 (2.54)
	High	2.59 (3.13)	6.42 (2.11)	7.59 (2.23)	17.96 (6.91)	7.68 (2.20)	10.19 2.56)

Note: Pt = Prompt, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task

Table 8

Mean Rates and (Standard Deviations) of Maternal Behavior PP

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	.19 (.56)	.00 (.00)	2.04 (6.11)	.12 (.37)	2.67 (5.22)	.33 (1.05)
	High	.93 (2.22)	.74 (1.21)	1.48 (2.42)	.00 (.01)	2.22 (2.76)	4.26 (6.51)

Note: PP = Physical prompt, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task

Table 9

Percent of Intervals and (Standard Deviations) of the Maternal Behavior M

		Nurturance					
		Low			High		
		Free Play	Proact/Tcu	Prohib/Fo	Free Play	Proact/Tcu	Prohib/Fo
Verbosity	Low	.00 (.00)	6.84 (4.55)	.36 (.72)	.67 (2.11)	6.73 (4.54)	.17 (.53)
	High	.19 (.56)	4.57 (2.69)	.37 (1.10)	.93 (1.88)	5.78 (1.83)	.56 (.84)

Note: M = Modeling, Proact/Tcu = Proactive toy clean-up task, Prohib/Fo = Prohibitive forbidden objects task

Table 10

Percent of Intervals and (Standard Deviations) of Child Compliance (Ap/Pa)

		Task			
		Proactive Toy Clean-Up		Prohibitive Forbidden Objects	
		Low Nurturance	High Nurturance	Low Nurturance	High Nurturance
Verbosity	Low	51.53 (36.90)	20.54 (31.11)	63.33 (25.84)	63.33 (15.14)
	High	30.12 (22.97)	32.21 (31.82)	70.55 (15.64)	51.00 (27.99)

Note: Ap = Appropriate play, Pa = Playing appropriately.

Table 11

Percent of Intervals and (Standard Deviations) of Child Noncompliance (Tc/Fo)

		Task			
		Proactive Toy Clean-Up		Prohibitive Forbidden Objects	
		Low Nurturance	High Nurturance	Low Nurturance	High Nurturance
Verbosity	Low	44.12 (30.31)	53.60 (35.71)	11.33 (12.24)	15.62 (10.99)
	High	38.63 (27.89)	47.26 (28.88)	13.14 (14.82)	32.33 (22.01)

Note: Tc = Toy contact, Fo = Touching forbidden objects.

Table 12

Mean Rates and (Standard Deviations) of Child Noncompliance (La)

		Task			
		Proactive Toy Clean-Up		Prohibitive Forbidden Object	
		Low Nurturance	High Nurturance	Low Nurturance	High Nurturance
Verbosity	Low	4.33 (7.98)	5.42 (12.17)	8.50 (12.90)	2.92 (7.60)
	High	11.11 (17.80)	11.41 (14.13)	1.29 (3.87)	1.83 (2.99)

Note: La = Leaving the area.

Table 13

Percent of Intervals and (Standard Deviations) of the Child Behavior Na

	Task			
	Proactive Toy Clean-Up		Prohibitive Forbidden Object	
	Low Nurturance	High Nurturance	Low Nurturance	High Nurturance
Verbosity				
Low	10.17 (28.14)	9.37 (14.64)	1.33 (3.12)	6.04 (10.23)
High	7.22 (9.95)	5.83 (6.77)	7.03 (8.85)	18.00 (19.45)

Note: Na = Negative affect

Table 14

Percent of Intervals and (Standard Deviations) of the Child Behavior Sa

		Task			
		Proactive Toy Clean-Up		Prohibitive Forbidden Object	
		Low Nurturance	High Nurturance	Low Nurturance	High Nurturance
Verbosity	Low	20.65 (10.19)	28.40 (21.19)	22.16 (11.86)	29.16 (21.69)
	High	30.43 (20.57)	23.20 (11.49)	31.66 (17.78)	41.33 (21.50)

Note: Sa = Solicitation for attention

Table 15

Results of Analyses of Variance on Compliance (Ap/Pa)

Percent Compliance (Ap/Pa)	F-Value	Significance
Nurturance	2.930	.096
Verbosity	.275	.603
Task	26.206	.000 *
Nurturance by Verbosity	.229	.636
Nurturance by Task	.177	.677
Verbosity by Task	.043	.836
Nurturance by Verbosity by Task	5.605	.024 *

Note: Ap = Appropriate play, Pa = Playing appropriately, * = significant at .05.

Table 16

Results of Analyses of Variance on Noncompliance (Tc/Fo)

	F-Value	Significance
Percent Noncompliance (Tc/Fo)		
Nurturance	2.884	.099
Verbosity	.075	.786
Task	28.270	.000 *
Nurturance by Verbosity	.329	.520
Nurturance by Task	.066	.799
Verbosity by Task	2.105	.156
Nurturance by Verbosity by Task	.567	.457

Note: Tc = Toy contact, Fo = Touching forbidden objects, * = significant at .05.

Table 17

Results of Analyses of Variance on Noncompliance (La)

	F-Value	Significance
Percent Noncompliance (La)		
Nurturance	.117	.734
Verbosity	.176	.667
Task	3.177	.084
Nurturance by Verbosity	.251	.619
Nurturance by Task	.417	.523
Verbosity by Task	4.48	.042 *
Nurturance by Verbosity by Task	.483	.492

Note: La = Leaving the area, * = significant at .05.

Table 18

Results of Analyses of Variance on Solicitation for Attention (Sa)

	F-Value	Significance
Percent Solicitation for Attention (Sa)		
Nurturance	.883	.354
Verbosity	2.060	.161
Task	2.447	.127
Nurturance by Verbosity	.453	.506
Nurturance by Task	1.360	.252
Verbosity by Task	1.526	.225
Nurturance by Verbosity by Task	1.628	.211

Note: Sa = solicitation for attention.

Table 19

Results of Analyses of Variance on Negative Affect (Na)

	F-Value	Significance
Percent Negative Affect (Na)		
Nurturance	.786	.382
Verbosity	.540	.468
Task	.000	.988
Nurturance by Verbosity	.139	.711
Nurturance by Task	2.031	.164
Verbosity by Task	3.715	.063
Nurturance by Verbosity by Task	.298	.589

Note: Na = negative affect.

APPENDIX B

DEMOGRAPHICS QUESTIONNAIRE

Subj # _____

Demographic Questionnaire

Please complete this confidential questionnaire. An answer to every question is requested.

1. Your relationship to the child: Mother_____

   Father _____

   Other _____

2. Your sex: Female _____ Male _____

3. Your age: _____

4. Your race: _____

5. Highest level of education completed (circle year):

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

6. Your occupation: _____

7. Marital status: Single _____ Married _____ Divorced _____

   Separated _____ Other _____

8. Total family income per month:

   Less than $800 _____ $800-$1000 _____ $1001-$1500 _____

   $1501-$2000 _____ $2001-$2500 _____ over $2500 _____

9. If married, please provide the following information about your spouse:

   a. his/her relationship to the child: _____

   b. his/her age: _____

   c. his/her race: _____

   d. his/her highest level of education completed (circle year)

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

10. Does the child have siblings? Sex _____ Age _____

    Sex _____ Age _____

    Sex _____ Age _____

11. Please provide the following information about your child:

    a. sex: female _____ male _____

    b. race: _____

12. Developmental milestones:

    At what age did your child:

    a. sit independently _____

    b. crawl _____

    c. walk independently _____

APPENDIX C

FORMS

INFORMED CONSENT STATEMENT

Project Title: The Effect of Nurturance and Verbosity on Child Compliance in Both a Proactive and Prohibitive Situation

Investigators: Maureen Sullivan, Ph.D., Melissa Blundell, M.S.

A. Purpose: This study will examine the effects of different parenting strategies on children's behavior. This study will also gather information on the frequency and severity of behavior problems in young children.

B. Procedures: I, (print name) _____ hereby authorize the above named researchers or assistants of their choosing to direct my participation in the following procedures:

1. Completion of four questionnaires. One questionnaire will ask for demographic information such as number and age of household family members, income, occupation, etc. One questionnaire will ask about typical parenting strategies you use with your child. Two questionnaires will assess your child's typical behaviors and behavior problems.

2. You will participate in a videotaped procedure in which you and your child will engage in activities such as playing with toys, cleaning up toys, and placing toys in a plastic bin. You will be asked to give your child directions regarding cleaning up toys, praise for appropriate behaviors, and reprimands, such as "no-no don't touch."

C. Duration of participation: Your participation is completely voluntary and may be ended at any point. This study is designed to last approximately 1 hour.

D. Confidentiality: All information about you and your child will be kept confidential and will not be released. Questionnaires and videotapes will have subject numbers, rather than names on them. All information will be kept in a secure place that is open only to the researchers and their assistants. This information will be saved as long as it is scientifically useful; typically, such information is kept for five years after publication of the results. Results from this study may be presented at professional meetings or in publications. You and your child will not be identified individually; we will be looking at the group as a whole.

E. Benefits of participation: If you are interested, we will send you a copy of the results of the study when it is finished.

F. Risks of participation: The risks to you and your child are minimal. It is possible that some children may become upset during the procedure. If this happens, we will try to make your child more comfortable with the situation. Similarly, some mothers may

become uncomfortable with the situation. If either you or your child become uncomfortable or too upset, you will be given the opportunity to stop the procedure at that point with absolutely no penalty. You may also choose to stop at any time, even without our asking you. In completing the questionnaires, some mothers may become aware that their child's behavior is not typical for his or her age. You will be offered several names and phone numbers of agencies that work with parents and children should you desire psychological services to assess or treat developmental or behavioral problems.

I have been fully informed about the procedures listed here. I am aware of what my child and I will be asked to do and of the benefits of my participation. I also understand the following statement:

I affirm that I am 18 years of age or older.

I understand that I may contact any of the researchers at the following addresses and phone numbers, should I desire to discuss my participation in the study and/or request information about the results of the study: Maureen Sullivan, Ph.D., 215 North Murray Hall, Dept. of Psychology, Oklahoma State University, Stillwater, OK 74078-0250, (405) 744-6027. I may also contact Sharon Bacher, Institutional Review Board, 203 Whitehurst, OSU, (405) 744-5700. I have read and fully understand this consent form. I sign it freely and voluntarily. A copy of this form will be given to me. I hereby give permission for my child's and my participation in this study.

_____ _____

Signature of Parent/Legal Guardian Date

_____ _____

Signature of Witness Date

I certify that I have personally explained this document before requesting that the participant sign it.

_____ _____

Signature of Researcher Date

DEBRIEFING

At the end of the study, we like to get feedback from the mothers about the study. What was it like being in the study? What did you think about it?

How realistic did the waiting room situation seem?

1	2	3	4	5
not at all		somewhat		very

How typical was your child's behavior?

1	2	3	4	5
not at all		somewhat		very

Overall, how typical was your behavior?

1	2	3	4	5
not at all		somewhat		very

Compared to the amount of praise you were cued to give, how often do you typically praise your child?

1	2	3	4	5
not as much		about the same		more

Compared to the length of reprimands you were cued to give, how long are your reprimands/directives that you give to your child?

1	2	3	4	5
not as long		about the same		longer

Was there any part of the study that was especially difficult?

Having experienced the study, would you be willing to participate again?

Any other comments?

APPENDIX D

FIGURE

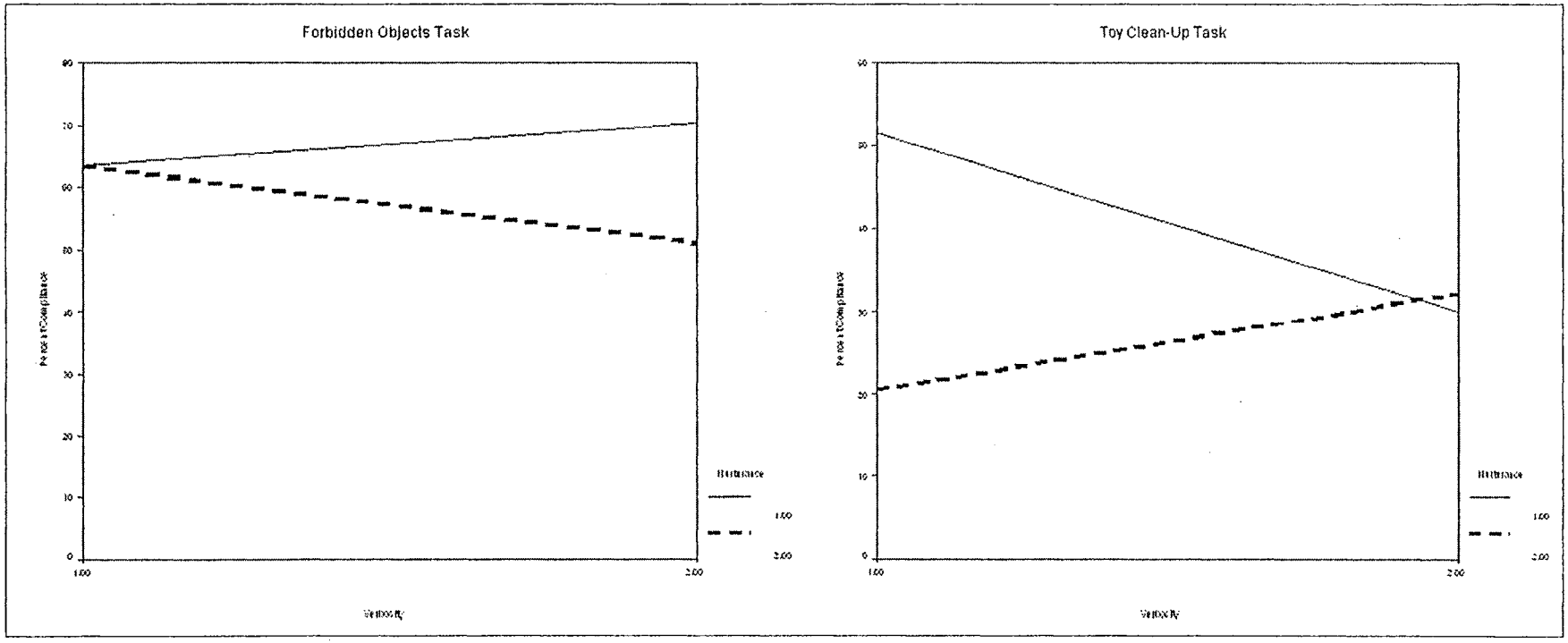

Figure 1: Nurturance by Verbosity by Task Interaction Effect

APPENDIX E

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 09-17-98 **IRB #: AS-99-004**

Proposal Title: THE EFFECTS OF NURTURANCE AND VERBOSITY ON YOUNG CHILD COMPLIANCE

Principal Investigator(s): Maureen A. Sullivan, Melissa Blundell

Reviewed and Processed as: Expedited with Special Population

Approval Status Recommended by Reviewer(s): Approved

Signature: Carol Olson Date: September 17, 1998

Director of University Research Compliance
cc: Melissa Blundell

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA 2

Melissa A. Blundell

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE EFFECT OF NURTURANCE AND VERBOSITY ON CHILD COMPLIANCE IN BOTH A PROACTIVE AND PROHIBITIVE SITUATION.

Major Field: Psychology

Biographical:

Personal Data: Born in Fairview, Oklahoma, on May 22, 1975, the daughter of David L. and Connie J. Blundell.

Education: Graduated from Fairview High School, Fairview, Oklahoma in May 1993; received Bachelor of Arts degree in Psychology from Oklahoma State University, Stillwater, Oklahoma in May 1997; received a Master of Science degree in Psychology from Oklahoma State University, Stillwater, Oklahoma in May 2000. Completed the requirements for the Doctor of Philosophy degree with a major in Psychology at Oklahoma State University in August 2002.

Professional Memberships: American Psychological Association, Association for the Advancement of Behavior Therapy.