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Mother responsiveness and instruction strategy : joined or separate pathways to child cooperation?

Vanessa Ann Vigilante

To the Graduate Council:

I am submitting herewith a thesis written by Vanessa Ann Vigilante entitled "Mother responsiveness and instruction strategy : joined or separate pathways to child cooperation?." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Robert G. Wahler, Major Professor

We have read this thesis and recommend its acceptance:

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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Graduate Studies

MOTHER RESPONSIVENESS AND INSTRUCTION STRATEGY: JOINED OR SEPARATE PATHWAYS TO CHILD COOPERATION?

A Thesis

Presented for the

Master of Arts

Degree

The University of Tennessee, Knoxville

Vanessa Ann Vigilante

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Thanks always to my family, my parents Anthony and Olga, my aunt and uncle Diane and Frank, and my very good friend Imelda Sukartoyo, whose support, encouragement, and friendship have helped make this academic milestone a realization.

ABSTRACT

Investigated the natural home interactions of 24 volunteer and 20 clinic-referred mother-child dyads during a one-hour observation. Observers coded mother instructions strategy ("Do" or "Don't"), child compliance, child negativity, and mother responsiveness. These categories were compared through descriptive, correlational, and regression mediation analyses to assess the association between mother instruction strategy, mother responsiveness, and child compliance. As hypothesized, mother responsiveness accounted for most of the variance in child compliance and was mediated by mother's use of "Do" instructions. Results were discussed within a theoretical framework in which the mother responsiveness construct was expanded to include her instructional strategy.

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION

Review of the Literature

Socializing children to comply with instructions and to follow directives is considered crucial to the parenting enterprise. While some parents are adept at gaining their children's compliance, others are chronically ineffective. Research in the field of child psychology (Roberts, McMahon, Forehand, & Humphreys, 1978) indicates that non-clinic referred children comply with maternal instructions only half of the time. Because child compliance is vital to the health of the mother and child relationship, discoveries concerning the factors that appear to lead to child compliance are to mothers what finding a diamond is to a diamond miner.

Child developmental research is rife with scientific efforts to understand the factors that lead a child, when faced with parent expectations, to choose the more effortful option involving child cooperation. Some useful discoveries have been made that serve to increase our understanding this "road" to child compliance. One of these, namely parenting skills, has been shown to be a major contributing factor to the acquisition as well as the loss of a child's willingness to be cooperative. Parents who are inept in parenting skills unwittingly contribute to child non-compliance because the social contingencies they provide for their children encourage child opposition instead of compliance (Vuchinech, Bank, & Patterson, 1989). In addition, these unskilled parents seem to set the occasion for child opposition through the use of instructions that are

either excessive in number, unclear, or tend to specify capabilities well beyond the child's usual performance (Roberts, McMahon, Forehand, & Humphreys, 1978). These data suggest that unskilled parents have trouble in deciding how to direct their children and they also have trouble in providing consistent and appropriate support when the children actually comply with these directives.

The current research literature describes parenting support through the construct called responsiveness (Strand, 2000). Responsive parents not only provide appropriate and consistent reactions to their children's cooperative and uncooperative behavior, they are also on target in reacting to other responses in the children's repertoire, such as social approaches, solitary play, and independent work. In contrast, unresponsive parents confuse and frustrate their children through the misuse of acknowledgments, praise, and discipline. As a result, these children are apt to be uncooperative in the pursuit of parental socialization goals (Maccoby, 1992).

The conceptualization of maternal responsiveness originated with the work of Bowlby (1970) who described it as a hypothetical inner working model representing a mother's expectations of her child-care experiences-expectations that are based on her past relationships. If these relationships were satisfying then the mother's expectations of her child will be objective with respect to that child's temperament and capabilities. Conversely, if her past relationships were lacking, then her expectations of her infant will be biased, causing her to chronically misread the infant's physical and social cues. In the latter case, the mother cannot distinguish her needs from that of her infant, resulting in a pattern of inappropriate and untimely approaches to her child. Bowlby goes on to describes how gradually the child will form an internal working model of his relationship

with his mother consisting of expectations about her behaviors that are based on his past experience. These expectations, then, will form the context within which the child will approach and experience others in his environment. Bowlby's inner working model framework, then, becomes the child's property, developed through maternal influences on the child's expectations of security or insecurity.

Kochanska (2002) clarified the social transactions leading to a child's inner working model through her concept of mutually responsive orientation (MRO) and in doing so replaced the unidirectional understanding of responsiveness with a bi-directional one characterized by "a relationship that is close, mutually binding, cooperative, and affectively positive." According to Kochanska (2002), MRO means that "the parent's and child's internal models entail mutual cooperation and implicit reciprocity, and the child's internal model is thought to underlie his or her willingness to embrace parental rules." In this model, the mother and child are acting on each other to generate reciprocity or lack thereof. Like Bowlby's, this model uses internal factors to explain behavior.

The theoretical framework used to describe the "working model" of relationships in this study follows Kochanska's (2002) transactional model of mother-child relationships but views its working model as "outer" instead of "inner." Outer implies the continual presence of historical information interacting with the here and now transactions of children and their mothers. In this way the parent and child's working models are continuously influenced by their present day interactions.

Based on evidence from longitudinal studies of parent-child relationships, there is reason to argue the credibility of such a model. Thus, in Vuchinech, Bank, & Patterson

(1989), the time 1 measures of parenting and child reciprocity, while correlated with these measures at time 2, no longer accounted for variance in the current child behavior when time 2 parenting measures entered the regression analysis. Since these concurrent measures eliminated the predictive value of the historical measures, this finding suggests that mother-child transactions are a product of both history and the here and now. This makes it reasonable to assume that a mother's responsiveness and her child's emerging responsiveness continue developing and are maintained by the dyad's here and now transactions.

Expanding the Responsiveness Construct

Because giving instructions to a child is observable and bi-directional, as the child can comply or oppose, it could also be part of a mother's responsiveness within the transactional model described above. Accordingly, parental guidance is made clear to the child through commands, suggestions, and other forms of instruction designed to tell the youngster what to do or to not do. However, in order for an instruction to serve its' purpose, it must clearly specify a requested child response (Green, Forehand, & McMahon, 1978), the response must be within the child's capability (Redd, Amen, Meddock, & Winston, 1974), and the parent must limit its' use (Wahler, Herring, & Edwards, 2001). Parents who misuse instructions are apt to issue vague instructions, apt to tell their children to perform behavior outside their capabilities, and they are apt to issue directives in excessive numbers. Small wonder that parents who seek psychological help because of failed socialization efforts with their children have been

shown to make mistakes in their use of instructions as well as in their use of contingency management.

A neglected parameter in studies of parental instructions has to do with commands that either specify action or inaction. This dichotomy is significant for all children who are learning to tolerate various kinds of delays. Thus, Mischel and Ebbesen (1970) found that children have a difficult time waiting in general, but this task is easier for those children who are able to deploy attentional strategies that enable them to delay gratification. For this reason, instructions that convey activity on the part of the child ("do" instructions) should be more effective at gaining child cooperation and self-regulation than instructions that convey inactivity ("don't instructions") and which leave the child with "nothing to do." Accordingly, mothers who use "do" instructions could be providing their children with alternative ways to behave when they are confronted with the directive to stop what they are doing or do something else. Additionally, Kochanska (1995 & 2002) and Kuczynski & Kochanska (1995) hypothesized that "Do" instructions were a less coercive expression of maternal power that "Don't" instructions and predictive of whole-hearted compliance and fewer behavior problems in later childhood.

The present study was an effort to assess the differential impact of "do" and "don't" maternal instructions on child compliance and to ascertain the role of maternal responsiveness in such findings. Thus far, researchers in the child socialization area have viewed responsiveness as a pattern of consequences provided through a mother's wise use of social attention. Obviously, responsiveness mothers also direct their children's behavior and we suspect that their choice of instruction would favor "do" over "don't". Thus, we expect to find associations between instruction choice,

responsiveness and child compliance. More specifically, we set forth the following hypotheses:

(1) Clinic-referred children will be less compliant than volunteer children.

(2) Clinic-referred mothers will be less responsive contingency managers than will volunteer mothers.

(3) Clinic-referred mothers will use fewer "do" instructions than will volunteer mothers.

(4) When all participants are combined in a single group child compliance probabilities will covary with both indices described in (2) and (3).

(5) In a regression analysis, the differential variance in compliance is accounted for by maternal responsiveness and instruction strategy, but we cannot be certain of the comparative power of these two maternal indices.

CHAPTER II

METHOD

Participants

Twenty-four volunteer mother-child dyads were recruited from elementary schools and twenty clinic-referred mother-child dyads were recruited from a university mental health clinic. The non-clinic sample consisted of 24 middle-class Caucasian dyads and the clinic-referred sample consisted of 20 middle-class Caucasian dyads. Children were between the ages of 6 and 11 years and their mean age was 8 years.

Procedure

One-hour home observations were scheduled on a rolling basis as mother and child committed their participation to the project. The dyads were not afforded the latitude to watch television, talk on the phone, have friends over or leave the house during the observation. Latitude was granted so that any other family members who wished to be part of the videotaped observation could do so.

The home observers were trained undergraduate students enrolled in a laboratory research course and each received 3 credits for each semester of participation in the project. Their laboratory training was comprised of lectures and question and answer sessions regarding the proper way to conduct a home observation and their field training consisted of putting what they learned into practice in the participant's homes.

These same undergraduates also attended weekly 2-hour training sessions in how to use the Standardized Observation Codes Revised III (SOC-R III) (Cerezo, 1995). The SOC-R is a behavioral coding system that records mother and child behaviors in 15-second intervals. At the completion of the training, 20% of the total observations were coded for reliability checks with each undergraduate yoked to a master observer for the sole purpose of matching time intervals during these checks.

Measures

Mothers completed the Child Behavior Checklist as well as a demographic fact sheet asking for age and number of children.

Mother-child interactions during the 1-hour home observations were assessed through the Standardized Observation Codes-Revised (SOC-R) (Cerezo, 1995). The SOC-R has been used in several observational studies with demonstrated reliability and validity (Cerezo, 1995). The following SOC-R categories were used to compile child prosocial and antisocial responses to mother instructions and approaches.

Mother Instruction Strategies (MIS). This category is comprised of two components: mother instructions that specify action-"Do" instructions or inaction-"Don't" instructions.

Mother Responsiveness (MR). This category measures mother responsiveness and is an aggregate measure of appropriate mother reactions to all prosocial and antisocial responses in a child's repertoire. For the present study, the degree of 'fit" between child responses and mother reactions assessed the aggregate measure of mother responsiveness. The fit combinations are as follows: child neutral or positive approach =

mother neutral or positive approach; child aversive approach = time out or ignoring; child compliance = mother neutral or positive approach; child opposition = time out, ignoring or mother instruction.

Child Compliance (CC). This category is comprised of compliance with mother instructions and reflects children's willingness to cooperate with their mothers.

Child Negativity (CN). This category is comprised of all aversive and uncooperative behaviors by the child towards the mother. Child negativity is reflective of child opposition and a mothers' ineffective use of contingency management.

In summary, the specific mother and child behaviors assessed for this study were the following: Mother "Do" instructions which describe commands or directives phrased in a way that required child action; Mother "Don't" instructions which describe commands or directives phrased in a way that required child inaction; Child negativity which consisted of the percentage of time in which the child exhibited aversive behaviors such as opposition; Child compliance which contained the percentage of all mother instructions followed by acts of compliance; an aggregate measure of Mother Responsiveness which included appropriate responses to all child prosocial and aversive actions, was assessed by examining degree of "fit" between these child responses and mother reactions. The "fit" responsiveness aggregate was then divided by the sum of "fit" and "misfit" mother responses. SOC-R codes were recorded in brief time intervals (15-seconds), so we were able to examine temporal and sequential relationships between the myriad of child and mother behaviors.

The literature on child development, indicating that clinic children are more likely to behave antisocially, leads to the deduction that clinic mothers will be more likely to

use "don't" instruction. Because it is plausible that clinic mothers use "don't" instructions as a reaction to an immediately preceding child aversive response it is possible that all mothers use of "don't" instructions was driven by their children's demands or rule violations rather than by maternal insensitivity to their own instructional strategies. Thus, clinic mothers might use more 'don't' instructions simply because their children push them to do so. In order to test this possibility it would be necessary to examine those instructional episodes comprised of "Don't" instructions to determine the extent to which they are elicited by child aversive actions or words.

Data Analyses

An 80% observer agreement rate was obtained on 20% of the home observation tapes with the SOC-R for the categories 1) mother instructions strategy; 2) mother responsiveness; and 3) child compliance. Data analyses involved comparing group means for each category as follows: a between groups comparison of frequency of mother instructions was conducted to determine if clinic-referred mothers are less skillful contingency managers than are volunteer mothers. A second between groups comparison of type of mother instruction (Do vs Don't) was conducted to determine if clinic-referred mothers use fewer "Do" instructions. A third between groups comparison was conducted to determine if clinic-referred children are less compliant than volunteer children. A fourth analysis was conducted by combining all participants in a single group to determine if child compliance probabilities will co-vary with mother instructions strategy and mother responsiveness. Finally, a mediation analysis was

performed to determine the extent to which a mother's use of "Do" instructions mediated the relationship between mother responsiveness and child compliance.

CHAPTER III

RESULTS

Reliability

Observer agreement in coding a 20% subset of the home sessions with the SOC-R was achieved. Across pairs of observers, intraclass correlation coefficients for the total sessions' scores were as follows: mother instructions = .86; mother "Do" instructions = .66; mother "Don't" instructions = .83; child compliance = .79; mother responsiveness = .86; and child negativity = .98. According to the coefficients, observers were in good agreement in their coding of the SOC-R measures, supporting the credibility of these data sets.

Comparison of Group Means

The two groups of participants did not differ in mean age of mothers or children. Table A-1 shows the means and standard deviations for relevant measures of the dyads' home-based behaviors. Inspection of the table shows that the two groups of mothers did not differ in total instructions presented to their children, but volunteer children were more likely to comply than were their clinic-referred counterparts. As expected, mothers in the volunteer groups used more "Do" instructions than did mothers in the clinic-referred group and their children were more compliant across both types of instruction than were the clinic-referred children. Means for child compliance to "Do" instructions were higher for the volunteer dyads while means for child compliance to "Don't"

instructions were identical for the volunteer and clinic-referred groups. Means for mother responsiveness were higher for the volunteer group.

Table A-1 also shows that children in the clinic-referred group displayed more negative behaviors than children in the volunteer group. In line with our previously stated concern that child negativity might elicit mothers' use of "Don't" instructions, we compared mother "Do" and "Don't" immediately following child negativity episodes. As Table A-2 reveals, there was no evidence to support this concern. In fact, mothers in both groups were more likely to issue "Do" instructions after their children were negative in much the same fashion as their overall preferences shown in Table A-1.

Correlational Analyses

Since we found no evidence that child negativity elicited mothers' tendencies to use "Don't" instructions, we suspected that maternal responsiveness might determine their choice of instruction. Therefore, we correlated indices of mother responsiveness and their use of "Do" instructions within each group. Results supported this hypothesis (volunteer mothers $r = .55$, $p = .01$; clinic-referred mothers $r = .65$, $p = .01$), indicating that more responsive mothers are also more likely to use "Do" instructions. Given these similar findings for both groups, we decided to combine the volunteer and clinic-referred groups to assess the differential power of mothers' responsiveness and use of "Do" instructions in predicting the children's compliance. Table A- 3 shows that mother's responsiveness was the major covariate accounting for 74% of the variance in child compliance and the mothers' use of "Do" instructions added a significant 13%.

Because the Table A-3 finding indicated that mothers' use of "Do" instructions added unique variance in the prediction of child compliance, we wondered if this variable might mediate the more powerful predictive function of maternal responsiveness. Our mediation hypothesis also seemed reasonable because of the sequential order in which these two mother variables could affect child compliance. Logically, responsiveness is a contextual variable, presumably affecting a child's willingness to comply with instructions, while instructions constitute the necessary "trigger" that reveals willingness. Thus, in this sequence "Do" instructions might mediate the impact of responsive mothering. According to Baron & Kenny (1986, p 1176), the following correlational results would support a mediation process: a) variations in levels of the independent variable (i.e. mother responsiveness) must significantly account for variations in the presumed mediator (i.e. "Do" instructions); b) variations in the mediator must significantly account for variations in the dependent variable (i.e. child compliance); and c) when the mediator is statistically controlled, a previously significant relation between the independent and the dependent variable show a significant drop in its' zero-order value.

Our first equation tested the direct effects of mother responsiveness on child compliance (See Figure A-1). As expected, ([β] = .689; SE = .075, $p < .001$), mother responsiveness significantly predicted child compliance. We then examined whether mother responsiveness predicted her use of "Do" instructions. Mother responsiveness also predicted her use of "Do" instructions, (β] = .486; SE = .067, $p < .001$). We then examined whether "Do" instructions mediated the relationship between mother responsiveness and child compliance. Results revealed that when "Do" instructions

were controlled, the predictive power of mother responsiveness on child compliance decreased, ([β] = .373; SE = .165, $p < .001$). Finally, we tested the difference between the unmediated beta (.689) and the mediated beta (.373). Using the formula devised by MacKinnon & Dwyer (1993), the resulting z score was 3.185, $p < .001$, indicating a significant difference between these two beta weights.

CHAPTER IV

DISCUSSION

Conclusion

Children of responsive mothers appear to be cooperative with their mother's requests and directives because that is how they maintain mutual reciprocity comprising the transactional model of the relationship. This model is characterized not only by a mother's sensitivity to her child's social cues, age-appropriate capabilities and temperament but also by her awareness of those contingencies that most easily gain child cooperation, such as the use of "Do" instructions. Externalizing children have difficulty managing their behavior due to chronic parental insensitivity shown through poorly timed and otherwise inappropriate reactions, along with instructions (Don't") that require patience not yet established in the children.

According to MRO (Kochanska, 2002), responsive mothers develop and are able to maintain mutual reciprocity because their children's sense of security depends on maternal support of their roles as participants. Security is a child's basic sense of trust generated by being the recipient of responsive treatment. Conversely, unresponsive mothers have marked difficulty generating reciprocity and security because their children are seen as obstacles, not participants, in the parenting enterprise.

MRO, however, is broader than timely and appropriate reactions to child behaviors. A mother's use of instructions ("Do") can also represent maternal support and generate security by giving the child the opportunity to participate cooperatively in these

mother-child transactions through the use of instructions that invite activity geared towards parent-preferred behaviors. The mother's request that the child engage in parent-preferred behaviors supports the child's participation and cooperating secures their receipt of maternal responsiveness.

When mother's give "Do" instructions, they are inviting the child not simply to obey, but to participate through the use of instructions that are attuned to three facts: 1) in general, children prefer activity over non-activity, 2) children struggle when required to delay gratification; and 3) children strive for competence. "Do" instructions address all of these: (1) by asking children to engage in activity; (2) by giving them something else to do if engaged in a parent-unpreferred behavior, and; (3) by giving them recognition that they **can do**. For example, Sarah, a 6-year old, was at a friend's birthday party where the birthday child's father was sprinkling the children with water from a hose. Sarah walked over to the knob that controls the water flow and turned it off because she was "cold." She did this three times. After each time, her mother told her "don't turn the water off" and she replied "but I'm cold." This mother's reaction violates the three facts about children described above. When Sarah's mother was asked by Sarah's therapist what could she have done to help Sarah manage her behavior she replied "I could have directed her to go inside the house and get her sweater so that she would not be cold anymore." This would have given Sarah increased competence by not only asking her **to do** something else but also by guiding her in how to prosocially solve the problem of being cold. Now Sarah is not passively waiting for the water to be turned off nor is she engaging in inappropriate behavior, rather she is being guided to proactively and constructively navigate her environment and expand her problem-solving repertoire.

Externalizing children have, relatively speaking, considerable difficulty delaying gratification because their ability to wait or "be patient" is undermined by their impulsivity. The teaching of "Do" instructions to mothers of these children could add a new development to parent training. It could do so by teaching the use of a response that specifically targets and manages the child's inherent self-regulation difficulties by directing the child to engage in parent-preferred behavior that, through the child's cooperation, supports participation and secures the receipt of maternal responsiveness.

The importance of this study is highlighted in a documented expansion of the maternal responsiveness construct. By showing how "Do" instructions mediate the impact of mothers well-timed and appropriate reactions to children's behavior, a more complete picture of responsiveness is set forth. Not only do responsive mothers support their children's prosocial behavior, but they also guide the youngsters' activities in prescribed ways. The old saying "idle hands are the devil's tools" might be countered with "busy hands are a mother's tools": tools of cooperation and reciprocity.

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APPENDICES

Table A-1

Means, Standard Deviations and Significance Levels for T-tests Between Means For Volunteer and Clinic-referred Mother-child Dyads

	Volunteer n=24		Clinic-referred n=20		Significance
	$\bar{x}$	SD	$\bar{x}$	SD	
% Time intervals w/mother instruction	.10	.06	.14	.11	ns
% Instruction followed by child compliance	.89	.10	.72	.21	*
% "Do" instructions by mother	.95	.05	.81	.17	*
% "Don't" instructions by mother	.05	.05	.19	.18	**
% Child compliance with "Do" instructions	.90	.09	.72	.29	**
% Child compliance with "Don't' instructions	.40	.43	.26	.32	ns
Mother responsiveness index	.96	.04	.68	.24	**
Child negativity	.03	.03	.22	.24	**

. * = $p < .05$, ** = $p < .01$

Table A-2

Means, Standard Deviations, and Significance Levels for Pairwise T-tests for "Do" and "Don't" Instructions Following Instances of Child Negativity

	"Do"		"Don't"		Significance
	$\bar{x}$	SD	$\bar{x}$	SD	
Clinic-referred n=15	.64	.31	.31	.36	**
Volunteer n=15	.79	.31	.13	.31	**

** = $p < .01$

Table A-3

Results of Regression Analysis Showing Mother Responsiveness and "Do" Instructions Entered Simultaneously as Predictors of Child Compliance

Mother responsiveness	R2 = .67***
Mother responsiveness + Mother "Do" instructions	R2 = .80**
R^2 Change	R2= .13*

* = p < .05, ** = p < .01, *** = p < .001.

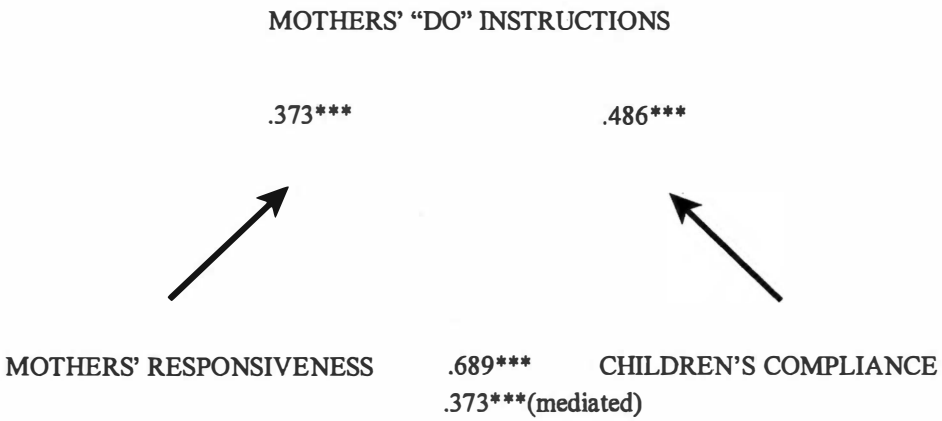

Figure A-1. Mediations of the Link Between Mother Responsiveness and Child Compliance by Mothers' Use of "Do" Instructions. All Values Are Beta Weights.

VITA

Born in Brooklyn, New York and raised both there and in New Jersey, Vanessa Ann Vigilante graduated Rutgers, The State University of New Jersey, in 1994 with a BA in Psychology. She attended graduate school first at the Wright Institute in Berkeley, California and then at the University of Tennessee, Knoxville where she is currently in her third year and working towards a doctoral degree in clinical psychology. Prior to attending UTK, she taught first grade at a Day School for Chinese-American children in San Francisco, California.