Order Number 9314584

An examination of the impact of personality factors and depression on maternal responses to child behavior

Johnson, Victoria R., Ph.D.

The University of North Carolina at Greensboro, 1992

U·M·I

300 N. Zeeb Rd.
Ann Arbor, MI 48106

AN EXAMINATION OF THE IMPACT OF PERSONALITY FACTORS AND DEPRESSION ON MATERNAL RESPONSES TO CHILD BEHAVIOR

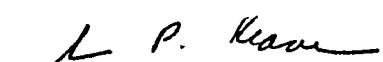
by

Victoria R. Johnson

A Dissertation Submitted to
The Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
1992

Approved by



Dissertation Advisor

APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

Dissertation Advisor Susan P Keane

Committee Members

Herbert Wells

Robert M. Eason

Paul Myers

11/19/92

Date of Acceptance by Committee

11/4/92

Date of Final Oral Examination

JOHNSON, VICTORIA R., Ph.D. An Examination of the Impact of Personality Factors and Depression on Maternal Responses to Child Behavior. (1992)
Directed by Dr. Susan Phillips Keane. 202 pp.

The purpose of this study was to examine the impact of personality factors and depression on the ways that mothers respond to children's behavior. Specifically, this study compared the impact of two different personality dimensions, Autonomy and Sociotropy (as described by Beck, 1983), on the responses of depressed and nondepressed mothers to a videotape of a five-year-old child playing alone and with peers. Four groups of mothers were compared: depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic, and nondepressed-autonomous. Maternal responses of interest were negative responses to identified neutral child behavior, positive perceptions of and responses to child behavior, and the particular form of negative responses to child behavior. It was hypothesized that depressed-sociotropic mothers would more frequently respond negatively to identified neutral child behavior, identify positive child behavior less frequently, and that their negative responses to child behavior would take a different form than those of the other three groups of mothers. One and two-way analyses of variance were employed to assess any differences between the groups of mothers.

Although none of the three hypotheses were supported by the data from this study, in some instances differences were

found between the depressed-sociotropic mothers and the other groups of mother. While the differences were not statistically significant, depressed-sociotropic mothers did respond negatively to identified neutral child behavior more frequently than the other mothers. Additionally, depressed-sociotropic mothers both identified negative child behavior and responded negatively to child behavior more frequently than the other mothers. This latter finding was significant. The results were interpreted as being a part of the development of an understanding of these two personality dimensions. Alternative interpretations of the contribution of the specific characteristics of Sociotropy and Autonomy to the responses of depressed and nondepressed mothers are discussed. It is suggested that longitudinal research might provide additional insights into the contribution of both personality and depression to maternal responses to child behavior.

ACKNOWLEDGEMENTS

I would like to thank the members of my dissertation committee, Dr. Robert Eason, Dr. Paul Mazgaj, Dr. David Rabiner and Dr. Herbert Wells, for their suggestions and interest during this preparation of this dissertation. I am especially grateful to the chair of my committee, Dr. Susan Phillips Keane, for her patience, enthusiasm and unwavering support throughout this project.

I would also like to thank the faculty of the Psychology Department of The University of North Carolina at Greensboro as their valuable contributions enabled me to expand my world view.

Finally I would like to thank my family especially my husband and my children for all the sacrifices that they made on my behalf throughout my years at UNCG so that I could attain this goal.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION

A plethora of articles in the literature have indicated that parental depression has a generally negative impact on the offspring of such parents (Downey & Coyne, 1990; Fabian & Donohue, 1956; Gelfand & Teti, 1990; Hammen, Adrian, Gordon, Burge, Jaenicke, & Hiroto, 1987; Keller, Beardslee, Dorer, Lavori, Samuelson, & Klerman, 1986; McKnew, Cytryn, Efron, Gershon, & Bunney, 1979; Morrison, 1983; Richman, 1976; Weisman & Paykel, 1974; Weisman, Paykel, & Klerman, 1972; Weisman, Prusoff, Gammon, Merikangas, Leckman, & Kidd, 1984). The data in these articles include information from individual case reports, clinical observations, and research investigations. While there are a variety of problems with such data, it appears that there is enough evidence to warrant further investigation of this issue. Some authors, in fact, have suggested that the impact of parental depression may be more severe than that of parental schizophrenia, the impact of which is fairly well documented (Fish & Alpert, 1962; Fish, 1963; Fish & Alpert, 1963; Mednick & Schulsinger, 1968; Sameroff, Barocas, & Seifer, 1984). Also, since depression occurs at a relatively high rate in the general population (Boyd & Weissman, 1982; Lewinsohn, 1975), since it is more prevalent among women than

among men (Gove & Tudor, 1973; Ryan, 1986; Weissman, Paykel, & Klerman, 1972), and since in the majority of families, the mother remains as the primary caretaker, continuing investigation of a possible relationship between maternal depression specifically and subsequent problems for the children of this population seems desirable.

Maternal depression has been found to have a negative impact on the cognitive development, affective regulation, and overt behavior of the children of these mothers (Beardslee, Bemporad, Keller, & Klerman, 1983; Weissman et al., 1984). Children whose mothers are depressed have received clinical diagnoses at a rate far greater than children whose mothers are not depressed (Weissman, 1984). In fact, Weissman (1984) found that the magnitude of risk for these children increased three-fold. These diagnoses have ranged from hyperactivity to eating disorders and childhood depression (Hammen et al., 1987). In addition, in some studies, many of these children have received multiple diagnoses. There is also some indication, in the British literature at least, that these children have a history of frequent medical hospitalizations and outpatient medical visits (Wolkind, 1985). Such investigations of this phenomenon have not determined whether this is a function of maternal pathology alone, an interaction between maternal pathology and the stress related consequences for the child, or the hypothesized relationship between maternal depression

and child abuse. Since depression can be expressed in a variety of ways, all three factors in various combinations are likely to be involved in this finding.

Another probable contributor to the findings described above, is the genetic factor. Evidence provided by twin studies, adoption studies & family studies suggests that mood disorders may be genetically transmitted. The evidence for genetic transmission of bipolar depression is stronger than that for unipolar depression. The results of adoption studies have not been as supportive of the heritability of mood disorders as the results of twin studies. Numerous twin studies over a 50-year period have found monozygotic concordance to be approximately 67% and dizygotic concordance to be approximately 15% (Gershon, Berrettini & Goldin, 1989). Concordance has been found to be higher for bipolar monozygotic probands (0.79) than for unipolar monozygotic probands (0.54) (Bertelsen, 1979). Rates for unipolar and bipolar dizygotic probands were similar (0.19) for unipolar and (0.24) for bipolar (Bertelsen, 1979). Recent family studies have shown a familial concentration of mood disorders (Gershon, Hamovit, Guroff, Dibble, Leckman, Sceery, Targum, Nurnberger, Goldin & Bunney, 1982). A higher prevalence of bipolar and unipolar disorder has been demonstrated in relatives of these patients than in relatives of controls. The most common mood disorder in families of both bipolar and unipolar mood disorder is major depression, implying an

overlap in the familial causes of both forms of the disorder.

Interestingly, a cohort effect has been observed in mood disorders (Gershon, Hamovit, Guroff & Nurnberger, 1987; Klerman, Lavori, Rice, Reich, Endicott, Andreasen, Keller & Hirshfeld, 1985). People born in the decades since 1940 have a higher lifetime prevalence of mood disorders and suicide than those born prior to 1940. The age of onset for bipolar disorders has become younger so that in the cohorts born after 1940, the total lifetime prevalence is likely to be much higher. Gershon et al. (1989) suggest that this finding reflects a cultural influence in the broadest sense (entire environmental and biological setting) since genetic change cannot occur over such a short period of time.

Maternal Depression and Child Development

Related to the idea that because the expression of maternal depression varies, its impact on children will not be uniform, is the idea that the consequences of being reared by a depressed mother will vary according to the developmental stage of the child. While evidence (Kochanska, Kuczynski & Maguire, 1989) suggests that depressed mothers are, in general, less sensitive to their children's developmental needs, the impact of postpartum depression, occurring during the first three to six months of the infant's life, will be different from maternal depression occurring during the adolescent years. Gizynski (1985) suggests that the "typical depressed patient -- a woman in

her most productive years, living at home and functioning as a mother on a day to day basis," will exhibit such symptoms as apathy, guilt, feelings of hopelessness and helplessness, sleep and eating disturbances, fatigue, irritability, and a variety of somatic complaints. These symptoms act to impair her ability to respond to the physical and emotional needs of her child in appropriate ways so that these children are at risk developmentally. Gizynski (1985) further suggests that the impact on the child will vary as a function of his/her developmental stage. For example, in infancy, when mother must be extraordinarily sensitive and responsive to the subtle cues that her infant is sending her about a variety of physical and psychological needs, depression interferes with her ability to detect and respond to such cues. She is instead withdrawn, apathetic, preoccupied with her own internal stimuli, and cannot meet her own needs much less those of her infant. According to Gizynski, the infant's perception of this type of experience is that he/she has been abandoned -- feelings equivalent to those that occur when mother is physically absent. The infant's initial response is to protest vigorously as a way of demanding the necessary attention. If, however, the mother continues to be unresponsive, the infant may seek comfort from inanimate toys or, if mother's depression is severe and prolonged, he/she may become a "failure to thrive" baby. Even if the infant seeks mother's attention by smiles and laughter as opposed to

crying, the depressed mother may perceive such behavior as too demanding, feel overwhelmed and incompetent, and thus withdraw even more. When the mother's depression is episodic, the infant's perception may be that mother is unpredictable so that mother-infant attachment is characterized by excessive dependency, anxiety, and fear of abandonment. The infant will have difficulty separating from mother, will be demanding and difficult to console, and will be full of rage "toward those seen as disappointing and depriving" (Gizynski, 1985). Such disruptions of normal mother-infant interaction can also impair the growing infant's ability to develop a sense of self. In this case, the depressed mother, rather than withdrawing, responds to the infant as an extension of herself. In other words, although she looks responsive, she is actually responding to her own needs rather than the infant's. Baby is fed when mother is hungry, put to bed when mother is sleepy, and taken to the doctor when mother is feeling bad. At this stage in development, when baby's "differentiation of self and object perceptions is too immature to experience mother's emotionality and psychological state as her own, separate from and independent of him/her," the development of the infant's identity may be prematurely aborted because he/she identifies with the dimensions of mother's depression and may come to see himself/herself as being bad and unlovable (Gizynski, 1985). This false self or identity, assigned by

the depressed mother, is adopted as a way of preserving the relationship between infant and mother. The eventual result of interactions such as those described above, according to Gizynski (1985), can be adult personality disorders in which detachment is used as a defense against the possibility of disappointing relationships. Fabian and Donahue (1956) stated that the effect of maternal depression on infants and young children is particularly disastrous. According to these authors, the postpartum mother finds her responsibilities overwhelming so that her anger and resentment builds, and she is unable to create the nurturing, stable atmosphere which is so important for the infant's early development and without which developmental deviations can occur. Other authors have even suggested that a loveless climate such as that created by the depressed mother, "heightens the infant's death instinct" (Gizynski, 1985).

Sameroff et al. (1984) found that infants of depressed mothers had increased scores on perinatal stress measures as did infants of mothers with other major mental illnesses, and that these impairments, described as cognitive and emotional delays, persisted throughout the four years of the study. Grunebaum and his associates (Cohler, Grunebaum, Weiss, Gamer, & Gallant, 1977) also found cognitive impairments in infants of depressed and other severely mentally ill mothers, while Weissman et al. (1972) reported tyrannical behavior,

inability to separate, and difficulties with ego boundaries occurring in infancy and early childhood.

In the second half of the second year, when language and play are important ways of maintaining contact with mother, her listlessness and apathy often prevent her from being actively and enthusiastically involved with her child. Mother's interest in and admiration of the child's developing skills are crucial contributors to the child's self-esteem at this point. Her remoteness may be perceived as indifference and criticism by the child so that no matter how hard he/she works to earn mother's admiration, he/she is left with the certainty that he/she is unworthy and insignificant. Gizynski (1985) labels this as a "core vulnerability" which will have an impact on the child in terms of ability to learn and achieve in that such children do not have the self-esteem necessary to tackle learning and exploration in new areas. Several studies have shown that children of depressed mothers often suffer from hyperactivity, school problems, are less creative, show less initiative, less need for closeness with teachers, and are rated lower on reading comprehension (Neale & Weintraub, 1975). Weissman and her colleagues (1972) reported additional problems such as excessive rivalry with peers and siblings, feelings of isolation or depression, and enuresis. Even if the child responds by becoming a parent for his/her mother, demonstrating precocious self-sufficiency and responsibility and assuming the

responsibility for his/her depressed mother or other family members, he/she does not go unaffected. Although such children have no school problems and are considered to be "good children," they can become depressed adults with deep seated feelings of worthlessness and incompetence. They may also feel resentment and loss about their enormous unmet dependency needs.

All the problems that exist in the relationship between depressed mothers and their children are exacerbated during the adolescent years when children are in some sense reworking the separation-individuation issues of early childhood. The ambivalence about separateness felt by the two-year-old is also felt by the adolescent who has conflicting feelings about wanting to leave the family unit while at the same time wanting to cling to the security of the latency age child. Both normal and depressed mothers have problems coping with the difficult behaviors that adolescents employ to achieve separation-individuation, such as testing the limits and rebellion, but at a time when parents must find a comfortable position between being a disciplinarian and accepting the child's growing autonomy, the depressed mother tends to either distance herself from any involvement with the child or to be rigid and over controlling. Weissman (1983) found that mothers of adolescents in her study were concerned about their lack of affection for and their hostile feelings toward these

children that sometimes even generalized to all family members. Such mothers experienced intense verbal and sometimes physical conflicts with their children and expressed much resentment and anger at their families for making unfair demands on them. Seventy-four percent of the adolescent children of depressed mothers in this study had problems both at school and at home as opposed to 10% of the adolescents with normal or nondepressed mothers. Additionally, Gizynski (1985) suggests that there are special consequences for the daughters of depressed mothers. She characterizes them as having a special vulnerability in that they must accept their mothers' negative, distorted perceptions of women, or reject mother's perception and their sexual identity by becoming distressed about being women and having women's bodies. Either choice is problematic, especially when they themselves face the challenge of motherhood, for they feel inadequate and defective as women so that motherhood is experienced as alien and frightening and the new infant as a dangerous competitor for the attention of husband and parents.

Of course, other factors such as the intensity and duration of the maternal depressive episode, whether or not depression is chronic, episodic, or both (i.e., double depression), whether or not the depression is treated and in what setting (i.e., hospitalization or on an outpatient basis), and the presence or absence of another stable

caretaker (e.g., spouse, grandparent, etc.) who can meet some of the child's most critical needs all play an important part in terms of the consequences for the child.

Several studies suggest that children of depressed mothers have social skills deficits. Weintraub, Prinz, and Neale (1978) studied peer evaluations of the social behavior of seven to fourteen-year-old male and female children of depressed, schizophrenic, and normal mothers. They found that, in general, the evaluations of children of depressives did not differ from those of children of schizophrenics. Both were seen as more impaired than controls on the factors of aggression and unhappiness/withdrawal. Similarly, Weissman and Paykel's (1974) summary of several studies indicates that children between the ages of six and twelve years, whose mothers were depressed, exhibited excessive rivalry with peers and siblings as well as feelings of isolation. These findings are important in several ways. For example, Weintraub and his colleagues (1978) point out that social competence is an important variable when predicting the course and outcome of depression. Furthermore, it has been suggested that this variable is of etiological importance in depression (Lewinsohn, 1975). Other explanations of depression have also incorporated the importance of social competence. According to Beck (1967), competence may play an important role in the acquisition of a negative view of self, the environment, and the future. The

relationship between social competence and the belief that responses are unrelated to outcomes is an important part of Seligman's (1975) learned helplessness theory. Thus Weintraub et al. (1978) speculate that offspring of depressives are a vulnerable group, at risk for both unipolar and bipolar depression. Indeed, Beardslee et al. (1983), in a review of studies of children of parents with a major affective disorder, found that while the nature of the impairments and difficulties that these children experienced was wide ranging, the prevalence of diagnosable depression in this group, especially among older children, was considerably greater than that in the normal population (when comparison groups were included). Even when depression was not diagnosed, depressive symptoms were reported in a high proportion of the children in a good number of the studies. Weissman (1984) compared six to eighteen-year-old children of probands with major depression with children of normal controls and found that such children were at increased risk for psychological symptoms, treatment for emotional problems, school problems, suicidal behavior, and DSM-III-R diagnoses. In this sample, major depression was the most common diagnosis followed by attention deficit disorder and separation anxiety. Other diagnoses were conduct disorder, developmental reading disorder, drug abuse, minor depression, and panic disorder. Again, while there is evidence of the heritability of affective disorders, the expression of

symptoms and/or disorders in the children of depressed mothers is certainly influenced by the impact of mother's depression on their children's development.

Impact of Maternal Depression vs. Maternal Schizophrenia

As mentioned previously, some researchers have suggested that chronic, maternal depression may have a more negative impact on children than maternal schizophrenia (Grunebaum, Cohler, Kauffman, & Gallant, 1978). Grunebaum and his colleagues (1978) argue that because depression is a disorder of both the affective and cognitive systems (Beck, 1967, 1972), the impact of this combined disturbance on the children of these individuals could be more pervasive than that of schizophrenia in which symptoms may be restricted to a particular area of functioning. Depressive behaviors are, as a rule, more socially acceptable than schizophrenic behaviors so that many depressives go unnoticed and untreated (Cohler, Gallant, Grunebaum, & Kaufman, 1983). Children may even feel more responsible for their mother's sad, depressed behavior than their mother's clearly crazy and irrational behavior (Grunebaum et al., 1978). Additionally, if mother does receive treatment, most treatment for depression is ambulatory so that depressed parents often continue to be primary caretakers throughout their illness -- even during acute episodes. Grunebaum et al. (1978), in their comparison of the competency of children whose mothers were depressed versus those whose mothers were psychotic, found that more of

those children whose mothers were depressed were evaluated as incompetent. In fact, out of the families included in this study in which mothers were diagnosed as depressed, only one child was rated as competent, and five of the six children in the low-competence group had depressed mothers. Cohler, Grunebaum, Weiss, Gamer and Gallant (1977) found that five-year-old children whose mothers were depressed showed greater intellectual impairment (as measured by the WPPSI) and more impairment on measures of both sustained and selective attention than five-year-old children whose mothers were schizophrenic. In a subsequent study of eight to ten-year-old children, the findings of this research group were similar. Children of depressed mothers continued to be more impaired on tests of sustained and selective attention than children of schizophrenic mothers. While differences in intellectual ability (as measured by the WISC) were not statistically significant, the scores of children of depressed mothers were lower than those of children of schizophrenic mothers (Grunebaum, Cohler, Kauffman, & Gallant, 1978).

The finding that children of depressed mothers are more impaired on attentional measures than those whose mothers are schizophrenic is especially surprising since both the ability to selectively attend to stimuli and the ability to sustain attention over time have been shown to differentiate successfully not only between schizophrenic and normal

control groups, but also between schizophrenics and other patient groups as well (Gardner, 1967; Schachtel, 1954). Thus, the assumption has been that the combination of genetic and environmental factors would lead to attentional problems in the offspring of schizophrenic patients, and several studies have supported this hypothesis (Anthony, 1974; Fish, 1963; Fish & Alpert, 1962, 1963; Gallant, 1972; Garmezy, 1974a & b; Marcus, 1972; Mednick & Schulsinger, 1968; Erlenmeyer-Kimling, Marcuse, Cornblatt, Rainer, & Rutschmann, 1984).

On the other hand, depression is believed to lead to cognitive as well as affective disturbances and one of those cognitive disturbances is said to be in the area of attention. Some depressed individuals inappropriately attend to internal stimuli (e.g., depressive thoughts, ideas, etc.) at the expense of more important external stimuli. Sustained attention is also impaired in that there is difficulty attending to external stimuli for any length of time due to the intrusive depressive thoughts (Hamilton, 1982; Beck, Rush, Shaw, & Emery, 1979). Attentional deficits in depressed individuals may be therefore, in some sense, as severe as those seen in schizophrenic individuals so that offspring of the former have the potential to be more impaired than offspring of the latter. An additional factor that could lead to more severe attentional deficits in the offspring of depressed mothers may be the different ages at

which depression and schizophrenia are expressed. In general, schizophrenia first appears during late adolescence or young adulthood while there is increasing evidence that childhood depression can appear in very young children and perhaps even infants (Kashani, Husain, Shekim, Hodges, Cytryn, & McKnew, 1981). Thus perhaps many children of depressed mothers are, to some extent, depressed themselves at an early age so that any attentional problems already present as a function of genetic-environmental interactions are exacerbated or increased by the child's depression.

Kauffman, Grunebaum, Cohler, and Gamer (1979) studied a group of families in which mothers were normal, depressed, or schizophrenic and found that a significant percentage of the offspring of those families in which mothers were schizophrenic were considered to be "super kids" (i.e., more creative, more competent than their counterparts in well families). No offspring of mothers diagnosed as depressed fell into this category. According to these authors, mothers who are depressed may not be available or may withdraw from interactions with their children significantly more than those mothers who are schizophrenic. Interactions that do occur between depressed mothers and their children may be more punitive than rewarding. Schizophrenic mothers, on the other hand, are believed to be more affectionate, nurturing, and capable of more creative interactions with their offspring.

Parental Depression and Child Abuse

Although the relationship between parental depression and child abuse has not been clearly established, references to depression are frequently found in descriptions of abusive parents, especially mothers (Estroff, Herrera, Gaines, Shaffer, Gould, & Green, 1984; Kaplan, Pelcovitz, Salzinger, & Ganeles, 1983; Kinard, 1982; Susman, Trickett, Iannotti, Hollenbeck, & Zahn-Waxler, 1985). In a study of 76 parents of abused or neglected children, Kaplan et al., (1983) found that there was a significantly higher incidence of depression and alcoholism among mothers in abusive or neglectful families than there was in nonabusive families. Of the diagnosed depressive disorders in this study, major depression was the most frequent. Although Estroff (1984) and his colleagues only evaluated the abusive mothers in their study for psychopathology in general, they hypothesized that more specific diagnoses might have revealed the presence of major depression in these mothers. There appears to be general agreement in the literature (Kaplan et al., 1983; Kinard, 1982; Robertson, 1976; Steele & Pollack; 1968) that many abusive parents are depressed to some extent. In fact, Robertson (1976) suggested that one expression of depression may be child abuse, while Steele and Pollack (1970) state that "there is the almost universal presence among abusing parents of some degree of depression -- either overt or latent." These authors further suggest that the depression

is a chronic, low-grade type. Since in many of the cases it is the mother (the primary caretaker) who is abusive, maternal depression may play an important role in the incidence of child abuse.

There is evidence in the literature that the parenting ability of depressed mothers is significantly impaired and that it resembles that of abusive mothers in important ways. Susman et al. (1985) found that there were similarities between the dysfunctional child rearing patterns of abusive mothers and depressed mothers. Both groups of mothers were found to be inconsistent, hostile, overly protective, and to use anxiety and guilt inducing methods to influence their children's behavior. Kinard (1982) describes depressed mothers as being more rejecting, critical, and hostile toward their children and less affectionate, less nurturing, and less sensitive to their children's dependency needs.

Parents who are depressed are more likely to lose control in ways that often lead to physical injury of their children than parents who are not depressed (Richman, 1976). In fact, the literature on infanticide and filicide indicates that a high percentage of parents involved in such crimes are depressed (Asch, 1968; Feinstein, Paul & Esmiol, 1964; Resnick, 1969; Rodenburg, 1971). In a study of 296 child murders in Denmark, Gormsen (1962) found that 94 of the adult perpetrators committed or attempted suicide after the murder. Of these adults, 74 were mothers, eight were fathers, and the

remaining 15 fell in other categories. A Canadian study of child murder over a five year period found that 114 children were killed by their parents. Of the 41 mothers who were responsible for their children's deaths, 29% committed suicide, and 12% attempted suicide after the murder. Of the 35 fathers that killed their children, 60% committed suicide, and 6% attempted suicide following the murder (Rodenburg, 1971). The author hypothesizes that children are especially at risk when parental depression is "superimposed upon a constellation of parental factors" (e.g., poor parenting skills, resulting in a disturbed relationship with the child, parental inability to handle aggression appropriately, particular personality characteristics, etc.). Although individuals who commit suicide do not necessarily have to be depressed (Linehan, 1981) the two appear to be equated in the infanticide and filicide literature.

In a psychodynamic model of depression, the relationship between depression, suicide, and homicide is often emphasized. Anger is believed to be turned inward thus leading to feelings of depression (Mendelson, 1982). Suicide represents the ultimate act of self aggression. There is a relationship between suicide and homicide in the depressed individual in that the homicidal act is said to be an extension of self aggression to include aggression against objects that are close to the depressed individual (Batt, 1948). Bender (1934) suggested that "child murder represents

a suicidal act resulting from the processes of identification". Mother projects her symptoms onto the child so that the child actually comes to represent this symptomatic part of mother's body. The initial suicidal urge becomes transformed or converted into a drive to kill the child who now represents these symptoms. The murder of the child has been said to be "altruistic" in the sense that the mother believes that it is the kindest act that she can perform for her poor, doomed child. The child is killed in order to relieve his/her suffering and/or to prevent him/her from being abandoned by the suicidal parent. Some support for this idea is presented in McDermaid and Winkler's (1955) study of 12 parents who murdered their children. One-half of these parents were excessively concerned and preoccupied with their children's health and well-being to the point of exhibiting severe panic reactions if they believed that something had happened to their child. This characteristic was labeled "child centered obsessional depression" by the authors. McDermaid and Winkler (1955), like Rodenburg, suggested that when this type of depression is combined with the critical factors (listed previously), ego function is weakened, suicidal tendencies become prevalent, and, if the mother then projects her symptoms onto the child so that he/she is thus representative of the afflicted part of mother's body, the risk to the child is greatly increased. Hawton and Goodwin (1985) found that out of 114 mothers who

were referred to the emergency service of a general hospital in Oxford, England, following a suicide attempt, 30% had either abused their children or their children were considered to be at risk for abuse. Feinstein, Paul, and Esmiol (1964) studied six women who presented with the impulse to kill their children. All of these women complained of chronic depression and suicidal preoccupations and all abused their children either physically, psychologically, or through neglect. Their children's problems included learning difficulties, school phobia, accident proneness, allergies, and increased susceptibility to infection.

Resnick (1969) reviewed 131 cases of filicide in the world literature on child murder from 1751-1967 and found that the most dangerous time for these children was the first six months of their lives -- the period that coincided with that of postpartum depression and psychosis in mothers. According to Resnick, the younger the child, the more likely the suicidal mother to perceive him/her as a personal possession and feel inseparable from him/her. In Resnick's opinion, mothers in 71% of the cases included in his study were depressed. Like Bender, he hypothesizes that the suicidal mother frequently thinks of her infant as an extension of herself and projects her own unacceptable symptoms to him/her. He believes that all depressed parents are at risk for homicidal acts. Robertson (1976) states that

70% of mothers with postpartum depression have problems with their children ranging from overconcern to physical abuse, while Asch (1968) suggests that there is a relationship between postpartum depression and crib deaths. According to this author, a large percentage of the 20,000 to 30,000 crib deaths recorded each year are actually infanticides "perpetrated by mothers as a specific manifestation of a postpartum depression." He suggests that a mother whose premorbid personality is fragile is more likely to be depressed and suicidal during the postpartum period (Asch, 1968).

While there is a considerable amount of evidence supporting a relationship between maternal depression and child abuse, neither the nature nor the consequences of that relationship are entirely clear. Kinard (1982) discusses three possible links between abuse and depression: 1) depression in parents may increase the risk of their children being abused and/or neglected since parenting deficits include (among others) neglect, rejection, and/or hostility towards offspring. Because the capacity for nurturing in depressed mothers is often impaired, the likelihood that they may neglect their children both emotionally and physically is increased. Likewise, their strong feelings of hostility increase the likelihood that their offspring may experience physical and emotional abuse; 2) the risk of depression in children may be increased if parents are themselves

depressed. Offspring of depressed parents may learn depressive behaviors from their parents and/or they may become depressed as a consequence of the negative impact of parental depression on the parent-child relationship; 3) the risk of depression in children may be increased as a consequence of being abused. There is evidence that children whose mothers are abusive and those whose mothers are depressed exhibit similar symptomology (Kinard, 1982). For example, such children have been found to be aggressive with poor self-concepts, dysfunctional relationships with peers and adults, difficulty trusting others, and difficulty with resolving both attachment and detachment issues.

Whether maternal depression is one of the factors leading to child abuse or not, both abusive and depressed mothers have been portrayed in the literature as having inadequate parenting skills. When these inadequacies are not addressed, the impact on the offspring of such parents is likely to be severe and to have more negative consequences than the actual loss of a parent since the depriving or rejecting experience is continuous rather than being confined to a single event (Kinard, 1982).

Child rearing practices of depressed mothers

Clearly then, this suspected relationship, between maternal depression and negative consequences for the child, is a highly complex one that requires a great deal of further investigation. It is important to investigate the child

rearing practices of depressed mothers to see which practices differ from those of normal mothers, whether such practices negatively impact the child, and if so, how. Information on the degree to which child rearing practices are influenced by the chronicity, severity, type, and recency of depression must be collected. It is important to determine whether any hypothesized impact on children is related to psychological illness in general or to depression specifically. For example, Rex Forehand and his colleagues have found that depressed mothers perceive their children as deviant when in fact they cannot be behaviorally differentiated from other children. In other words, Forehand suggests that depressed mothers differ from both normal mothers and perhaps other psychologically ill mothers in that their perceptions of their children's behavior are distorted as a function of depression. These investigators, therefore, view maternal depression as the best predictor of maternal perception of child maladjustment in the children of such mothers. On the other hand, for nondepressed mothers, child behavior is the best predictor of maternal perception of child maladjustment. Their research results have indicated that mothers who are experiencing depressive symptomology also perceive their children as experiencing difficulties (Forehand, Wells, McMahon, Griest & Rogers, 1982; Greist, Forehand, & Wells, 1979; Griest, Forehand, Wells & McMahon, 1980; Rickard, Forehand, Wells, Greist, & McMahon, 1981). This is not

surprising since many investigators have found that perceptual distortions are common in this population (Beck, 1967, 1976; Ellis, 1962). This view is also consistent with the idea that depressed mothers view their children as extensions of themselves (Gizynski, 1985, Bender, 1934) so that their children come to represent the "sick" or "bad" part of themselves. The data collected by Forehand and his colleagues suggest (by extension) that if depressed mothers perceive their children's behavior as deviant when, in fact, it is not, then they may consequate or respond to that behavior in inappropriate ways. For example, depressed mothers may punish appropriate child behavior (perceived as deviant) along with actual inappropriate behavior. Lobitz and Johnson (1975) found that parents of their clinic-referred children responded more negatively to both deviant and nondeviant child behavior than parents of nonclinic children. If the punishment is effective, then the occurrence of both types of behaviors will decrease. While a decrease of truly deviant behavior is desirable, a decrease of behavior that is only perceived as inappropriate is not. It is possible that a child whose behavior is consequated in such a way will develop a very restricted behavioral repertoire with which to interact with his/her environment.

On the other hand, it may be that depressed mothers ignore both appropriate behavior and behavior that is perceived as only slightly to moderately deviant while

attending only to highly inappropriate behavior. If attention (even though it is negative) is conceptualized as reinforcement (Lovass & Newsom, 1976) then deviant behavior may increase. Likewise, if lack of attention (ignoring) is conceptualized as punishment (Bellack & Herson, 1977) then the occurrence of appropriate behavior may decrease. One result of this particular parenting style could be that the child learns that a certain kind of behavior (highly inappropriate) is effective in that this behavior results in gaining attention from others. Appropriate ways of gaining attention are either not learned at all or are suppressed by the deviant mother-child interaction. Thus the child has a largely inappropriate behavioral repertoire with which to gain attention from other adults and peers in his/her environment.

A related possibility is that depressed mothers may respond no differently to positive child behavior than nondepressed mothers -- the impact of the perceptual differences and thus responses may only be on negative child behavior. Several studies (Forehand, King, Peed, & Yoder, 1975; Green, Forehand, & McMahon, 1979; Lobitz & Johnson, 1975; Rickard et al., 1981) have found that there are no differences in positive responding between parents of clinic-referred and parents of nonclinic children. Also, Furey and Forehand (1984) have found that negative child behavior is more important than positive child behavior in

predicting the daily ratings of personal satisfaction for mothers of clinic-referred children. They suggest that mothers of such children are more responsive to negatives than to positives. It may be then, that depressed mothers respond more intensely, frequently, or longer to negative child behavior than to positive child behavior. Again, the consequences of the focus on negative behavior could be that such behavior receives more reinforcement than positive behavior and is strengthened.

A third possibility is that maternal responding to child behavior may be inconsistent over time since severity of depression can vary. Weissman and Siegel (1972) have found that during an acute episode, depressed mothers behaved differently (e.g., communications were more impaired, were less affectionate, were more resentful, etc.) toward their children than when they were not as severely depressed. Thus, there may be a relationship between the severity of depression and mothers' perceptions of child behavior as normal or deviant. If so, then behavior consequated in one way when mother's depression is acute, may be consequated in another way when mother is feeling relatively less depressed. This type of maternal response style, in which the relationship between the child's behavior and the consequence of that behavior is unpredictable, may lead to feelings of helplessness and hopelessness for the child (Seligman, 1975).

This situation again suggests a possible narrowing of the child's behavioral repertoire.

The hypothesis that depressed mothers perceive their children's behavior as more deviant than do normal and/or other psychologically ill mothers was recently tested by Keane and Johnson (1988). An additional hypothesis tested was that, given the first hypothesis, depressed mothers would then respond to their children's behavior in ways that differ from those of normal mothers or those in a psychiatric control group. In this study, 35 mothers who had children ranging from two to eighteen years viewed a videotape in which a five-year-old boy interacted with his peers in a day care setting. Mothers were asked to stop the tape each time that the target child behaved in a way that they would normally respond to if they were the child's mother and in that situation with the child. Mothers then completed a response form each time the tape was stopped. This form instructed mothers to briefly describe the child's behavior at the time that the tape was stopped, rate the child's behavior on a 7 point Likert scale ranging from 1 (very positive) to 7 (very negative), briefly describe their (mother's) response to that particular child behavior, and rate the degree to which they felt that the behavior was typical of a child that age. This last rating was also on a 7 point Likert scale ranging from 1 (very typical) to 7 (not typical). Mothers were separated into three groups: a

depressed group, a psychiatric control group, and a nonpsychiatric or normal control group.

The results of this investigation indicated that, contrary to predictions, there were no significant perceptual differences between depressed mothers and control mothers. Mothers in all three groups perceived the target child's behavior in similar ways. Depressed mothers did not perceive the target child's behavior more negatively than did mothers in the other two groups (nondepressed and psychiatric control mothers). Their identification of the child's behavior(s) as positive, negative, or neutral closely matched that of the nondepressed and psychiatric control group mothers. Additionally, mothers in all three groups did not differ in terms of how typical they judged the child's behavior to be. There were, however, significant differences between the behavior of depressed mothers and control mothers in three important areas. First of all, depressed mothers identified positive child behavior less frequently than did control mothers. On the other hand, while depressed mothers identified negative child behavior no more frequently than did control mothers, their response styles to this type of behavior differed. Depressed mothers tended to use more physical and verbal negatives in response to child behavior that they identified as negative, whereas normal mothers used more alternative consequences such as time-out or insisting that the child share a toy, apologize, etc. Mothers in the

psychiatric control group, like those in the normal control group, used physical negatives least. It was also found that the responses of all three groups of mothers to the target child's positive and negative behavior were consistent or agreed with their identification of that behavior. For depressed mothers, however, agreement between perception and response when the child's behavior was neutral was not good. These mothers responded more negatively than other mothers when their perception of the child's behavior was neutral. In fact, when the child's behavior was neutral, if the perception and the response did not match, depressed mothers responded negatively twice as much as they responded positively. This was not true of either the psychiatric control group or the normal group. Keane & Johnson (1988) hypothesized that although depressed mothers' perception of the child's behavior was the same as that of the control mothers, the child's behavior, being neutral, was not salient enough to lead to a matching response much of the time. More salient perhaps for these depressed mothers, were their inner stimuli or cognitions, and it was these cognitions, rather than the original perceptions or identification of the behavior as neutral, that determined the response. This could also have been a contributing factor to the finding that depressed mothers identified positive child behavior less frequently than control mothers. If the behavior was not strongly positive, it may not have claimed the attention

of the depressed mother. Again, attention may have been directed toward internal or more salient stimuli so that the opportunity for a positive response was not taken. Responding negatively to neutral child behavior could lead to a decrease in that behavior and a restriction or narrowing of the child's response repertoire. Similarly, not responding or ignoring positive child behavior could also lead to a reduction in that behavior and further restriction.

Personality factors and depression

Because the population of depressives is so heterogeneous, such response styles may only be typical of a certain subgroup of depressed mothers. One contributor to that heterogeneity is personality characteristics which can affect the nature of the expression of depression. Particular personality characteristics may combine with depression in a more negative way than others. On the other hand, other types of personality characteristics could act as protective or preventative factors perhaps to prevent the full expression of the depressive syndrome or to reduce the length, intensity, and impact of an episode. This possibility seems especially important in a study of the way that depressed mothers respond to child behavior. For example, Marantz and Coates (1990) found that mothers of boys with Gender Identity Disorder (GID) who were depressed and met the criteria for Borderline Personality Disorder had a great deal of difficulty with affect regulation, management

of aggression, and interpersonal relationships. The impact of such personality traits combined with an affective illness may predispose to GID in boys according to these authors. One could speculate that personality traits such as those found in Borderline, Antisocial, Narcissistic, and Histrionic personality disorders may play a part in the similarities found between the parenting styles of depressed mothers and those who abuse their children.

On the other hand, a depressed mother with avoidant personality traits is likely to respond to her child's behavior quite differently. She may withdraw from interacting with her child and other family members even more than would be expected given the depression. This withdrawal could lead to increased feelings of loneliness and isolation and cut off opportunities for positive experiences and help seeking. Thus mother's depressive episode could be intensified and extended. The impact of such an expression on the child could be increased feelings of rejection, abandonment, unworthiness, guilt, and helplessness. Mother would not be available to meet her child's critical developmental needs. Kochanska (1991) has found that the 2 - 3 1/2 year old children of unipolar depressed mothers are more inhibited in unfamiliar situations and with unfamiliar people than those of nondepressed mothers. She suggested that these findings could be, in part, a function of such maternal behavior as withdrawal, passivity and other signs of

social discomfort, behaviors that can be characteristic of both depression and Avoidant Personality Disorder.

Other types of personality characteristics may act to reduce the impact of depression on the mother-child relationship. If mother can be described as self-efficacious, or the type of individual who tends to persist in a task until success is achieved, her competence in the area of parenting may not be as impaired when she is depressed. Mother's basic belief that she is a competent person could act as a mediator to reduce the impact of her depression on the mother-child relationship. This belief could also lead to more rapid and effective help-seeking since she might not have to contend with feelings of helplessness and hopelessness to the extent that mothers without this characteristic or belief would. Teti and Gelfand (1991) found that maternal self-efficacy beliefs related significantly to maternal behavioral competence independent of the effect of maternal depression. If depression and low self-efficacy were present, maternal competence was impaired. If mother's self-efficacy was higher, maternal competence was not affected when mother was depressed.

Beck (1983) portrays clinical depression as an outgrowth of the particular personality problems at a given time. Recently, he has speculated about the possibility of two different personality dimensions or structures that may be

influential in depression, Autonomy and Sociotropy, and has developed a questionnaire (Sociotropy/Autonomy Scale) to measure these dimensions. According to Beck, these personality structures are important in that they can determine the particular kinds of environmental stressors that lead to depression in certain individuals, determine the types of symptoms or depressive behaviors that will occur, and influence whether or not they respond well to certain types of treatment.

Beck describes the autonomous individual as one who is invested in protecting and enhancing his/her independence, mobility, and personal rights. Freedom of choice, action and expression are essential to this type of individual who clearly defines his/her boundaries and protects his/her domain. His/her well-being depends on whether or not he/she has the freedom to interact with the world in this way. The autonomous type of personality can be characterized by particular features or behaviors which in turn can be exacerbated by depression.

Among these are unrealistically high personal expectations or standards and a high threshold for external feedback. The autonomous individual is not particularly empathic, focuses on doing, rather than thinking and is less reflective than the sociotropic type. Autonomous individuals tend to be direct, decisive, and positive but can be dogmatic and authoritarian. They have high self-esteem and

self-confidence, need freedom to initiate action, and dislike externally imposed demands or directives. They do not like to be dependent on others for help and prefer flexible options over permanent commitment. They can also adapt better than sociotropic individuals to situations or relationships in which there is a good deal of ambiguity or variability. They judge their worth by their success in fulfilling role expectations (e.g., employee, parent, etc.). When depressed, autonomous individuals exhibit such symptoms as increased self-criticism, a loss of interest in and withdrawal from others, an unremitting depressed mood which is not affected by positive or negative events, a tendency toward hostile depression, internal attribution of difficulties to personal deficiencies, and excessive concern about ability to function. They are reluctant to seek help, choosing instead to rely on their own abilities and resources to resolve their problems. Beck (1983) states that many of these characteristics overlap with those descriptive of endogenous depression, and it also seems that they may overlap with some of the DSM-III-R criteria for Major Depression.

On the other hand, Beck describes the sociotropic type of individual as one who seeks closeness and who depends on others rather than himself/herself for reinforcement. Specifically, such individuals need people for safety, help, and gratification and depend on relationships to ensure

safety, the availability of necessary interactions, and to prevent the pain of social isolation. They need a nurturant figure because of concerns about health and fear of getting lost. They cannot tolerate rejection because rejection represents abandonment, leads to a loss of confidence in the ability to get crucial needs met, and diminishes self-esteem. Sociotropic individuals need continual reassurance that people will be accessible when needed, and they have difficulty being assertive. They tend to establish a wide circle of friends that can provide assistance when needed, and they obtain pleasure primarily from receiving. Typical sociotropic symptoms and behaviors are demanding help, dwelling on loss of gratification, frequent crying, excessive concern about personal attractiveness and other social attributes, optimism about the benefits of treatment, and a temporary response to reassurance and support. Their mood is typically labile, they are more reactive to positive or negative events, and are more likely to be characterized as anxious depressives. They may benefit from closed hospitalization, are more likely to use passive modes for suicide attempts, and are often sad and lonely. Beck (1983) suggests that the depression of the sociotropic can be described as reactive or exogenous as opposed to the endogenous depression experienced by the autonomous type. Based on the description of the sociotropic type, this group

may overlap to some extent with the DSM-III-R diagnosis of Dysthymia, at least with regard to chronicity.

Clark, Beck, and Brown (1987) tested the hypothesis that the personality dimensions of Sociotropy and Autonomy can influence the nature or character of depression. They found that the depressed individuals with high Autonomy/low Sociotropy experienced significantly less cognitive disturbance than individuals with high Sociotropy/low Autonomy. A somewhat unexpected finding was that individuals with high Sociotropy proved to be the most severely depressed. Robins (1985), using a student sample, found that while Sociotropy was a vulnerability factor for depression in this population, Autonomy was not. In this study, the sociotropic dimension, but not the autonomous dimension, discriminated between depressed and nondepressed groups. Robins suggested that, in day to day living, the sociotropic individual comes into frequent contact with situations involving social loss or rejection so that the individual differences in Sociotropy contribute to more chronic, low level depression as well as more severe depression. On the other hand, the autonomous individual may not face the particular environmental stressors that lead to depression for him/her (e.g., achievement failure or loss of autonomy) as frequently, so that the individual differences in Autonomy influence depression less frequently. These differences may be associated primarily with more severely clinical levels of

depression such as those found during a major depressive episode. Again, the population in this study consisted of a student sample as opposed to a patient sample so that a more clinically depressed group may have differed significantly from normals in Autonomy. Another interesting finding in this study was that Autonomy was related to efficacy but not self-criticism. Beck (1983) suggested that the individual who is high on Autonomy will be self-critical and that this self-criticism will be exacerbated during depression. Based on their data, these authors postulate that, while the highly autonomous individual can be self-critical when depressed, it does not follow that he/she will be self-critical when not depressed. This is an important point in that it suggests that autonomous individuals probably experience cognitive distortions only during their depressive episodes. On the other hand, if sociotropic individuals are subject to more chronic depression, then cognitive distortions or disturbances may also be chronic or at least present more frequently.

Based on both Beck's (1983) description of these two personality types and the subsequent research data (Clark, Beck, & Brown, 1987; Robins, 1985), it would seem that mothers who score high on the Autonomy scale and those who score high on the Sociotropy scale of the Sociotropy/ Autonomy Scale would respond differentially to certain types of child behavior. If these mothers are depressed, the

differences should be even greater. For example, in the study described earlier (Keane & Johnson, 1988) it was found that depressed mothers responded to child behavior that they identified as neutral more negatively than did normal mothers. In other words, when depressed mothers identified the child's behavior as neutral, their responses did not always match the child's behavior (were not neutral). Frequently their responses were negative. For nondepressed mothers, if the child's behavior was identified as neutral, an unmatched response that followed such behavior was never negative. For these mothers, if perceived neutral child behavior and mother response did not match, mother's responses were always positive. If the depressed mothers are separated into two groups consisting of high Autonomy/low Sociotropy mothers and high Sociotropy/low Autonomy mothers, it would seem that the responses of mothers in the first group to neutral child behavior would be more similar to those of nondepressed mothers than those of mothers in the second group. The high sociotropic mothers who may be characterized by chronic depression and more severe, chronic cognitive disturbances should have a tendency to focus on their negative cognitions rather than the child's behavior per se so that their responses to that behavior are based on these negative cognitions rather than the child's behavior. On the other hand, the responses of mothers in the high Autonomy/low Sociotropy group should more closely resemble

those of nondepressed mothers since this population's cognitive disturbances as described in the Clark et al. (1987) study are less severe than high Sociotropy/low Autonomy mothers. The finding that depressed mothers responded less often than nondepressed mothers to positive child behavior is also relevant to difference between the dimensions of Autonomy and Sociotropy. Just as with neutral child behavior, if the positive child behavior was not strongly positive, the sociotropic depressed mother may attend to her more salient internal stimuli or negative cognitions rather than to child behavior so that the opportunity for a positive response is not taken. Negative child behavior, on the other hand, may be more salient, or said another way, it may correspond more closely with the depressed mother's inner stimuli than does positive and neutral behavior. Responses to negative child behavior then are more typical so that perception and response are matched more frequently.

As described previously, depressed mothers in Keane and Johnson's (1988) study responded to negative child behavior at the same rate as did normal mothers. Furthermore, for depressed mothers, perceptions and responses matched more closely when the child's behavior was negative. Their responses, however, took a different form than those of normal mothers. Depressed mothers chose to employ physical and verbal negatives more than alternative methods (e.g.,

time-out), while nondepressed mothers chose to employ alternative methods more frequently. Lewinsohn (1985) and his colleagues have suggested that depressed individuals are more sensitive to negative stimuli than nondepressed individuals. If this sensitivity to negative stimuli is combined with the sociotropic individual's tendency to be overly reactive to environmental events or stimuli, then it may be that sociotropic mothers would respond more strongly to negative child behavior than autonomous mothers who are less sensitive to environmental events. If physical negatives are perceived as "stronger" negatives than alternative negatives, then physical negatives may be chosen more frequently by sociotropic mothers than by other mothers. A contributing factor to this sensitivity may be the sociotropic's sensitivity to rejection. Negative child behavior could be perceived as rejection by the depressed sociotropic mother. Similarly, since she is dependent on the environment as her primary source of reinforcement, she could see her child's negative behavior as a potential barrier to the external acceptance and support that she needs.

The sorts of maternal responses described above may lead to negative consequences for the children of such mothers. Furthermore, it appears that sociotropic depressed mothers may respond in ways that are more problematic than autonomous depressed mothers. Even when the opportunity to reinforce positive child behavior is present, sociotropic depressed

mothers may not seize this opportunity as frequently as autonomous depressed mothers or normal mothers. On the other hand, they may respond to negative behavior more frequently and more intensely. If the response rate to positive behavior is lower than the response rate to negative behavior, the consequences may be that positive child behavior, in turn, may not occur as frequently as negative child behavior. If attention, whether positive or negative, is conceptualized as reinforcement, then the child would receive more attention for negative than positive behavior. Sociotropic depressed mothers may also respond negatively to neutral child behavior. This could lead to a decrease in that type of behavior and a further restriction or narrowing of the child's response repertoire. If the sociotropic personality dimension in depression corresponds to the DSM-III-R diagnosis of Dysthymia, then such mothers may be chronically depressed or depressed a great deal of the time. It could be then that the impact of this type of depression could be greater than that of the autonomous type. Even if the autonomous personality dimension in depression corresponds to the more "severe" DSM-III-R diagnosis of major depression, an episode may occur only once in a mother's lifetime. Furthermore, she may be hospitalized, returning home only upon recovery. On the other hand, Dysthymic mothers are more likely to remain in the home, responding to

their children in problematic ways over a long period of time.

As Beck (1983) has suggested, these two personality dimensions could determine differential treatment strategies for depressed mothers. For example, the parenting skills of sociotropic depressed mothers may be deficient whereas those of autonomous depressed mothers may only be somewhat suppressed during a depressive episode. One consequence of chronic depression of the sort hypothesized to be associated with Sociotropy could be that appropriate parenting skills are never learned. Thus positive child behavior may go unrecognized and ignored while negative child behavior may be responded to in maladaptive rather than adaptive ways. This possibility should be assessed and, if necessary, treated. On the other hand, this sort of treatment could be superfluous for the autonomous depressed mother whose skills are temporarily suppressed but perfectly adequate. While cognitive therapy could be beneficial to both types of depressed mothers, the type or focus of this therapy would be different. Treatment for sociotropic, depressed mothers might focus on the perception or meaning of various types of child behavior. Appropriate parental expectations of typical child behavior would also be a therapeutic goal. Sociotropic parents may need to understand the kinds of behaviors that are typical or age-appropriate. Because of their distorted cognitions and skill deficits, parental expectations of child

behavior may also be distorted. Cognitive therapy for autonomous, depressed mothers, on the other hand, would probably be focused primarily on problem solving as a means to resolve blocked goals and to regain a perception of independence and control. Essentially, an important focus of treatment for sociotropic, depressed mothers would be parent-child interactions whereas this may not be a necessary treatment component for autonomous, depressed mothers.

In summary, maternal depression may have long-term negative and perhaps even fatal consequences for the children of such mothers. While prevention is always the ideal goal, until appropriate prevention programs are available, early identification and intervention is certainly desirable. Since depression is a heterogeneous disorder, treatment must be tailored, as closely as possible, to the particular characteristics or symptoms of the specific type of depression identified. Personality characteristics can affect the expression of depression and Beck (1983) has proposed two personality dimensions that may influence its etiology, nature, symptom pattern, course, and treatment. If, in this study, sociotropic and autonomous depressed mothers respond differentially to child behavior as predicted, then these results will lend some support to Beck's hypothesis. His approach, combining somewhat stable personality characteristics with a depressive disorder may enable us to develop treatment strategies that address

specific symptom patterns more efficiently and effectively. Additionally, the results of this study may add more support for the idea that cognitions have an important impact on behavior. While many authors would agree that cognitions are covert behavior, there is disagreement concerning their relationship to overt behavior. In the Keane and Johnson study (1988), the fact that the responses of depressed mothers to child behavior that they perceived as neutral did not always match that behavior (were not always neutral), suggests that a cognitive process may have intervened between perception and response leading to a response that did not match the initial perception. This finding provides some evidence for the impact of covert cognitive processes on overt behavior. In the present study, it may be found that a particular kind or category of depression (depressed mothers who score high on the Sociotropy scale) which is said to involve significant cognitive impairment, leads to a particular kind of behavioral response, while a second category which is said to involve a lesser impairment of cognitions, leads to a different response. This sort of finding would add support to the idea that cognitive behavior has a significant impact or effect on overt behavior. Such a finding would not, however, say anything about causality since the design of the study does not lend itself to such speculations.

The purpose of this study is to attempt to identify two distinct populations of maternal depressives using the measures and criteria that Beck has proposed to identify the autonomous and sociotropic personality dimensions. Once identified, the responses of these two groups of depressed mothers to child positive, negative, and neutral behavior will be assessed and compared. Additionally, these two groups will be compared to two groups of nondepressed mothers. These two groups of nondepressed mothers will also be determined by Beck's criteria and measures. Specifically, mothers will be divided into the following four groups: 1) depressed-sociotropic mothers -- those mothers who are defined as high /sociotropic/low autonomous according to Beck's Sociotropy/Autonomy Scale (SAS) and who have received a DSM-III-R diagnosis of unipolar depression; 2) nondepressed-sociotropic mothers -- those mothers who are defined as high sociotropic/low autonomous and have never received a DSM-III-R diagnosis of depression; 3) depressed-autonomous mothers -- those mothers who are defined as high autonomous/low sociotropic according to Beck's SAS and who have received a DSM-III-R diagnosis of unipolar depression; and 4) nondepressed-autonomous mothers -- those mothers who are defined as high autonomous/low sociotropic and have never received a DSM-III-R diagnosis of depression.

This study proposes to examine the responses of these four groups of mothers to positive, negative, and neutral

child behavior and to determine whether or not any differences in maternal responding can be associated with depression and/or the two personality dimensions proposed by Beck (1983). A secondary question is whether, within the group of depressed mothers, a sociotropic designation will be synonymous with a previous DSM-III-R diagnosis of Dysthymia while an autonomous designation will be synonymous with a previous DSM-III-R diagnosis of Major Depressive Episode. While significant differences are expected between the depressed-sociotropic mothers and all other groups, the differences are expected to be the greatest between the group of depressed-sociotropic mothers and the nondepressed-autonomous mothers. Differences between depressed-sociotropic mothers and depressed-autonomous mothers are also expected to be evident and may be greater than those between depressed-sociotropic and nondepressed-sociotropic mothers. This is an interesting question since it could address the issue of the contribution of personality traits versus the contribution of psychological states to behavior.

More specifically, it is predicted that the responses of depressed-sociotropic mothers to neutral child behavior will be more negative than positive when their perceptions of that behavior and their responses to that behavior do not match (Hypothesis #1). The responses of depressed-autonomous mothers to neutral child behavior, on the other hand, will more closely resemble those of nondepressed mothers. When

perception and response do not match, the responses of depressed-autonomous mothers to neutral child behavior will be in the positive rather than the negative direction. A second prediction is that depressed-sociotropic mothers will less frequently identify positive child behavior than depressed-autonomous mothers. There will be no significant differences between depressed-autonomous mothers and nondepressed mothers in terms of the frequency of their identification of positive child behavior (Hypothesis #2). A final prediction is that the responses of depressed-sociotropic mothers to negative child behavior will take a different form than those of depressed-autonomous mothers. Negative physical and verbal responses will be more typical of depressed-sociotropic mothers, whereas alternative responses will be more typical of both autonomous and nondepressed mothers (Hypothesis #3).

CHAPTER II

METHOD

Subjects

In the initial or screening phase of the study, a packet containing three questionnaires and a consent form was mailed to each prospective mother. The three questionnaires were the Beck Depression Inventory (BDI), the Minnesota Multiphasic Personality Inventory-Depression Scale (MMPI-D) and the Sociotropy/Autonomy Scale (SAS). One hundred and sixty-six mothers who had at least one child between the ages of five and twelve years agreed to participate in this phase. Mothers were instructed to fill out the questionnaires, sign the consent form, and return all materials to the investigator at the University of North Carolina at Greensboro in an enclosed, stamped envelope. Of these 166 mothers, 115 returned the completed packet for a return rate of 69%. Mothers who returned the completed questionnaires were contacted by telephone as soon as the questionnaires were scored. Those mothers whose scores met the study criteria (see "Subject Selection") were invited to participate in the second or laboratory phase of the study. Those mothers whose scores did not meet the study criteria were given an explanation of their scores and thanked for their participation in the initial phase of the study. Of

the 115 who returned completed packets, 73 met the criteria for participation in the laboratory phase. Twelve of these mothers decided not to participate in the laboratory phase. The data of nine of the 61 mothers who actually completed both the initial phase and the laboratory phase of the study were eliminated from the frequency counts and the statistical analyses because of disqualifying information (e.g., a previous episode of mania or hypomania) revealed during a structured interview conducted in the laboratory phase. All 61 mothers who completed both phases of the study received ten dollars.

Table 1 contains the means and standard deviations for selected demographic variables for the 52 mothers whose data were selected for inclusion in this study. Included in Table 2 are the frequencies and percentages for the remainder of the demographic variables for these 52 mothers. The subject selection process is described in more detail below.

Subject Selection

All prospective subjects in the depression groups were recruited through newspaper advertisements and referrals from public mental health clinics and private practitioners, both psychologists and psychiatrists, in the Triad area. Prospective subjects in the nondepressed groups were recruited on the campus of the University of North Carolina

Table 1

Means and Standard Deviations of Selected Demographic Variables for All Mothers

Variable	Mean	Standard Deviations
Age	37.8	4.9
Education (highest grade completed)	15.4	2.2
Number of marriages	1.3	0.7
Number of children	2.2	0.9
Number of female children	1.3	0.9
Number of male children	0.9	0.8
Age of child #1	10.9	4.4
Age of child #2	8.2	3.8
Age of child #3	8.0	3.1
Age of child #4	5.7	2.2
Age of child #5	1.0	.

Table 2

Frequencies and Percentages for Selected Demographic Variables for All Mothers

Variable	Category	Frequency	Percent
Income	0 - $25,000	7	13.5
	$25,000 - $50,000	22	42.3
	$50,000 - $75,000	14	26.9
	$75,000 - $100,000	5	9.6
	Above $100,000	4	7.7
Work Status	Out of home	26	51.0
	Homemaker	19	37.3
	Part-time	6	11.8
Religion	Protestant	42	80.8
	Catholic	2	3.8
	Jewish	3	5.8
	None	5	9.6
Marital Status	Married	42	80.8
	Separated	5	9.6
	Divorced	4	7.7
	Widowed	1	1.9

at Greensboro (UNCG) and from local day care centers. All prospective subjects, referred or recruited, were contacted by mail and/or telephone. A brief explanation of the study and a description of their participation in it was provided (see Appendix A for Consent Forms I & II). Those mothers who chose not to participate were thanked for their consideration of the study. Those mothers who chose to participate received the packet of questionnaires.

Mothers who returned the questionnaires, whose scores on those questionnaires met the study criteria and who agreed to continue, were assigned to one of four groups based on their scores. They were first classified as depressed or nondepressed based on their scores on two questionnaires, the Beck Depression Inventory (BDI) and the Minnesota Multiphasic Personality Inventory-Depression Scale (MMPI-D). A BDI score equal to or greater than 13 and an MMPI-D score equal to or greater than 70T was required for assignment to the depressed group. A BDI score of 13 or less and an MMPI-D score of less than 70T was required for assignment to the nondepressed group.

Each group of mothers, both depressed and nondepressed were subdivided into two smaller groups based on their responses to the third questionnaire, the Sociotropy/ Autonomy Scale (SAS), which is a measure of two different personality styles or dimensions. Because of the absence of norms and/or consistent guidelines in the literature for

determining the classification of subjects as autonomous or sociotropic, a preponderance of one score over the other was used. Subjects were considered to be predominantly sociotropic if their Sociotropy score exceeded their Autonomy score by 15 points or more. Likewise, they were considered to be predominantly autonomous if their Autonomy score predominated by 15 points or more. Hammen, Ellicott, Gitlin and Jamison (1989) used a preponderance score exceeding three points based on their desire to maximize the sample sizes. The decision to use a difference score of 15 points or more in this study was based on the desire to maximize differences between the two personality dimensions. Nevertheless, since the criteria for classification of subjects as autonomous or sociotropic are not clear and because difference scores of subjects in this study ranged from 15 points to 52 points, the data of subjects with high difference scores was compared to that of subjects with low difference scores. All analyses performed to test the hypotheses were repeated to ensure that the results obtained were not a function of the variable scores on the SAS. None of the analyses revealed any differences between the performance of subjects with high difference scores versus those with low difference scores.

The final 52 participants were thus selected to fall into four groups of 13 mothers each. Designations for the four groups were depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic and nondepressed-

autonomous. The means and standard deviations of selected demographic variables by group are included in Table 3. Tables 4 through 7 include the frequencies and percentages for the remainder of the demographic variables by group. Included in Table 8 are the means and standard deviations of the BDI, MMPI-D and SAS scores for all subjects, while Table 9 includes the same information by group.

In the laboratory phase, demographic information was collected so that the characteristics of this particular sample could be determined. A structured interview, the Schedule for Affective Disorders and Schizophrenia (SADS) was also administered in this phase. The SADS was employed to supplement the data from the screening instruments (i.e., BDI & MMPI-D) and to determine whether or not subjects met the Research Diagnostic Criteria (RDC) for a Major Depressive Episode and/or a Minor Depressive Episode. It was also employed to discriminate between unipolar and bipolar depression. The data of mothers who met the criteria for bipolar depression were not included in the frequency counts and the statistical analyses of this study. Information collected in this interview, case records and referral notes, when available, were also used to determine whether or not subjects met the Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised (DSM-III-R) criteria for Major depression and/or Dysthymia. All subjects fell into one of five diagnostic categories used for the purpose of

Table 3

Group Means and Standard Deviations of Selected Demographic Variables

Group	Variable	Mean	Standard Deviation
Depressed Sociotropic	Age	36.4	5.0
	Education	15.2	2.0
	Number of marriages	1.2	0.4
	Number of children	1.9	0.3
	Number of female children	1.2	0.8
	Number of male children	0.8	0.7
	Age of child #1	11.5	4.2
	Age of chlid #2	7.8	3.2
	Age of child #3	.	.
	Age of child #4	.	.
	Age of child #5	.	.
Depressed Autonomous	Age	40.8	4.2
	Education	14.8	2.4
	Number of marriages	1.6	1.0
	Number of children	2.3	1.1
	Number of female children	1.3	1.0
	Number of male children	1.0	0.7
	Age of child #1	12.8	4.9
	Age of child #2	11.1	3.7
	Age of child #3	8.5	2.9
	Age of child #4	7.5	0.7
	Age of child #5	.	.
Nondepressed Sociotropic	Age	36.6	4.9
	Education	14.8	2.0
	Number of marriages	1.1	0.3
	Number of children	2.5	1.0
	Number of female children	1.7	1.0
	Number of male children	0.8	0.4
	Age of child #1	8.9	3.1
	Age of child #2	6.7	2.7
	Age of child #3	7.2	4.0
	Age of child #4	3.0	.
	Age of child #5	1.0	.
Nondepressed Autonomous	Age	37.4	4.6
	Education	16.7	1.9
	Number of marriages	1.2	0.6

Table 3 - Continued

Number of children	2.2	0.9
Number of female children	1.1	0.9
Number of male children	1.0	1.1
Age of child #1	10.2	4.6
Age of child #2	7.7	4.9
Age of child #3	8.3	3.0
Age of child #4	5.0	.
Age of child #5	.	

Table 4

Frequencies and Percentages for Annual Income by Group

Group	Variable	Category	Frequency	Percent
Depressed Sociotropic	Income	0 - $25,000	2	15.4
		$25,000 - $50,000	7	53.8
		$50,000 - $75,000	4	30.8
		$75,000 - $100,000		
		Above $100,000		
Depressed Autonomous	Income	0 - $25,000	2	15.4
		$25,000 - $50,000	5	38.5
		$50,000 - $75,000	5	38.5
		$75,000 - $100,000	1	7.7
		Above $100,000		
Nondepressed Sociotropic	Income	0 - $25,000	2	15.4
		$25,000 - $50,000	4	30.8
		$50,000 - $75,000	4	30.8
		$75,000 - $100,000	2	15.4
		Above $100,000	1	7.7
Nondepressed Autonomous	Income	0 - $25,000	1	7.7
		$25,000 - $50,000	6	46.2
		$50,000 - $75,000	1	7.7
		$75,000 - $100,000	2	15.4
		Above $100,000	3	23.1

Table 5

Frequencies and Percentages for Work Status by Group

Group	Variable	Category	Frequency	Percent
Depressed Sociotropic	Work Status	Out of home	6	46.2
		Homemaker	6	46.2
		Part-time	1	7.7
Depressed Autonomous	Work Status	Out of home	6	46.2
		Homemaker	7	53.8
		Part-time		
Nondepressed Sociotropic	Work Status	Out of home	5	41.7
		Homemaker	5	41.7
		Part-time	2	16.7
Nondepressed Autonomous	Work Status	Out of home	9	69.2
		Homemaker	1	7.7
		Part-time	3	23.1

Table 6

Frequencies and Percentages for Religion by Group

Group	Variable	Category	Frequency	Percent
Depressed Sociotropic	Religion	Protestant	12	92.3
		Catholic		
		Jewish		
		None	1	7.7
Depressed Autonomous	Religion	Protestant	10	76.9
		Catholic		
		Jewish		
		None	3	23.1
Nondepressed Sociotropic	Religion	Protestant	9	69.2
		Catholic	2	15.4
		Jewish	1	7.7
		None	1	7.7
Nondepressed Autonomous	Religion	Protestant	11	84.6
		Catholic		
		Jewish	2	15.4
		None		

Table 7

Frequencies and Percentages for Marital Status by Group

Group	Variable	Category	Frequency	Percent
Depressed Sociotropic	Marital Status	Married	9	69.2
		Separated	3	23.1
		Divorced	1	7.7
		Widowed		
Depressed Autonomous	Marital Status	Married	11	84.6
		Separated	1	7.7
		Divorced		
		Widowed	1	7.7
Nondepressed Sociotropic	Marital Status	Married	11	84.6
		Separated	1	7.7
		Divorced	1	7.7
		Widowed		
Nondepressed Autonomous	Marital Status	Married	11	84.6
		Separated		
		Divorced	2	15.4
		Widowed		

Table 8

Means and Standard Deviations of BDI, MMPI-D and SAS Scores for All Mothers

Variable	Mean	Standard Deviation
BDI	14.4	11.1
MMPI-D	27.7	8.6
SAS 1[a]	96.1	15.9
SAS 2[b]	94.2	21.2

[a] = Autonomy score
[b] = Sociotropy score

Table 9

Means and Standard Deviations of BDI, MMPI-D and SAS Scores by Group

Group	Variable	Mean	Standard Deviation
Depressed Sociotropic	BDI	23.5	7.1
	MMPI-D	36.0	3.9
	SAS 1[a]	91.1	8.7
	SAS 2[b]	120.2	8.3
Depressed Autonomous	BDI	22.0	11.6
	MMPI-D	33.8	5.3
	SAS 1[a]	109.8	13.0
	SAS 2[b]	78.8	13.5
Nondepressed Sociotropic	BDI	8.1	3.6
	MMPI-D	22.2	5.0
	SAS 1[a]	78.2	9.1
	SAS 2[b]	102.6	11.1
Nondepressed Autonomous	BDI	4.0	4.0
	MMPI-D	18.7	3.1
	SAS 1[a]	105.2	8.6
	SAS 2[b]	75.4	9.6

[a] = Autonomy score
[b] = Sociotropy score

this study. These five categories were major depression-recurrent, major depression-single episode, dysthymia, "double" depression (major depression and dysthymia) and no diagnosis. Table 10 contains the frequencies and percentages of each interview diagnosis used for all mothers, while Table 11 contains the frequencies and percentages of each interview diagnosis by group.

Measures

A description of each of the measures completed by mothers in the initial phase of the study and of the structured interview used in the laboratory phase of the study follows.

The Sociotropy-Autonomy Scale (SAS) (Beck, Epstein, Harrison and Emery, 1983) is a 60 item self-report scale designed to measure the concepts of the sociotropic and autonomous dimensions of personality. There are 30 items measuring Sociotropy and 30 items measuring Autonomy. The items included in the Sociotropy scale reflect concern with disapproval by others and efforts to secure attachment to others, while the items included in the Autonomy scale reflect achievement orientation, concern with the possibility of personal failure, and the maximization of control over the environment (see Appendix B). Subjects are asked to rate, on a five point scale how often each statement applies to them (e.g., 1=0%, 2=25%, 3=50%, 4=75%, 5=100%). Test takers

Table 10

Frequencies and Percentages of Each Interview Diagnoses for All Mothers

Variable	Category	Frequency	Percent
Interview Diagnosis	Major depression/recurrent	8	15.4
	Major depression/single episode		
	Dysthymia	5	9.6
	Double Depression	13	25.0
	No Diagnosis	26	50.0

Table 11

Frequencies and Percentages of Each Interview Diagnosis by Group

Group	Variable	Category	Frequency	Percent
Depressed Sociotropic	Interview Diagnosis	Major depression/ recurrent	4	30.8
		Major depression/ single episode		
		Dysthymia	2	15.4
		Double Depression	7	53.8
		No Diagnosis		
Depressed Autonomous	Interview Diagnosis	Major depression/ recurrent	4	30.8
		Major depression/ single episode		
		Dysthymia	3	23.1
		Double Depression	6	46.2
		No Diagnosis	26	50.0
Nondepressed Sociotropic	Interview Diagnosis	Major depression/ recurrent		
		Major depression/ single episode		
		Dysthymia		
		Double Depression		
		No Diagnosis	13	100.0
Nondepressed Autonomous	Interview Diagnosis	Major depression/ recurrent		
		Major depression/ single episode		
		Dysthymia		
		Double Depression		
		No Diagnosis	13	100.0

circle the appropriate number for each item, and an arithmetic sum is computed for each scale.

Factor analyses have found three factors associated with each personality dimension (Beck et al., 1983). The three sociotropic factors are "Concern about Disapproval", "Attachment/Separation concerns", and "Pleasing Others". The autonomous factors are "Individual Achievement", "Mobility/Freedom from Control", and "Preference for Solitude".

Duran and Hammen (1989), using a sample of 51 unipolar and bipolar subjects, found that alpha coefficients were .93 for Sociotropy and .88 for Autonomy. Over a six month period, test-retest reliability for a sample of 14 subjects was .82 ($p<.001$) for Sociotropy and .66 ($p=.01$) for Autonomy. Stable classifications at both testings were reported for 86% of the subjects. Construct validity was indicated by a strong positive correlation between Sociotropy scores and the scores on the "emotional reliance on another person" subscale of the Interpersonal Dependency Inventory (IDI; $r=.66$, $p<.001$) (Hirschfield, Klerman, Gough, Barrett, Korchin and Chodoff, 1977) and between Autonomy and the scores on the "assertion for autonomy" subscale of the IDI ($r=.43$, $p<.001$).

A review of the psychometric status of the SAS (Clark, 1988) reported internal consistency statistics from three studies and internal reliability statistics for the six factors of the SAS from two studies. Test-retest reliability

was reported for one study. Beck, Epstein & Harrison (1983) reported alpha coefficients of .93 and .86 for the original 126 item SAS. Beck, Epstein, Harrison and Emery (1983) also reported alphas of .90 and .83 for Sociotropy and Autonomy based on a patient sample. Robins (1985) reported alphas of .90 for Sociotropy and .80 for Autonomy using the 60 item SAS on a sample of 424 undergraduates. Robins also assessed internal reliability for the six factors of the SAS. He found that, in general, the factors had good psychometric properties. The alpha coefficients for the three Sociotropy factors ranged from .86 to .75 in this study and in the Beck et al. (1983) study. The first autonomous factor has also showed acceptable internal consistency with alpha coefficients at .82 (Beck et al., 1983) and .79 (Robins, 1985). The second autonomous factor appears to vary in terms of stability between clinical samples with a reported alpha of .76 (Beck et al., 1983) and non-clinical samples with a reported alpha of .56 (Robins, 1985). The third autonomous factor, however, consistently appears to be unstable. Beck et al. (1983) reported an alpha of .60 while Robins (1985) reported an alpha of .63 for this factor. Similarly, Robins (1985) found that while all factors of the SAS demonstrated moderate stability across four to six weeks, the correlations were lower for the Autonomy factors than for the Sociotropy factors.

The SAS is still in the developmental stage, and while it appears that the psychometric properties of the primary dimensions, Sociotropy and Autonomy, are good, the psychometric properties of the factors within these dimensions are not as stable. As a result, a decision was made to look only at the primary dimensions rather than at their factors in this study.

The Beck Depression Inventory (BDI) (Beck et al., 1961) is a global measure of depression best used to evaluate the severity of depression (see Appendix C). It consists of twenty-one items which assess a variety of characteristics of depression. These items are scored on a range of 0 to 3 with the lowest possible total score being 0 and the highest possible total score being 63. It is scored by summing the highest numbers for each item that the subject endorses. The higher the score, the more severe the depression.

Hammen (1981) suggests that the BDI may be the most satisfactory of all the multi-symptom self-rating scales. It is used as a pre- and post-treatment measure and as a periodic measure in depression research. While the typical criterion for assignment to a depressed group is a score of 20 or greater, the criterion was lowered to 13 or greater in this study. This was done because subjects are instructed to endorse items based on the way that they feel at the moment. Momentary fluctuations of mood can sometimes lead to false negatives. This characteristic is, in part, why the BDI is

not typically used to diagnose depression (Hammen, 1981). In this study, the BDI was used primarily as a screening instrument for the severity of depression while the SADS interview and the MMPI-D scale were used as diagnostic measures. All depressed subjects with atypically low BDI scores had high MMPI-D scores and met both RDC and DSM-III-R criteria for an affective disorder.

The Minnesota Multiphasic Personality Inventory-Depression Scale (MMPI-D) is a subscale of the Minnesota Multiphasic Personality Inventory (MMPI) (Hathaway & McKinley, 1942) which is extensively used in both research and clinical settings (see Appendix D). It is one of the best known self-report measures for depression (Lewinsohn & Lee, 1981). The Depression Scale consists of sixty heterogeneous true-false items.

The MMPI-D scale has been shown to correlate significantly with other self-report depression scales (Seitz, 1970) and to correlate substantially with interview ratings. Over the years there have been several attempts to revise the MMPI depression scale to increase internal consistency (Dempsey, 1964) and discriminant validity (Costello & Comrey, 1967). According to Dahlstrom et al. (1972) however, there is very little evidence that any of the modifications have led to improvement. Normative data indicates that the average score on the MMPI-D scale is 50T

(raw score of 19). A T score of 70 (raw score of 29) is two standard deviations above the mean.

The Schedule for Affective Disorders and Schizophrenic (SADS) (Endicott & Spitzer, 1978, Shortened version suggested by Lewinsohn, Biglan, & Zeiss, 1976) is a structured interview guide and rating scale developed to provide a method for research investigators to elicit information from subjects about functional psychiatric illnesses (see Appendix E). This information is to be used in conjunction with the RDC (Spitzer, Endicott & Robins, 1978), a diagnostic system designed to reliably classify affective disorders as well as other psychiatric disorders. Lewinsohn and Lee (1981) have suggested that the RDC is the most well developed and perhaps the best diagnostic system for affective disorders available. Research on diagnostic reliability suggests that it reliably distinguishes between affective disorders and other psychiatric disorders and between various subtypes of depression. According to Lewinsohn and Lee (1981), Kappa coefficients to assess inter-rater reliability are above chance levels.

Since the SADS manual of instruction suggests that all available information (e.g., case records, referral notes, etc.) be used along with the information collected during the SADS interview, it was possible to classify subjects into groups based on this system and the DSM-III-R classification system.

Procedure

Each of the mothers who participated in the laboratory phase, observed a ten minute video tape of a five-year-old boy (the target child) engaged in a variety of behaviors, including interactions with peers and solitary play, in a day care setting. This tape was observed two times under two different experimental conditions. The order of the presentation of the two experimental conditions was alternated from subject to subject.

In the first condition (Condition A), mothers were instructed to stop the tape and fill out a recording form (Recording Form A) each time the target child behaved in a way that they would ordinarily respond to if they were the child's mother and in that situation with the child. Maternal responses were defined as any type of behavior that the child would be aware of. Recording Form A included eight spaces to record the following information: (1) the time elapsed (superimposed on the tape), (2) a brief written description of the child's behavior at that time, (3) a rating of the child's behavior on a 7 point Likert scale ranging from 1 (very positive) to 7 (very negative), (4) a brief description of how the subject would respond to that behavior, (5) a brief explanation of why that response was chosen, (6) a speculation as to what the child would do given the mother's response, (7) a statement of how the mother would feel given the child's response (in #6) and a rating of

the degree to which the subject felt that the behavior (described in #2) was typical of a child that age. This rating was also on a 7 point Likert scale ranging from 1 (very typical) to 7 (not typical).

In the second condition (Condition B), mothers were instructed to fill out a recording form (Recording Form B) every time the instruction, "Please press pause and fill out your recording form now", appeared on the television screen. Recording Form B differed from Recording Form A in two ways. A space for the time elapsed was not included since the tape was stopped in the same twenty-five places for all subjects and the recording forms were numbered one through twenty-five. An extra statement included at the end of Recording Form B stated: "[] Put a check ( ) in the box if you would not respond to this behavior." Thus, in this condition all mothers had twenty-five recording forms, but not all of them were filled out. Examples of these forms are included in Appendix F.

All participants completed the experiment in a quiet laboratory room at the University of North Carolina at Greensboro or an office at the referral facility. The experimenter was not present during the procedure, and participants placed their completed data in a manila envelope identified only by a number. They were asked to seal the envelope once the experiment was completed. They were informed that their data would be tabulated by the

experimenter and entered into the computer identified only by the number on the envelope. These procedures were employed to reduce some of the demand characteristics present in the experiment.

The SADS interview was administered immediately after the experimental procedure. Demographic information was also collected at this time.

Scoring Procedure

Recording forms A and B were identical except for the two exceptions described under the subheading "Procedure." The numbering on the two forms of the questions that subjects responded to differed, however, because when responding on Recording Form A, subjects had to first record the time that they stopped the videotape. It was necessary to know where the tape was stopped in Condition A so that the data collected in this condition could be compared to that collected in Condition B where the videotape stopped on twenty-five occasions and instructed subjects to fill out a recording form (if they would have responded to the target child's behavior). These twenty-five occasions on Tape B represented positive, negative and neutral behavioral segments. There were seven positive behavioral segments, nine neutral behavioral segments and nine negative behavioral segments interspersed throughout the videotape. These twenty-five behavioral segments and their positive, negative and neutral designations were based on data collected from a

normative group used in the Keane and Johnson (1988) study described in Chapter I.

Mothers' responses to the seven identical questions on Recording forms A and B were scored in the following way. Each response to each question on a response form was assigned to a particular category. The response categories for the first question (#2 on A and #1 on B) "Briefly describe the child's behavior at the point where you stopped the videotape," were positive, negative, and neutral. Next, mothers rated the child's behavior on a Likert scale ranging from 1-7 with 1 being extremely positive and 7 being extremely negative (#3 on A and #2 on B). Responses of 1 and 2 were categorized as positive, responses of 3, 4, and 5 were categorized as neutral, and responses of 6 and 7 were categorized as negative. Responses to the next question, (#4 on A and #3 on B) "Describe briefly how you as the child's mother would respond to this behavior," were assigned to one of eight categories. The categories were: positive, neutral, negative verbal, negative physical, negative other (i.e., time out, negative facial expressions, requests that the child apologize or share, etc.), negative verbal and other, negative physical and other, and mixed (positive and negative). For the purpose of testing Hypothesis #3, the negative verbal and negative physical categories were collapsed. The categories of negative other, negative verbal and other, and negative physical and other were also

collapsed and designated as alternative negative responses. The category of mixed (positive and negative) was not included in this analysis nor were the categories of positive or neutral.

Responses to Question #5 on Response form A (#4 on Response form B) "Explain briefly why you chose to respond in that way", were also assigned to one of eight categories. The categories were: target child encouragement, target child deterrence, other child encouragement, other child deterrence, target child prevention, other child prevention, target child teaching, and mixed. To look at the impact of depression, the categories of target child encouragement, other child encouragement, and target child teaching were combined and labeled "encourage/teach." The categories of target child deterrence, other child deterrence, target child prevention, and other child prevention were also combined and labeled "deter/prevent." It was felt that the categories included in "encourage/teach" represented a more positive view and approach, while the categories included in "deter/prevent" represented a more negative view and approach. The categories, other child encouragement, other child deterrence, and other child prevention were collapsed as were the categories target child encouragement, target child deterrence, and target child prevention to look at whether sociotropic mothers responded more frequently than

autonomous mothers to the behavior of children involved in interactions with the target child.

Responses to the Question (#6 on A, #5 on B), "Given your response what would your child do?", were assigned to one of nine categories. The categories were overt positive, overt negative, overt neutral, affective positive, affective negative, affective neutral, mixed negative (affective and overt), mixed positive (affective and overt), and mixed (positive and negative). Eight of these nine categories were collapsed into three categories for the purpose of analysis. Overt positive, affective positive, and mixed positive were categorized as simply positive while overt negative, affective negative, and mixed negative were categorized as negative. The two neutral categories were collapsed and categorized as neutral while mixed responses (positive and negative) were not included. Responses to the question (#7 on A, #6 on B) "How would you feel if your child responded that way?" were assigned to four categories: positive, negative, neutral, and mixed (positive and negative). Responses in the mixed category were not included in the data analysis.

Responses to the last question (#8 on A, #7 on B), "How typical is this behavior for children of this age?" were also made on a Likert scale ranging from 1-7 with 1 being very typical and 7 being not typical. Responses of 1 and 2 were

categorized as being very typical, 3, 4, and 5 as typical, and 6 and 7 as not typical.

All of the data was scored by the principal investigator. A trained clinical graduate student who was blind to the hypotheses of the study and to mothers' clinical status and personality type scored twenty-five percent of the data (data for 13 subjects) for a reliability check.

Chapter III

RESULTS

Preliminary Analyses

Interrater reliability was calculated for the scoring of responses on both forms A and B. Two raters independently scored data from 13 subjects (25% of the final sample). Overall percentage of agreement was 91%.

In addition to interrater reliability, several other preliminary analyses were performed. Mothers' overall number of responses in Condition A were compared to those in Condition B. Additionally, the frequency of mothers' perceptions of child behavior as positive, negative, or neutral, and the frequency of her responses to those types of behavior in Condition A and Condition B were examined. Finally, mothers' perceptions of child behavior as positive, negative, or neutral were compared to those of the normative group from the Keane and Johnson (1988) study.

As described in the "Procedure" section of Chapter II, mothers in Condition A made the decision when to stop the videotape and fill out a response sheet. In Condition B, however, they were given instructions to stop the videotape on 25 specific occasions. While these instructions were given on 25 occasions, mothers did not actually have to complete 25 response forms. There was a box on Recording

Form B for mothers to check if they would not have responded at that point in time. Thus a point of interest was whether or not mothers' actual responses were more frequent in Condition B than in Condition A since Condition B appeared to have increased demand characteristics. In terms of overall numbers of response forms, mothers produced 586 response forms in Condition A and 654 response forms in Condition B for an overall difference of 3% between the two conditions.

The means and standard deviations for each of the four groups of mothers for the number of times mothers stopped the tape in Condition A, the number of response forms completed in Condition B, and the proportion of agreement between the two conditions can be seen in Table 12. Nondepressed-autonomous mothers had the highest agreement between the two conditions (proportion = .86). The proportion of agreement was identical for the other three groups (proportion = .82). A one-way analysis of variance on the proportion of agreement for the four groups of mothers revealed no significant differences among the groups, $F(3, 48) = 0.48$, $p = 0.6989$ (see Table 13).

A second and related question was whether or not mothers in Condition A perceived and responded to one of the three types of child behavior (positive, negative, and neutral) more frequently than in Condition B. The most frequent perception and the most frequent response in both conditions was a neutral one, while the least frequent perception and

Table 12

Group Means and Standard Deviations for the Number of Times Mothers Stopped the Videotape in Condition A, Completed Response Forms in Condition B and the Proportion of Agreement between the Two Conditions.

Group	Number or Proportion	Mean	Standard Deviation
Depressed Sociotropic	# Stop/Condition A	11.54	2.15
	# Respond/Condition B	12.85	2.61
	Agreement between A & B	0.82	0.09
Depressed Autonomous	# Stop/Condition A	11.38	3.97
	# Respond/Condition B	12.38	3.36
	Agreement between A & B	0.82	0.06
Nondepressed Sociotropic	# Stop/Condition A	10.77	2.68
	# Respond/Condition B	12.69	2.21
	Agreement between A & B	0.82	0.11
Nondepressed Autonomous	# Stop/Condition A	11.38	2.63
	# Respond/Condition B	12.38	3.18
	Agreement between A & B	0.86	0.08

Table 13

One-way Analysis of Variance on the Proportion of Agreement between Completed Response Forms in Conditions A and B by Group

Source	df	Sum of Squares	Mean Squares	F-Value	p
Group	3	0.01083077	0.00361026	0.48	0.6989
Error	48	0.36233846	0.00754872		
Corrected Total	51	0.37316923			

response in both conditions was a positive one. The frequencies and percentages of all mothers positive, negative, and neutral perceptions and responses are included in Tables 14 & 15.

Mothers perceptions of the target child's behavior as positive, negative, or neutral in Conditions A and B in this study were compared to those of the normative group in the Keane and Johnson (1988) study. The means and standard deviations of the proportion of agreement with the normative group for all four groups of mothers in both conditions are included in Table 16. A one-way analysis of variance on the proportion of agreement with the norm was performed for each condition. There were no significant differences among any of the groups in either Condition A [$F(3, 48) = 2.42$, $p = 0.0776$] or Condition B [$F(3,48) = 1.23$, $p = 0.3085$] (see Tables 17 and 18).

To control for experiment-wise error, since Condition A and Condition B were analyzed separately, all analyses in this study were conducted at the .025 alpha level.

Hypothesis #1: Depressed-sociotropic mothers will respond negatively to perceived neutral child behavior more frequently than the other three groups of mothers.

To test this hypothesis, consistency between maternal perception of child behavior and maternal response to child behavior was assessed. An overall agreement score was

Table 14

Frequencies and Percentages of Positive, Negative and Neutral Perceptions of Child Behavior for Conditions A and B

	Condition A		Condition B	
Perceptions	Frequency	Percent	Frequency	Percent
Positive	82	14.2	114	17.5
Negative	206	35.7	228	35.0
Neutral	289	50.1	310	47.5

Table 15

Frequencies and Percentages of Positive, Negative and Neutral Responses to Child Behavior for Conditions A and B

	Condition A		Condition B	
Responses	Frequency	Percent	Frequency	Percent
Positive	122	20.9	168	25.7
Negative	224	38.4	231	35.3
Neutral	238	40.8	255	39.0

Table 16

Group Means and Standard Deviations for the Proportion of Agreement with Perceptions of the Normative Group in Keane and Johnson (1988) Study for Conditions A & B

	Condition A		Condition B	
Group	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	0.73	0.14	0.65	0.22
Depressed Autonomous	0.54	0.21	0.49	0.29
Nondepressed Sociotropic	0.56	0.21	0.55	0.24
Nondepressed Autonomous	0.56	0.26	0.62	0.18

Table 17

One-way Analysis of Variance on the Proportion of Agreement with the Perceptions of Normative Group in Keane and Johnson (1988) Study by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-Value	p
Group	3	0.31669679	0.10556560	2.42	0.0776
Error	48	2.09409120	0.04362690		
Corrected Total	51	2.41078798			

Table 18

One-way Analysis of Variance on the Proportion of Agreement with the Normative Group in Keane and Johnson (1988) Study by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.20494726	0.06831575	1.23	0.3085
Error	48	2.66268177	0.05547254		
Corrected Total	51	2.86762903			

calculated by first counting the total number of segments that a mother responded to. Next, the number of times a mother's perception of a child behavior was consistent with her response to that behavior was calculated. Finally the proportion of agreements to segments was computed for an overall agreement score. The frequencies and percentages of agreement and disagreement for all mothers in Conditions A and B are presented in Table 19. Agreement scores for each type of child behavior (positive, negative, and neutral) were also calculated. The means and standard deviations of the overall proportion of agreement between maternal perceptions and responses and the proportion of agreement for all three types of behavior in both conditions for each of the four groups are included in Tables 20 and 21. A one-way analysis of variance on the overall agreement score compared consistency across the four groups. An analysis was performed for both Condition A and Condition B. The analyses revealed that there were no significant differences among the four groups, in Condition A [$F(3, 48) = 1.17$, $p = 0.3301$] nor in Condition B [$F(3, 48) = 2.88$, $p = 0.0455$] (see Tables 22 and 23).

Differences between the proportion of agreement between maternal perception and maternal responses for each type of child behavior (positive, negative, and neutral) among the four groups in Conditions A and B were also tested with one-way analyses of variance. The analysis of the proportion

Table 19

Frequencies and Percentages of Agreement and Disagreement between Maternal Perceptions and Maternal Responses for All Mothers in Conditions A and B

Condition	Variable	Frequency	Percent
A	Agreement	400	68.3
	Disagreement	186	31.7
B	Agreement	440	67.3
	Disagreement	214	32.7

Table 20

Group Means and Standard Deviations of the Proportion of Agreement between Maternal Perception of Child Behavior and Maternal Response to Child Behavior for Condition A

Group	Proportion Agreement	Mean	Standard Deviation
Depressed Sociotropic	Overall	0.75	0.09
	Positive	1.00	0.00
	Negative	0.79	0.20
	Neutral	0.63	0.19
Depressed Autonomous	Overall	0.65	0.09
	Positive	0.88	0.35
	Negative	0.71	0.34
	Neutral	0.59	0.20
Nondepressed Sociotropic	Overall	0.69	0.23
	Positive	1.00	0.00
	Negative	0.77	0.34
	Neutral	0.55	0.33
Nondepressed Autonomous	Overall	0.64	0.21
	Positive	1.00	0.00
	Negative	0.57	0.30
	Neutral	0.55	0.33

Table 21

Group Means and Standard Deviations of the Proportion of Agreement between Maternal Perception of Child Behavior and Maternal Response to Child Behavior for Condition B

Group	Proportion Agreement	Mean	Standard Deviation
Depressed Sociotropic	Overall	0.77	0.13
	Positive	1.00	0.00
	Negative	0.73	0.23
	Neutral	0.65	0.35
Depressed Autonomous	Overall	0.60	0.20
	Positive	0.97	0.09
	Negative	0.72	0.40
	Neutral	0.53	0.24
Nondepressed Sociotropic	Overall	0.69	0.20
	Positive	1.00	0.00
	Negative	0.77	0.26
	Neutral	0.63	0.33
Nondepressed Autonomous	Overall	0.61	0.12
	Positive	0.98	0.07
	Negative	0.55	0.23
	Neutral	0.62	0.25

Table 22

One-way Analysis of Variance of the Overall Proportion of Agreement between Maternal Perception and Maternal Response to the Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.10125937	0.03375312	1.17	0.3301
Error	48	1.38216669	0.02879514		
Corrected Total	51	1.48342606			

Table 23

One-way Analysis of Variance on the Overall Proportion of Agreement between Maternal Perception of and Maternal Response to Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.24285543	0.08095181	2.88	0.0455
Error	48	1.34943628	0.02811326		
Corrected Total	51	1.59229171			

of agreement between perception and response for positive child behavior revealed that there were no significant differences among the four groups for this type of behavior in Condition A [$F(3, 36) = 1.37$, $p = 0.2671$] or Condition B [$F(3, 33) = 0.83$, $p = 0.4885$]. The results were the same for the analyses of the proportion of agreement between perception and response for negative child behavior in Condition A [$F(3, 42) = 1.34$, $p = 0.2733$] and Condition B [$F(3, 44) = 1.62$, $p = 0.1980$] and neutral child behavior in Condition A [$F(3, 47) = 0.58$, $p = 0.6294$] and Condition B [$F(3, 46) = 0.41$, $p = 0.7445$]. These analyses can be seen in Tables 24 through 29.

The hypothesis itself was tested with a one-way analysis of variance[1] on the proportion of segments perceived as neutral, but responded to negatively. The independent variable was group (depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic, nondepressed-autonomous). The hypothesis was tested separately for each treatment condition: A and B. The means and standard deviations for the proportion of negative responses to neutral perceptions for the four groups in Condition A and Condition B are included in Table 30. It can be seen in Table 30 that in Condition A, sociotropic mothers (depressed or nondepressed) responded negatively to neutral perceptions of child behavior more frequently than autonomous mothers either depressed or nondepressed. In Condition B, however,

Table 24

One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Positive Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.10000000	0.03333333	1.37	0.2671
Error	36	0.87500000	0.02430556		
Corrected Total	39	0.97500000			

Table 25

One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Negative Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.35078245	0.11692748	1.34	0.2733
Error	42	3.65664928	0.08706308		
Corrected Total	45	4.00743173			

Table 26:One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Neutral Child Behavior by Group for Condition A.

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.09811153	0.03270384	0.58	0.6294
Error	47	2.63875098	0.05614364		
Corrected Total	50	2.73686251			

Table 27

One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Positive Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.00678397	0.00226132	0.83	0.4885
Error	33	0.09024306	0.00273464		
Corrected Total	36	0.09702703			

Table 28

One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Negative Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.37710803	0.12570268	1.62	0.1980
Error	44	3.41053731	0.07751221		
Corrected Total	47	3.78764534			

Table 29

One-way Analysis of Variance on the Proportion of Agreement between Maternal Perception of and Maternal Response to Neutral Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.10746459	0.03582153	0.41	0.7445
Error	46	3.99061521	0.08675250		
Corrected Total	49	4.09807980			

Table 30

Group Means and Standard Deviations of the Proportion of Negative Maternal Responses to Neutral Perceptions of Child Behavior for Conditions A and B

	Condition A		Condition B	
Group	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	0.31	0.22	0.24	0.35
Depressed Autonomous	0.23	0.18	0.30	0.23
Nondepressed Sociotropic	0.35	0.34	0.21	0.31
Nondepressed Autonomous	0.16	0.16	0.18	0.20

the depressed mothers (autonomous or sociotropic) responded negatively to neutral perceptions of child behavior more frequently than the nondepressed mothers (autonomous or sociotropic). While the trends can obviously be seen from the means, these differences were not statistically significant.

In Condition A, the one-way analysis of variance revealed that there were no significant differences among the four groups on the proportion of segments perceived as neutral, but responded to negatively, $F(3, 48) = 1.66$, $p = 0.1874$ (see Table 31). Similarly, in Condition B, the one-way analysis of variance revealed that there were no significant differences among the four groups, $F(3, 48) = 0.46$, $p = 0.7100$ (see Table 32). Thus the results of the analyses do not support the hypothesis that depressed-sociotropic mothers will respond negatively to perceived neutral child behavior more frequently than the other three groups of mothers.

Hypothesis #2: Depressed-sociotropic mothers will identify positive child behavior less frequently than the mothers in the other three groups.

This hypothesis was tested with a one-way analysis of variance. In this analysis, the independent variable was group (depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic, nondepressed-autonomous). The dependent measure was the proportion of segments in which the

Table 31

One-way Analysis of Variance on the Proportion of Negative Responses to Neutral Perceptions of Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.27437627	0.09145876	1.66	0.1874
Error	48	2.63990571	0.05499804		
Corrected Total	51	2.91428198			

Table 32

One-way Analysis of Variance on the Proportion of Negative Responses to Neutral Perceptions of Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.10551003	0.03517001	0.46	0.7100
Error	48	3.65312690	0.07610681		
Corrected Total	51	3.75863693			

mother perceived the child's behavior to be positive. In a second one-way analysis, the independent variable was also group while the dependent measure was the proportion of segments in which the mother perceived the child's behavior to be negative. Each treatment condition, A and B was tested separately. The means and standard deviations for the proportion of segments that mothers in each of the four groups perceived to be positive, negative, and neutral in Conditions A and B are included in Table 33.

The one-way analysis of variance on the proportion of segments perceived to be positive revealed that there were no significant differences among the four groups in either Condition A [$F(3, 48) = 2.15$, $p = 0.1067$] or Condition B [$F(3, 48) = 0.62$, $p = 0.6045$]. Therefore, the results of the analyses do not support the hypothesis that depressed-sociotropic mothers will identify positive child behavior less frequently than the mothers in the other three groups. These analyses can be seen in Tables 34 and 35.

On the other hand, the one-way analyses on the proportion of segments in which mothers perceived the child's behavior to be negative revealed significant differences among the four groups in Condition A [$F(3, 48) = 3.72$, $p = 0.0175$] and a trend toward significance in condition B [$F(3, 48) = 3.14$, $p = 0.0336$]. See Tables 36 and 37 for the analyses. In Condition A, the Tukey's Studentized Range (HSD) Test indicated that the depressed-sociotropic mothers

Table 33

Group Means and Standard Deviations for the Proportion of Segments Perceived to be Positive, Negative and Neutral for Conditions A and B

		Condition A		Condition B	
Group	Perceptions	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	Positive	0.14	0.08	0.21	0.13
	Negative	0.50	0.15	0.47	0.21
	Neutral	0.36	0.14	0.33	0.21
Depressed Autonomous	Positive	0.09	0.10	0.15	0.14
	Negative	0.27	0.19	0.25	0.20
	Neutral	0.65	0.23	0.61	0.29
Non-depressed Sociotropic	Positive	0.18	0.10	0.15	0.11
	Negative	0.29	0.23	0.30	0.20
	Neutral	0.53	0.23	0.54	0.25
Non-depressed Autonomous	Positive	0.12	0.10	0.15	0.13
	Negative	0.34	0.22	0.38	0.17
	Neutral	0.48	0.25	0.46	0.26

Table 34

One-way Analysis of Variance on the Proportion of Positive Perceptions of Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.06203076	0.02067692	2.15	0.1067
Error	48	0.46256563	0.00963678		
Corrected Total	51	0.52459639			

Table 35

One-way Analysis of Variance on the Proportion of Positive Perceptions of Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.03207947	0.01069316	0.62	0.6045
Error	48	0.82577036	0.01720355		
Corrected Total	51	0.85784983			

Table 36

One-way Analysis of Variance on the Proportion of Negative Responses to Neutral Perceptions of Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.44959407	0.14986469	3.72	0.0175
Error	48	1.93610139	0.04033545		
Corrected Total	51	2.38569546			

Table 37

One-way Analysis of Variance on the Proportion of Negative Perceptions of Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.35830954	0.11943651	3.14	0.0336
Error	48	1.82414474	0.03800302		
Corrected Total	51	2.18245427			

had significantly higher proportions of negative perceptions of child behavior (X = 0.5025) than the depressed-autonomous mothers (X = 0.2656). In Condition B, the depressed-sociotropic group also had higher proportions of negative perceptions of child behavior (X = 0.4662) than the depressed-autonomous group (X = .02466), but these differences were not significant. A 2 (personality type) X 2 (depression status) analysis of variance examined whether these differences in negative perceptions were due to depression, personality type, or the interaction of the two. One analysis was performed for Condition A and one for Condition B. In Condition A, the analysis revealed no main effects for personality or depression but a significant interaction, $F(1, 48) = 7.02$, $p = 0.0109$, just what the one-way analysis revealed. The results were the same in Condition B: no main effects but a significant interaction, $F(1, 48) = 7.74$, $p = 0.0077$. These two analyses can be seen in Tables 38 and 39.

While the hypothesis that depressed-sociotropic mothers will identify positive child behavior less frequently than the mothers in the other three groups was rejected, these mothers do identify negative child behavior more frequently than the mothers in the other three groups in both Condition A and Condition B and this difference is due to this particular combination of depression and personality type.

Table 38

2 (Personality Type) X 2 (Depression Status) Analysis of Variance on the Proportion of Negative Perceptions of Child Behavior for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Status	1	0.06280877	0.06280877	1.56	0.2181
Personality Type	1	0.10366196	0.10366196	2.57	0.1155
Depression* Personality	1	0.28312333	0.28312333	7.02	0.0109
Error	48	1.93610139	0.04033545		
Corrected Total	51	2.38569546			

Table 39

2 (Personality Type) X 2 (Depression Status) Analysis of Variance on the Proportion of Negative Perceptions of Child Behavior for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Status	1	0.00199952	0.00199952	0.05	0.8195
Personality Type	1	0.06224171	0.06224171	1.64	0.2068
Depression* Personality	1	0.29406831	0.29406831	7.74	0.0077
Error	48	1.82414474	0.03800302		
Corrected Total	51	2.18245427			

Hypothesis #3: Negative responses of depressed-sociotropic mothers will assume a different form than the negative responses of the other groups of mothers. Negative physical and verbal responses will be more typical of depressed-sociotropic mothers, whereas alternative types of negative responses will be more typical of both depressed-autonomous and nondepressed mothers.

This hypothesis was tested with a one-way analysis of variance. The independent variable was group (depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic, nondepressed-autonomous). The dependent measure was the proportion of negative responses identified as physical negatives or verbal negatives. The hypothesis was tested separately for each condition, A and B. The means and standard deviations for the proportion of negative physical and verbal responses for each group in both conditions are included in Table 40. The means and standard deviations for the proportion of all alternative negative responses (i.e., negative other, negative verbal and other, negative physical and other) for each group in Conditions A and B are also included in this table. The means and standard deviations for the proportions of the individual categories of negative responses for the four groups of mothers in both conditions

Table 40:Group Means and Standard Deviations for the

Proportion of Negative Physical and Verbal Responses to Child Behavior and the Proportion of Combined Negative Alternative Responses (Negative Other, Negative Verbal and Other, Negative Physical and Other) to Child Behavior for Conditions A and B

		Condition A		Condition B	
Group	Proportions	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	NP & VR	0.28	0.21	0.25	0.33
	CAR	0.72	0.21	0.75	0.33
Depressed Autonomous	NP & VR	0.32	0.33	0.24	0.28
	CAR	0.65	0.33	0.74	0.28
Non-depressed Sociotropic	NP & VR	0.44	0.37	0.29	0.30
	CAR	.056	0.37	0.69	0.31
Non-depressed Autonomous	NP & VR	0.32	0.23	0.24	0.26
	CAR	0.66	0.22	0.74	0.27

can be seen in Table 41. The one-way analyses of variance revealed that there were no significant differences among the four groups in either Condition A [$F(3, 48) = 0.71$, $p = 0.5535$] or Condition B [$F(3, 48) = 0.08$, $p = 0.9716$] (see Tables 42 and 43).

The results of the analyses do not support the hypothesis that the negative responses of depressed-sociotropic mothers will assume a different form than the negative responses of the other groups of mothers. As can be seen in Table 40, in both Condition A and Condition B, negative physical and verbal responses were most typical of nondepressed-sociotropic mothers. This group however was not significantly different from the other three groups in either condition, as determined by the one-way analyses of variance.

Additional Research Questions

The results of the analyses described above and some additional information collected from the response forms inspired several research questions which, although not included in the three hypotheses, were related to them in interesting and hopefully important ways.

Since the hypotheses in this study were based, in part, on the results of an earlier study (Keane & Johnson, 1988) it seemed important to compare the outcome of all depressed subjects, regardless of personality type, with the outcome of the depressed subjects in the earlier study. This was an interesting comparison since the sample in the earlier study

Table 41

Group Means and Standard Deviations for theProportion of each Category of Negative Responsesfor Conditions A and B

		Condition A		Condition B	
Group	Proportions	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	NV	0.26	0.22	0.25	0.33
	NP	0.02	0.06	0.00	0.00
	NO	0.48	0.29	0.44	0.33
	NV & O	0.22	0.15	0.23	0.28
	NP & O	0.03	0.06	0.08	0.19
Depressed Autonomous	NV	0.30	0.31	0.22	0.29
	NP	0.03	0.09	0.02	0.07
	NO	0.55	0.33	0.46	0.35
	NV & O	0.09	0.18	0.19	0.24
	NP & O	0.01	0.03	0.10	0.21
Non-depressed Sociotropic	NV	0.44	0.37	0.30	0.32
	NP	0.00	0.00	0.01	0.05
	NO	0.36	0.32	0.53	0.40
	NV & O	0.21	0.23	0.16	0.21
	NP & O	0.00	0.00	0.00	0.00
Non-depressed Autonomous	NV	0.30	0.25	0.17	0.14
	NP	0.02	0.07	0.01	0.04
	NO	0.38	0.24	0.37	0.34
	NV & O	0.25	0.29	0.31	0.32
	NP & O	0.03	0.10	0.06	0.11

Table 42

One-way Analysis of Variance on the Proportion of Negative Physical and Verbal Responses to Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.18120628	0.06040209	0.71	0.5535
Error	48	4.11063056	0.08563814		
Corrected Total	51	4.29183684			

Table 43

One-way Analysis of Variance on the Proportion of Negative Physical and Verbal Responses to Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.02053783	0.00684594	0.08	0.9716
Error	48	4.21053099	0.08771940		
Corrected Total	51	4.23106882			

was inpatient while the sample in this study was outpatient.

In the Keane and Johnson (1988) study, inpatient depressed mothers responded negatively to perceived neutral child behavior more frequently (37%) than did control mothers (0%) or another psychiatric group of mothers (20%). This was not true in this study. One-way analyses of variance revealed that there were no significant differences between depressed and nondepressed mothers independent of personality type with regard to the proportion of negative responses to perceived neutral behavior in either Condition A [$F(1, 50) = 0.50$, $p = 0.4838$], or Condition B [$F(1, 50) = 0.53$, $p = 0.4696$]. Means and standard deviations for the proportion of negative responses to perceived neutral behavior for depressed and nondepressed mothers in Conditions A and B are included in Table 44. The analyses of variance for Conditions A and B are in Tables 45 and 46.

Keane and Johnson (1988) also found that the negative responses of depressed mothers assumed a different form than those of nondepressed mothers. Depressed mothers were more likely to respond with physical and verbal negatives while nondepressed mothers were more likely to choose alternative types of negative responses (e.g., time out, asking their child to share, apologize, etc.). This finding was not replicated in the present study. Two one- way analyses of variance of the proportion of negative physical and verbal responses for depressed and nondepressed mothers revealed no

Table 44

Depression Group Means and Standard Deviations for the Proportion of Negative Responses to Perceived Neutral Child Behavior for Conditions A and B

	Condition A		Condition B	
Group	Mean	Standard Deviation	Mean	Standard Deviation
Depressed	0.27	0.20	0.27	0.29
Nondepressed	0.25	0.28	0.19	0.25

Table 45

One-way Analysis of Variance on the Proportion of Negative Responses to Perceived Neutral Child Behavior by Depression Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.01462115	0.01462115	0.50	0.4838
Model	50	1.46880491	0.02937610		
Error	51	1.48342606			

Table 46

One-way Analysis of Variance on the Proportion of Negative Responses to Perceived Neutral Child Behavior by Depression Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.01673394	0.01673394	0.53	0.4696
Error	50	1.57555777	0.03151116		
Corrected Total	51	1.59229171			

significant differences between the two groups in Condition A [$F(1, 50) = 0.87$, $p = 0.3546$], or Condition B, $F(1, 50) = 0.05$, $p = 08223$. These analyses can be seen in Tables 47 and 48. The means and standard deviations for the proportion of negative physical and verbal responses for depressed and nondepressed mothers are included in Table 49.

A third finding in the earlier study (Keane & Johnson, 1988) was that depressed mothers identified positive child behavior less often than nondepressed mothers. This finding was also not replicated in the present study. One-way analyses of variance were performed on the proportion of positive perceptions of child behavior for depressed and nondepressed mothers in Conditions A and B. These two analyses revealed no differences between the two groups in either Condition A [$F(1, 50) = 1.69$, $p = 0.2002$], or Condition B [$F(1, 50) = 0.63$, $p = 0.4302$]. One way analyses of variance were also performed on the proportion of negative perceptions of child behavior for depressed and nondepressed mothers in Conditions A and B. Similarly, no significant differences were found between the two groups of mothers with regard to this variable in either Condition A [$F(1, 50) = 1.35$, $p = 0.2505$] or Condition B [$F(1, 50) = 0.05$, $p = 0.8313$]. These analyses can be found in Tables 50 through 53. The means and standard deviations for the proportion of positive, negative, and neutral perceptions of child behavior for depressed and nondepressed mothers in Conditions A and B

Table 47

One-way analysis of Variance on the Proportion of Negative Physical and Verbal Response by Depression Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.07366170	0.07366170	0.87	0.3546
Error	50	4.21817515	0.08436350		
Corrected Total	51	4.29183684			

Table 48

One-way Analysis of Variance on the Proportion of Negative Physical and Verbal Responses by Depression Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.00430999	0.00430999	0.05	0.8223
Error	50	4.22675883	0.08453518		
Corrected Total	51	4.23106882			

Table 49

Depression Group Means and Standard Deviations for the Proportion of Negative Physical and Verbal Responses for Conditions A and B

	Condition A		Condition B	
Group	Mean	Standard Deviation	Mean	Standard Deviation
Depressed	0.30	0.27	0.25	0.30
Nondepressed	0.38	0.31	0.26	0.28

Table 50

One-way Analysis of Variance on the Proportion of Positive Perceptions of Child Behavior by Depression Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.01710502	0.01710502	1.69	0.2002
Error	50	0.50749137	0.01014983		
Corrected Total	51	0.52459639			

Table 51

One-way Analysis of Variance on the Proportion of Positive Perceptions of Child Behavior by Depression Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.01071741	0.01071741	0.63	0.4302
Error	50	0.84713242	0.01694265		
Corrected Total	51	0.85784983			

Table 52

One-way Analysis of Variance on the Proportion of Negative Perceptions of Child Behavior by Depression Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.06280877	0.06280877	1.35	0.2505
Error	50	2.32288668	0.04645773		
Corrected Total	51	2.38569546			

Table 53

One-way Analysis of Variance on the Proportion ofNegative Perceptions of Child Behavior by DepressionGroup for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Group	1	0.00199952	0.00199952	0.05	0.8313
Error	50	2.18045476	0.04360910		
Corrected Total	51	2.18245427			

can be seen in Table 54.

As described under Hypothesis #2, depressed-sociotropic mothers in this study identified negative child behavior more frequently than the other three groups of mothers. It was also found that this group responded negatively to child behavior more frequently than the other three groups. The means and standard deviations for the proportion of negative responses to child behavior for the four groups of mothers in Conditions A and B are included in Table 55. One-way analyses of variance revealed that there was a trend towards significant differences in Condition A [$F(3, 48) = 3.04$, $p = 0.0376$] but not in Condition B [$F(3, 48) = 0.86$, $p = 0.4658$]. Tukey's Studentized Range (HSD) test found that the depressed-sociotropic mothers had significantly higher proportions of negative responses ($X = .50$) than the nondepressed-autonomous mothers ($X = .29$) in Condition A. These one-way analyses of variance can be found in Tables 56 and 57.

In order to identify which factor, depression or personality type, accounted for this trend found in Condition A, a 2 (personality type) X 2 (depression status) analysis of variance was performed using the personality and depression groups as the independent variables and the proportion of negative responses to child behavior as the dependent variable. There was no significant interaction nor main effect for depression status. However, there was a

Table 54

Depression Group Means and Standard Deviations for the Proportion of Positive, Negative and Neutral Perceptions of Child Behavior for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed	Positive	0.11	0.09	0.18	0.14
	Negative	0.38	0.21	0.36	0.23
	Neutral	0.50	0.24	0.47	0.28
Nondepressed	Positive	0.15	0.11	0.15	0.12
	Negative	0.31	0.22	0.34	0.19
	Neutral	0.51	0.23	0.50	0.25

Table 55

Group Means and Standard Deviations of the Proportion of Negative Responses to Child Behavior for Conditions A and B

	Condition A		Condition B	
Group	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	0.50	0.20	0.42	0.22
Depressed Autonomous	0.35	0.21	0.37	0.22
Nondepressed Sociotropic	0.46	0.26	0.37	0.25
Nondepressed Autonomous	0.29	0.13	0.29	0.12

Table 56

One-way Analysis of Variance on the Proportion of Negative Responses to Child Behavior by Group for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.38462847	0.12820949	3.04	0.0376
Error	48	2.02109841	0.04210622		
Corrected Total	51	2.40572688			

Table 57

One-way Analysis of Variance on the Proportion of Negative Responses to Child Behavior by Group for Condition B

Source	df	Sum of Squares	Mean Squares	F-value	p
Group	3	0.11471827	0.03823942	0.86	0.4658
Error	48	2.12207632	0.04420992		
Corrected Total	51	2.23679459			

significant main effect for personality type, $F(3, 48) = 8.25$, $p = 0.0060$. Sociotropic mothers produced a significantly higher proportion of negative responses to child behavior (X = .48) than did the autonomous mothers (X = .32) confirming that the best predictor of negative responses to child behavior is personality type rather than depression or the combination of the two (see Table 58).

The last four questions on the response forms were for the purpose of assessing several additional areas of interest. These questions and the data analyses for each are discussed below.

Question #5 ("Explain briefly why you chose to respond in that way.").

This question was an attempt to examine mothers' rationales for responding in a particular way to identified child behavior. The Question seemed important given the different values or goals of the two personality groups and the impact of depression on mother's view of the world or interpretation of external events. To look at the impact of depression, the categories of target child encouragement, other child encouragement, and target child teaching were combined. This group of three categories was labeled "encourage/teach" and was thought to represent a more positive view and approach. The four categories of target child deterrence, other child deterrence, target child

Table 58

2 (Depression Status) X 2 (Personality Type) Analysis of Variance on the Proportion of Negative Responses to Child Behavior for Condition A

Source	df	Sum of Squares	Mean Squares	F-value	p
Depression Status	1	0.03552387	0.03552387	0.84	0.3629
Personality Type	1	0.34740748	0.34740748	8.25	0.0060
Depression Personality	1	0.00169712	0.00169712	0.04	0.8417
Error	48	2.02109841	0.42210622		
Corrected Total	51	2.40572688			

prevention, and other child prevention were also combined and labeled "deter/prevent." This group of categories was thought to represent a more negative view and approach. Means and standard deviations for the combined categories "encourage/teach" and "deter/prevent" for the four groups of mothers in Conditions A and B are included in Table 59. As can be seen, there do not appear to be any meaningful differences between the four groups of mothers in either condition. Mothers' reasons for responding in particular ways appeared to be fairly balanced between positive ("encourage/teach") and negative ("deter/prevent"). Depressed mothers did not give negative reasons more than nondepressed mothers. In fact, nondepressed-autonomous mothers showed a tendency in both Conditions A and B to give more negative reasons and less positive reasons.

A second way to explore the data from this Question is to examine whether or not mothers' reasons (for their responses) were related to the target child or to the other child. Sociotropic mothers who are more dependent on social interactions as a way of getting their needs met might be concerned about or sensitive to the other child more frequently than autonomous mothers whose behavior tends to be more independent of others. The means and standard deviations in Conditions A and B for the variables "other child focus" which includes three categories (i.e., other child encouragement, other child deterrence, and other child

Table 59

Group Means and Standard Deviations of the Proportions of "Encourage/Teach" and "Deter/Prevent" Rationales for Responses to Child Behavior for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	E & T	0.50	0.26	0.53	0.24
	D & P	0.46	0.25	0.42	0.24
Depressed Autonomous	E & T	0.46	0.25	0.49	0.20
	D & P	0.51	0.25	0.48	0.22
Nondepressed Sociotropic	E & T	0.47	0.26	0.51	0.23
	D & P	0.50	0.24	0.43	0.24
Nondepressed Autonomous	E & T	0.32	0.22	0.38	0.21
	D & P	0.52	0.21	0.50	0.20

prevention) and "target child focus" which includes four categories (i.e., target child encouragement, target child deterrence, target child prevention, and target child teaching) are included in Table 60 for comparison. All groups focused primarily on the target child. No group focused on the other child much more than the others.

Question #6 ("Given your response, what would your child do?")

Responses to this Question were assigned to nine behavioral categories: overt positive, overt negative, overt neutral, affective positive, affective negative, affective neutral, mixed negative, mixed positive, and mixed (positive and negative). In other words, a mother had to predict how the target child would respond following her response to his behavior. It would seem that depressed mothers' predictions might be in a more negative direction than those of nondepressed mothers and that sociotropic mothers might make more negative predictions because their self-efficacy may not be as great as that of autonomous mothers. To look at this, the categories of predictions of positive behavior (i.e., overt positive, affective positive, and mixed positive), predictions of negative behavior (i.e., overt negative, affective negative, and mixed negative) and predictions of neutral behavior (i.e., overt neutral and affective neutral) were combined. The mixed (positive and negative) category

Table 60

Group Means and Standard Deviations of the Proportions of "Other Child Focus" and "Target Child Focus" Rationales for Responses to Child Behavior for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	Target	0.85	0.16	0.82	0.17
	Other	0.11	0.16	0.12	0.14
Depressed Autonomous	Target	0.87	0.11	0.84	0.14
	Other	0.09	0.11	0.12	0.14
Nondepressed Sociotropic	Target	0.81	0.16	0.86	0.13
	Other	0.15	0.15	0.08	0.09
Nondepressed Autonomous	Target	0.66	0.24	0.73	0.22
	Other	0.18	0.20	0.15	0.14

was excluded. The means and standard deviations for the proportions of positive, negative, and neutral predictions of child response to mother's behavior in Conditions A and B for the four groups of mothers are in Table 61. Mothers in all four groups in both conditions most frequently predicted positive child response. Predictions of neutral child response occurred the least frequently. There do not appear to be any meaningful differences between either the depressed and nondepressed mothers or the autonomous and sociotropic mothers.

Question #7 ("How would you feel if your child responded that way")

This Question was related to Question #6 in that mothers were asked to speculate how they (the mothers) would feel given their prediction of the target child's behavior. Responses to this Question were assigned to one of four categories: positive, negative, neutral, and mixed (positive and negative). Mothers who are depressed should respond more negatively than mothers who are nondepressed. Additionally, sociotropic mothers, who are said to be highly sensitive to the behavior of others, might respond more frequently in a positive and/or negative direction rather than responding in a neutral fashion. The mixed (positive and negative) category was not included in the computations. The means and standard deviations for the proportion of reported positive,

Table 61

Group Means and Standard Deviations of the Proportion of Positive, Negative and Neutral Predictions of Child Response to Mother for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	Positive	0.57	0.18	0.59	0.22
	Negative	0.29	0.21	0.31	0.24
	Neutral	0.13	0.12	0.10	0.09
Depressed Autonomous	Positive	0.58	0.27	0.54	0.19
	Negative	0.23	0.22	0.28	0.18
	Neutral	0.18	0.17	0.18	0.12
Nondepressed Sociotropic	Positive	0.56	0.18	0.60	0.17
	Negative	0.24	0.22	0.21	0.16
	Neutral	0.20	0.11	0.19	0.18
Nondepressed Autonomous	Positive	0.70	0.18	0.71	0.17
	Negative	0.17	0.15	0.13	0.11
	Neutral	0.13	0.11	0.17	0.14

negative, and neutral feelings for the four groups of mothers in Conditions A and B are included in Table 62. Although depressed-sociotropic mothers in both conditions had the highest proportion of reported negative feelings among the four groups of mothers, these differences were not significant. The proportion of reported neutral and reported positive feelings for all groups were similar.

Question #8 ("How typical is this behavior for children of this age?")

In order to respond to this Question, mothers circled a number on a Likert scale that ranged from 1-7. Responses of numbers 1 and 2 were assigned to the "very typical" category, responses of numbers 3 through 5 were assigned to the "typical" category and responses of numbers 6 and 7 were assigned to the "not typical" category. Based on the research of Forehand and his colleagues (i.e., 1975, 1982, 1984) described in Chapter I, and given that "not typical" is similar to "deviant," depressed mothers might be expected to perceive the target child's behavior as less typical than nondepressed mothers. This was not, however, the case. The majority of the responses given by all four groups of mothers were in the "typical" and "very typical" categories. There were very few responses given in the "not typical" category. In fact, no mother in the depressed-autonomous group responded in this category. The means and standard

Table 62

Group Means and Standard Deviations of the Proportion of Reported Positive, Negative and Neutral Feelings for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	Positive	0.47	0.29	0.49	0.24
	Negative	0.28	0.26	0.29	0.26
	Neutral	0.24	0.23	0.21	0.18
Depressed Autonomous	Positive	0.58	0.30	0.49	0.26
	Negative	0.19	0.23	0.26	0.26
	Neutral	0.20	0.25	0.22	0.24
Nondepressed Sociotropic	Positive	0.56	0.29	0.57	0.25
	Negative	0.18	0.15	0.24	0.14
	Neutral	0.25	0.26	0.20	0.19
Nondepressed Autonomous	Positive	0.57	0.29	0.68	0.28
	Negative	0.11	0.12	0.10	0.11
	Neutral	0.31	0.26	0.22	0.25

deviations for the proportion of "very typical," "typical," and "not typical" categories of responses for the four groups of mothers in Conditions A and B can be seen in Table 63.

Table 63

Group Means and Standard Deviations of the Proportion of "Very Typical", "Typical" and "Not Typical" Categories of Responses for Conditions A and B

		Condition A		Condition B	
Group	Proportion	Mean	Standard Deviation	Mean	Standard Deviation
Depressed Sociotropic	Very Typ.	0.36	0.38	0.40	0.41
	Typical	0.62	0.37	0.57	0.40
	Not Typ.	0.03	0.06	0.03	0.06
Depressed Autonomous	Very Typ.	0.24	0.37	0.25	0.35
	Typical	0.76	0.37	0.75	0.35
	Not Typ.	0.00	0.00	0.00	0.00
Nondepressed Sociotropic	Very Typ.	0.36	0.35	0.30	0.23
	Typical	0.61	0.35	0.66	0.21
	Not Typ.	0.03	0.06	0.04	0.08
Nondepressed Autonomous	Very Typ.	0.36	0.34	0.41	0.37
	Typical	0.63	0.34	0.57	0.37
	Not Typ.	0.01	0.03	0.02	0.05

Chapter IV

DISCUSSION

In order to investigate the possible impact of depression and personality factors on maternal responses to child behavior, data collected from four groups of mothers responding to a videotape of the behavior of a five-year-old child were examined by means of analyses of variance. Four groups of mothers were examined: depressed-sociotropic, depressed-autonomous, nondepressed-sociotropic, and nondepressed-autonomous. It was predicted that depressed-sociotropic mothers would perform differently from the other three groups of mothers. More specifically, it was predicted that depressed-sociotropic mothers would respond negatively to perceived neutral child behavior more frequently (Hypothesis #1), identify positive child behavior less frequently (Hypothesis #2), and when responding negatively, their responses would assume a different form than the responses of the other three groups of mothers (Hypothesis #3). The analyses of variance revealed that there were no significant differences among the four groups of mothers with regard to these three hypotheses. However, a trend towards significant differences was found for the prediction made by Hypothesis #1. Additionally, it was found that depressed-sociotropic mothers identified negative child

behavior more frequently than the other groups of mothers and responded negatively to child behavior more frequently than the other groups of mothers. The combination of depression status and personality type accounted for the finding that depressed-sociotropic mothers identified negative child behavior more frequently, while personality type accounted for the finding that depressed-sociotropic mothers responded negatively to child behavior more frequently.

There are several ways to look at the results of this study. First of all, there were only 13 subjects in each of the four groups. With such a small sample, the probability that the mean will be affected by outliers or extremes is high. As can be seen in the tables containing the means and standard deviations (e.g., Tables 30, 33, and 40 for example), the standard deviations were quite high -- in some cases higher than the mean. Thus there was a lot of variability or "noise" in the data and the means were not stable. If the sample had been larger, the standard deviations would have been lower and the mean more stable as it would have been less affected by the extremes. Additionally, as can be seen in Tables 1 and 2, the sample was somewhat atypical. It was skewed with primarily married mothers who had higher incomes and more education than is typical of the general population. One might speculate that this sample of mothers had more access to information about parenting skills and child development than mothers in the

general population and thus may not be truly representative. These demographic factors may have been particularly important with respect to both Hypothesis #2 and Hypothesis #3. Mothers with more access to education and enrichment opportunities may learn more about the importance of identifying and reinforcing positive child behavior and more effective and appropriate ways to consequate negative child behavior.

Somewhat surprisingly, when the data from the two groups of depressed mothers were combined and compared against that of the combined nondepressed mothers, there were no differences between these two groups on the questions of interest. In addition to the concerns described above, the relatively brief duration of the period of data collection may have been a factor in this finding and in the results in general. If mothers had to respond for a longer period of time, typical symptoms of depression such as a lack of energy and problems with attention and concentration may have had a greater impact on their performance. The fact that the setting was not a naturalistic one could also have had an impact on mothers' performance. Mothers were asked to provide a written record of their responses to a child's behavior in a setting that they most likely interpreted as evaluative. Thus they may have made an effort to respond in the most appropriate or "correct" way. Additionally, they were responding to a child that was not their own, so that

the impact of the child's behavior on these mothers was not as significant. Had the responses of mothers to their own child's behavior been covertly observed in the laboratory, or had data been collected in the subjects' homes over a period of time, any differences that exist between the behavior of the four groups of mothers may have been more apparent.

The concerns discussed above apply to the characteristics of the sample, the relatively brief behavioral probe, the experimental setting and the small sample size. There is another issue, however, that is more specific to the predictions that were made regarding the behavior of the four groups of mothers. The two personality constructs or dimensions that were used are still in the process of being developed. It is not yet entirely clear whether Sociotropy and Autonomy represent distinct personality typologies that differ in meaningful ways. It may be that Sociotropy and Autonomy are better conceptualized as continuous dimensions along which individuals vary. Similarly, it is not entirely clear whether or not the Sociotropy/Autonomy Scale (SAS) truly captures the concepts of Sociotropy and Autonomy. As mentioned in Chapter III, the three sociotropic factors (Concern about Disapproval, Attachment/Separation Concerns, and Pleasing Others) appear to be internally consistent, reliable and meaningfully related to each other. On the other hand, while the first autonomous factor (Individualistic Achievement) also appears

to be internally consistent and reliable, problems have been reported with the second and third factors. The internal stability of the second factor (Mobility/Freedom) appears to vary between clinical and nonclinical samples while the third factor (Preference for Solitude) is clearly unreliable. As such, while both constructs may prove to be valid and useful, they are still open to interpretation. This study attempted to extrapolate from Beck's (1983) description of the behavioral characteristics of the two types of personality to predictions of maternal responses to child behavior. In the course of this process, interpretations could have been made which were not justified given the original concept. This possibility is developed more fully in the following discussion of the three hypotheses of this study.

Hypothesis #1: Sociotropic-depressed mothers will respond negatively to perceived neutral child behavior more frequently than the other three groups of mothers.

This prediction was based on both the likelihood of cognitive dysfunction in depressed individuals (Beck, 1983) and the report by Beck and his colleagues (Clark, Beck & Brown, 1987) that sociotropic individuals exhibit more cognitive disturbance when depressed than autonomous individuals. Another important determining factor was the finding in the Keane and Johnson (1988) study that depressed mothers responded negatively to perceived neutral child

behavior more frequently than did nondepressed mothers. It was felt that this behavior, perceiving the behavior as neutral but responding negatively, could be conceptualized as a cognitive error. If sociotropic individuals experience more cognitive disturbance than autonomous individuals, then they could commit this type of error more frequently in the research setting of this study. Actually, in this study, overall agreement between perception and response was relatively good (see Table 20). While agreement between perception and response for all mothers when the child behavior was identified as neutral was less than that when the child behavior was identified as positive or negative, depressed-sociotropic mothers' perceptions and responses when the child behavior was identified as neutral agreed as much as, or in some cases more than, the other groups of mothers.

Beck suggests that sociotropic individuals are more sensitive to and responsive to external or environmental events than are autonomous individuals. This characteristic, coupled with their social dependency or their investment in positive interactions with other people, could be represented in a desire to respond correctly or appropriately to those events. Their need to respond in an acceptable way then could lead to an effort to "match" their responses more precisely to external events. Autonomous individuals, on the other hand, who are not as sensitive to external events could make matching errors as a function of this characteristic.

The attention of sociotropic individuals could be drawn to the external event more readily than that of the autonomous individuals, so that even if the former group experience more cognitive disturbances, this is moderated or modified by their dependence on social supplies to meet their needs.

Hypothesis #2: Depressed-sociotropic mothers will less frequently identify positive child behavior than the mothers in the other three groups.

As in Hypothesis #1, the basis for the prediction was that sociotropic individuals are said to experience more cognitive disturbance than autonomous individuals, plus the Keane and Johnson (1988) finding that depressed mothers identify positive child behavior less frequently than do nondepressed mothers. If cognitive disturbance can be represented by a tendency to view the world in a negative way, such a tendency might make it more difficult to identify positive events. While there were no significant differences on this variable among the four groups, depressed-sociotropic mothers, contrary to the hypothesis, identified positive child behavior more frequently in both conditions than did depressed-autonomous mothers (see Table 33) and in fact more frequently than did nondepressed-autonomous mothers. Nondepressed-sociotropic mothers identified positive child behavior as much as or more than the two autonomous groups. Interestingly, as reported in Chapter III, depressed-sociotropic mothers also identified negative child behavior

more frequently than did all other groups. Furthermore this difference was significant and was the result of the combination of depression and personality. Since agreement between perception and response was high for identified negative child behavior, it is not surprising that depressed-sociotropic mothers also responded negatively to child behavior more frequently than the other three groups of mothers. The biggest difference was between depressed-sociotropic and depressed-autonomous mothers in Condition A, and the best predictor of that difference was found to be personality type. These findings lend some support to the alternative interpretation presented above -- sociotropic individuals with their tendency to be more sensitive to and reactive to both positive and negative external events, which is a part of their social dependency, actually, may tend to identify both positive and negative events more frequently than do autonomous individuals who are less reactive. Additionally, their need for social acceptance could lead to an increased motivation to correctly match their responses to the environmental event.

Hypothesis #3: Negative responses of depressed-sociotropic mothers will assume a different form than the negative responses of the other groups of mothers. Negative physical and verbal responses will be more typical of depressed-sociotropic mothers, whereas alternative

types of negative responses will be more typical of both depressed-autonomous and nondepressed mothers.

The basis for this prediction was the finding in the Keane and Johnson (1988) study that negative physical and verbal responses were more characteristic of depressed mothers while alternative negative responses were more characteristic of nondepressed mothers. Beck and his colleagues have suggested that sociotropic individuals, when depressed, may tend to be more chronically depressed than autonomous individuals since they are more frequently exposed to the types of situations that predispose them to depression than are autonomous individuals. Sociotropic individuals tend to become depressed when their interactions with other people are not successful, while autonomous individuals tend to become depressed when their striving to achieve is blocked. If sociotropic individuals are more chronically depressed, their opportunities to learn alternative ways of consequating negative child behavior may not be as frequent. If they do acquire such skills, they may be suppressed by the depression to some degree over a longer period of time. Again since this prediction was not supported by the data in this study, an alternative interpretation of these personality characteristics should be considered. The same interpretation offered for Hypotheses #1 and #2 can be applied here. Sociotropic individuals, regardless of the

chronicity or frequency of their depressive episodes, have a tremendous investment in positive interchange with other people. If alternative responses to negative child behavior are considered more appropriate in the environment in which they live (or in the experimental situation), they will choose the most correct or appropriate response given that environment.

Additional Research Questions

As discussed above, the responses of interest of the depressed mothers in the Keane and Johnson (1988) study differed from the responses of interest of the depressed mothers in this study. Perhaps this difference was due, in part, to the fact that the sample in the Keane and Johnson (1988) study was inpatient while the sample in this study was outpatient. An inpatient sample is likely to be more severely depressed than an outpatient sample. Most of the depressed mothers in the sample in the present study were in treatment and many had been taking antidepressant medications long enough to have gotten at least a minimum response. On the other hand, many subjects in the inpatient sample had been recently diagnosed and were in the very early stages of treatment so that in many cases, a treatment response had not occurred. Some indication of the importance of this distinction is provided by a group of mothers who participated in the initial or screening phase of the present study, whose scores on the BDI and MMPI-D met the criteria

for inclusion in one of the depression groups, but who declined to participate in the laboratory phase. The mean scores for this group of mothers on the BDI and the MMPI-D were higher than the mean scores for the depressed mothers who did agree to participate in the laboratory phase. The mean BDI score for the depressed nonparticipants was 33, while the mean BDI score for the depressed participants was 22.7. Similarly, the mean MMPI-D score for the depressed nonparticipants was 40.1, while the mean MMPI-D score for the depressed participants was 34.9. This suggests that mothers who were the most severely depressed were not functioning well enough to feel like participating. If their data could have been collected, the results of this study may have been more similar to the Keane and Johnson (1988) study.

Another factor that may have contributed to the different outcomes of these two studies was the setting in which the data were collected. Data from the inpatient sample were collected in a hospital environment which can be a stressor independently of depression. Data from the outpatient sample on the other hand were collected in a laboratory room or an office -- a more neutral, less stressful environment. A third factor could be that the samples in the two studies differed with regard to certain demographic variables. While the sample in this study was skewed towards mothers who were married and well educated with relatively high incomes, the sample in the Keane and

Johnson (1988) study was more typical of the general population. The mothers in the present study may have had more access to treatment at an earlier stage of their illness than the mothers in the Keane and Johnson (1988) study.

As reported in Chapter III, there were also no meaningful differences among the four groups of mothers in terms of their responses to Questions four through seven on the response forms. These findings can be interpreted in the same way as those related to the hypotheses.

In conclusion, while the predictions made in this study were not supported by the data, the study can be seen as contributing in several ways. First of all, it is a part of the process that occurs when a concept or theory is being developed. Beck has suggested that the personality constructs of Sociotropy and Autonomy play a role in the development, maintenance and expression of depression. He also suggests that these personality types can influence the course and treatment of depression. His ideas may possibly provide a way to interpret the heterogeneity or the differences found along a variety of dimensions in the population of depressives. One logical step is to identify the sort of behavior that might be representative of each personality type in a variety of situations and settings with a depressed sample. This study is representative in that it attempted to test these concepts by looking at the impact of the two personality types on the way that depressed mothers

respond to child behavior. While keeping in mind the problems of this particular study and emphasizing that the hypotheses tested were not supported by the data, it does appear that depressed-sociotropic mothers both identified more negative child behavior and responded negatively to child behavior more frequently and that this tendency was due in part to the personality type. These results would certainly be predicted for a sample of depressed mothers especially by a cognitive theory of psychopathology. What might not be predicted, however, by a general theory, is that this behavior was specific to this particular personality type of depressed mother. Furthermore, it was found that sociotropic mothers, regardless of depression status, responded negatively to identified neutral child behavior more frequently than autonomous mothers in one condition (Condition A). Whether these differences or any that future research in this area may yield have applied value is another question that needs to be explored. Since statistical significance does not necessarily ensure clinical relevance, it will have to be determined whether and at what level any differences are meaningful in a clinical sense. Nevertheless, the data is suggestive and further research in this area will most likely prove to be useful.

A second fruitful area for further research is that of the differences between maternal behavior in an outpatient sample of depressives and in an inpatient sample of

depressives. The results seen in the Keane and Johnson (1988) study with an inpatient sample could have been in part a function of hospitalization, stage of treatment, the severity of the illness, etc., as opposed to being representative of depression per se. A severe depression in its early stages of treatment combined with the trauma of been separated from familiar people and places could have led to a temporary suppression of parenting skills that would have not been apparent at a later point in time. The depressed mothers in this study, however, were functioning well enough to be treated as outpatients rather than inpatients. This does suggest that even if the depressive episode was impairing their ability to function to some extent, impairment was not as great in this sample as in the inpatient sample. Furthermore, as described previously, a group of depressed mothers who declined to participate in the laboratory phase of this study obtained mean scores on the depression measures that were higher than the mean scores of the depressed mothers who did participate. Although there is no way to be certain that the inclusion of these subjects in this study would have affected the outcome, it does suggest that the severity and perhaps the stage of an episode are important factors to consider when examining the behavior of depressed individuals. Many of these questions could be more precisely addressed with longitudinal studies that could provide more opportunities for behavioral probes across a

variety of settings with individuals who vary in terms of severity and stage of depression. This sort of study could also offer some insight into whether or not Sociotropy and Autonomy are distinct personality types.

As mentioned in Chapter I, it could be important to find out whether there is a relationship between these two personality concepts and the different categories of depression found in our diagnostic systems. The characteristics that Beck has ascribed to Autonomy have suggested to some authors that individuals described as autonomous might be predisposed to an endogenous type of depression and the sort of depression represented by the category of Major Depression in DSM-III-R and the RDC. Similarly individuals described as sociotropic may be predisposed to a more reactive type of depression. Furthermore, due to the opportunity to come into contact with the types of events that lead to depression more frequently, sociotropic individuals may be more chronically depressed than autonomous individuals or have more frequent episodes. In this study, both depressed-sociotropic and depressed-autonomous mothers were assigned to the category of "double depression" (i.e., a combination of major depression and dysthymia) most frequently. There was no relationship between a particular personality group and a specific DSM-III-R category of depression. Continuing investigation in this area with larger numbers of subjects might prove

useful, however, since diagnostic differences can lead to different treatment decisions. Relationships between Sociotropy and Autonomy and other personality dimensions such as neuroticism, psychoticism and extraversion/introversion also need to be explored. This study, while suggesting some relationship between personality type and cognitive operations in depression, certainly does not clarify that relationship. This area needs to be explored further. It is also not clear how personality type might influence the treatment process or treatment outcome.

Past and current research suggests that maternal depression can have a negative impact on the children of these mothers. The population of depressives, however, is a heterogeneous one so that there may be numerous behavioral differences among the different types of depressed mothers. One possible contributor to these differences is personality. This study is a part of the process of examining possible relationships between two specific personality types and depression and the impact that these may have on a particular population in a particular setting.

BIBLIOGRAPHY

American Psychiatric Association. (1987). Diagnostic and Statistical Manual of Mental Disorders, Third Edition, Revised. Washington, D.C.: American Psychiatric Association.

Anthony, E. J. (1974). A risk vulnerability intervention model for children of psychotic parents. In E. J. Anthony & C. Koupernik (Eds.), The child in his family: Children at psychiatric risk. New York: Wiley.

Asch, S. S. (1968). Crib deaths: Their possible relationship to post-partum depression and infanticide. Journal of the Mount Sinai Hospital, New York, 35, 214-220.

Batt, J. C. (1948). Homicidal incidence in the depressive psychoses. Journal of Mental Science, 94, 782-792.

Beardslee, W. R., Bemporad, J., Keller, M. B., & Klerman, G. L. (1983). Children of parents with major affective disorder: A review. American Journal of Psychiatry, 140, 825-832.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archive of General Psychiatry, 4, 561-571.

Beck, A. T. (1967). Depression: Clinical, experimental and theoretical aspects. New York: Hoeber. (Republished in 1972 as Depression: Causes and treatment. Philadelphia: University of Pennsylvania Press).

Beck, A. T. (1976). Cognitive therapy and the emotional disorders. New York: International Universities Press.

Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford Press.

Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton & J. E. Barretts (Eds.) Treatment of depression: Old controversies and new approaches. New York: Raven Press.

Beck, A. T., Epstein, N., & Harrison, R. (1983). Cognitions, attitudes and personality dimensions in depression. British Journal of Cognitive Psychotherapy, 1, 1-16.

Beck, A. T., Epstein, N., Harrison, R. P., & Emery, G. (1983). Development of the Sociotropy-Autonomy Scale: A measure of personality factors in psychopathology. Unpublished Manuscript, University of Pennsylvania-Philadelphia.

Bellack, A. S., & Hersen, M. (1977). Behavior modification: An introductory textbook. Baltimore: Willams & Wilkins.

Bender, L. (1934). Psychiatric mechanisms in child murders. Journal of Nervous and Mental Disorders, 80, 32-47.

Bertelsen, A. (1979). A Danish twin study of manic-depressive disorders. In M. Shou & E. Stromgren (Eds.), Origin prevention and treatment of affective disorders. London: Academic Press.

Boyd, J. H., & Weissman, M. M. (1982). Epidemiology. In E.S. Paykel (Ed.), Handbook of affective disorders. New York: Guilford Press.

Clark, D. A., Beck, A. T., & Brown, G. (1987). Life stressors, personality dimensions, and dysfunctional beliefs in depressed and anxious outpatients: A test of the diathesis-stress hypothesis of cognitive theory. Poster presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Boston.

Clark, D. A. (1988). Progress report on the Sociotropy/ Autonomy Scale. Unpublished Manuscript, University of Pennsylvania-Philadelphia.

Cohler, B. J., Grunebaum, H. V., Weiss, J. L., Gamer, E., & Gallant, D. H. (1977). Disturbance of attention among schizophrenic, depressed and well mothers and their young children. Journal of Child Psychology and Psychiatry, 18, 115-136.

Cohler, B. J., Gallant, D. H., Grunebaum, H. V., & Kaufman, C. (1983). Social adjustment among schizophrenic, depressed, and well mothers and their school-aged children. In H. Morrion (Ed.), Children of depressed parents: Risk, identification, and intervention. New York: Grune & Stratton.

Costello, C. G., & Comrey, A. L. (1967). Scales for measuring depression and anxiety. Journal of Psychology, 66, 303-313.

Dahlstrom, W. G., Welsh, G. S., & Dahlstrom, L. E. (1972). An MMPI Handbook. Minneapolis: University of Minnesota Press.

Dempsey, P. A. (1964). Unidimensional depression scale for the MMPI. Journal of Consulting Psychology, 28, 364-370.

Downey, G., & Coyne, J. C. (1990). Children of depressed parents. Psychological Bulletin, 108, 50-76.

Duran, R., & Hammen, C.L. (1987). Psychometric characteristics of the Sociotropy/Autonomy Scale. Unpublished manuscript, University of California, Los Angeles.

Ellis, A. (1962). Reason and emotion in psychotherapy. New York: Lyle Stewart.

Endicott, J., & Spitzer, R. L. (1978). A diagnostic interview: The schedule of affective disorders and schizophrenia. Archives of General Psychiatry, 35, 837-844.

Erlenmeyer-Kimling, L., Marcuse, Y., Cornblatt, B., Rainer, J. D., & Rutschmann, J. (1984). The New York high risk project. In N. Watt, E. J. Anthony, L. Wynne, & J. Rolf (Eds.), Children at risk for schizophrenia: A longitudinal perspective. New York: Cambridge University Press.

Estroff, T. W., Herrera, C., Gaines, R., Shaffer, D., Gould, M., & Green, A. H. (1984). Maternal psychopathology and perception of child behavior in psychiatrically referred and child maltreatment families. Journal of the American Academy of Child Psychiatry, 23, 649-652.

Fabian, A. A., & Donohue, J. F. (1956). Maternal depression: A challenging child guidance problem. American Journal of Orthopsychiatry, 26, 400-405.

Feinstein, H. M., Paul, N., & Esmiol, P. (1964). Group therapy for mothers with infanticidal impulses. American Journal of Psychiatry, 120, 882-886.

Fish, B., & Alpert, M. (1962). Abnormal states of consciousness and muscle tone in infants born to schizophrenic mothers. American Journal of Psychiatry, 119, 439-445.

Fish, B. (1963). The maturation of arousal and attention in the first months of life: A study of variations in ego development. Journal of the American Academy of Child Psychiatry, 2, 253-270.

Fish, B., & Alpert, M. (1963). Patterns of neurological development in infants born to schizophrenic mothers. In J. Wortis (Ed.), Recent Advances in Bibliogical Psychiatry V. New York: Plenum Press.

Forehand, R., King, H. E., Peed, S., & Yoder, P. (1975). Mother-child interactions: Comparison of a non-compliant clinic group and a non-clinic group. Behaviour Research and Therapy, 13, 79-84.

Forehand, R., Wells, K. C., McMahon, R. J., Griest, D., & Rogers, T. (1982). Maternal perception of maladjustment in clinic-referred children: An extension of earlier research. Journal of Behavioral Assessment, 4, 145-151.

Furey, W., & Forehand, R. (1984). What makes some mothers more subjective and less objective in their evaluations of their child's behavior? Paper presented at the 18th annual convention of the Association for Advancement of Behavior Therapy, Philadelphia.

Gallant, D. (1972). Selective and sustained attention in young children of psychotic mothers. Unpublished doctoral dissertation, Boston University.

Gardner, G. G. (1967). Role of maternal psychopathology in male and female schizophrenics. Journal of Consulting Psychology, 31, 411-413.

Garmezy, N. (1974a). Children at risk: The search for the antecedents of schizophrenia. Part I: G models and research methods. Schizophrenia Bulletin, 8, 14-190.

Garmezy, N. (1974b). Children at risk: The search for the antecedents of schizophrenia. Part II: Ongoing research programs, issues and intervention. Schizophrenia Bulletin, 9, 55-125.

Gelfand, D. M., & Texi, D. M. (1990). The effects of maternal depression on children. Clinical Psychology Review, 10, 329-353.

Gershon, E. S., Berrettini, W. H., & Goldin, L. R. (1989). Mood disorders: Genetic aspects. In H. I. Kaplan & B. J. Sadocks (Eds.), Comprehensive textbook of psychiatry V. Baltimore: Williams & Wilkins.

Gershon, E. S., Hamovit, J., Guroff, J. J., Dibble, E., Leckman, J. F., Sceery, W., Targum, S. D., Nurnberger, J. I., Goldin, L. R., & Bunney, L. E. (1982). A family study of schizoaffective, bipolar I, bipolar II, unipolar and normal control probands. Archives of General Psychiatry, 39, 1157-1167.

Gershon, E. S., Hamovit, J. H., Guroff, J. J., & Numberger, J. I. (1987). Birth cohort changes in manic and depressive disorders in relatives of bipolar and schizoaffective patients. Archives of General Psychiatry, 44, 314-319.

Gizynski, M. N. (1985). The effects of maternal depression on children. Clinical Social Work Journal, 13, 103-116.

Gormsen, H. (1962). Retsmedicin Kopenhaven.

Gove, W. R., & Tudor, J. F. (1973). Adult sex roles and mental illness. In M. Rutter & N. Madge (Eds.), Cycles of Disadvantage. London, DHSS.

Green, K. D., Forehand, R., & McMahon, R. J. (1979). Parental manipulation of compliance and noncompliance in normal and deviant children. Behavior Modification, 3, 245-266.

Griest, D., Forehand, R., & Wells, K. C. (1979). An examination of predictors of maternal perceptions of maladjustment in clinic-referred children. Journal of Abnormal Psychology, 88, 277-281.

Griest, D. L., Forehand, R., Wells, K. C., & McMahon, R. J. (1980). An examination of differences between nonclinic and behavior-problem clinic-referred children and their mothers. Journal of Abnormal Psychology, 89, 497-500.

Grunebaum, H. (1977). In S. Henan & M. McMillan (Eds.), Children at risk for psychosis and their families in child psychiatry: Treatment and research. New York: Brunner/Mazel.

Grunebaum, H., Cohler, B. J., Kauffman, C., & Gallant, D. (1978). Children of depressed and schizophrenic mothers. Child Psychiatry and Human Development, 8, 219-228.

Hamilton, M. (1982). Symptoms and assessment of depression. In E. S. Paykel (Ed.), Handbook of affective disorders. New York: Guilford Press.

Hammen, C. L. (1981). Assessment: A clinical and cognitive emphasis. In L. P. Rehm (Ed.), Behavior therapy for depression. Present status and future directions. New York: Academic Press.

Hammen, C., Adrian, C., Gordon, D., Burge, D., Jaenicke, & Hiroto, D. (1987). Children of depressed mothers: Maternal strain and symptom predictors of depression. Journal of Abnormal Psychology, 96, 190-198.

Hammen, C., Ellicott, A., Gitlin, M., & Jamison, K. R. (1989). Sociotropy/Autonomy and vulnerability to specific life events in patients with unipolar depression and bipolar disorders. Journal of Abnormal Psychology, 98, 154-160.

Harris, R. E., & Lingoes, J. C. (1955). Subscales of the MMPI: An aid to profile interpretation. Unpublished Manuscript, University of California at San Francisco.

Hathaway, S. R., & McKinley, J. C. (1942). Minnesota Multiphasic Personality Inventory. Minnesota: University of Minnesota Press.

Hawton, K., Roberts, J., & Goodwin, G. (1985). The risk of child abuse among mothers who attempt suicide. British Journal of Psychiatry, 146, 486-489.

Hirschfeld, R. M. A., Klerman, G. L., Gough, H. G., Barrett, J., Korchin, S. J., & Chodoff, P. (1977). A measure of interpersonal dependency. Journal of Personality Assessment, 41, 610-618.

Kaplan, S. J., Pelcovitz, D., Salzinger, S., & Ganales, D. (1983). Psychopathology of parents of abused and neglected children and adolescents. Journal of the American Academy of Child Psychiatry, 22, 1983.

Kashani, J. H., Husain, A., Shekim, W. O., Hodges, J. K., Cytryn, L., & McKnew, D. H. (1981). Current perspectives on childhood depression: An overview. American Journal of Psychiatry, 138, 143-153.

Kauffman, M. A., Grunebaum, M. D., Cohler, B., & Gamer, E. (1979). Superkids: Competent children of psychotic mothers. American Journal of Psychiatry, 11, 1398-1402.

Keane, S. P., & Johnson, V. R. (1988). The impact of depression on maternal responses to child behavior. Unpublished manuscript, University of North Carolina at Greensboro.

Keller, M., Beardslee, W., Dorer, D., Lavori, P., Samuelson, H., & Klerman, G. (1986). Impact of severity and chronicity of parental affective illness on adaptive functioning and psychopathology in children. Archives of General Psychiatry, 43, 930-937.

Kinard, E. M. (1982). Child abuse and depressions cause or consequence? Child Welfare, 61, 403-413.

Klerman, G. L., Larvori, P. W., Rice, J., Reich, T., Endicott, J., Andreasen, N. C., Keller, M. B., & Hirschfeld, R. M. A. (1985). Birth cohort trends in rates of major depressive disorder among relatives of patients with affective disorder. Archives of General Psychiatry, 42, 689-693.

Kochanska, G., Kuczynski, L., & Maguire, M. (1979). Impact of diagnosed depression and self-reported mood on mothers' control strategies: A longitudinal study. Journal of Abnormal Child Psychology, 17, 493-511.

Kochanska, G. (1991). Patterns of inhibition to the unfamiliar in children of normal and affectively ill mothers. Child Development, 62, 250-263.

Lewinsohn, P. M. (1975). The behavioral study and treatment of depression. In M. Hersen, R. M. Eisler, & P. M. Miller (Eds.), Progress in Behavior Modification I. New York: Academic Press.

Lewinsohn, P. M., Biglan, T., & Zeiss, A. (1976). Behavioral treatment of depression. In P. Davidson (Ed.), Behavioral management of anxiety, depression, and pain. New York: Brunner/Mazel.

Lewinsohn, P. M., & Lee, W. M. L. (1981). Assessment of affective disorders. In D. H. Barlow (Ed.), Behavioral assessment of adult disorders. New York: Research Press.

Lobitz, G. K., & Johnson, S. M. (1975). Normal versus deviant children: A multimethod comparison. Journal of Abnormal Child Psychology, 3, 353-374.

Lovass, O. I., & Newsom, C. D. (1976). Behavior modification with psychotic children. In H. Leitenburg (Ed.), Handbook of behavior modification and behavior therapy. Englewood Cliffs, NJ: Prentice-Hall.

McDermaid, G., & Winkler, E. G. (1955). Psychopathology of infanticide. Journal of Clinical and Experimental Psychopathology, 16, 22-41.

McKnew, D. H., Cytryn, L., Efron, A. M., Gershon, E. S., & Bunney, W. E. (1979). Offspring of patients with affective disorders. British Journal of Psychiatry, 134, 148-152.

Marantz, S., & Coates, S. (1991). Mothers of boys with gender identity disorder: A comparison of matched controls. Journal of the American Academy of Child & Adolescent Psychiatry, 30, 310-315.

Marcus, L. (1972). Studies of attention in children vulnerable to psychopathology. Unpublished doctoral dissertation, University of Minnesota.

Mednick, S., & Schulsinger, F. (1968). Some premorbid characteristics related to breakdown in children with schizophrenic mothers. In D. Rosenthal & S. Kety (Eds.), The transmission of schizophrenia. Oxford: Pergamon Press.

Mendelson, M. (1982). Psychodynamics of depression. In E. S. Paykel (Ed.), Handbook of affective disorders. New York: Guilford Press.

Morrison, H.L. (Ed.). (1983). Children of depressed parents: Risk, identification, and intervention. New York: Grune & Stratton.

Neale, J. M., & Weintraub, S. (1975). Children vulnerable to psychopathology: The Stony Brook project. Journal of Abnormal Child Psychology, 3, 95-113.

Resnick, P. J. (1969). Child murder by parents: A psychiatric review of filicide. American Journal of Psychiatry, 126, 325-334.

Richman, N. (1976). Depression in mothers of preschool children. Journal of Child Psychology and Psychiatry, 17, 75-78.

Rickard, K. M., Forehand, R., Wells, K. C., Griest, D. L., & McMahon, R. J. (1981). Factors in the referral of children for behavioral treatment: A comparison of mothers of clinic-referred deviant, clinic-referred non-deviant and non-clinic children. Behavior Research and Therapy, 19, 201-205.

Robertson, J. M. (1976). The abusive parent: A different perspective. Canada's Mental Health, 24, 18-19.

Rodenburg, M. (1971). Child murder by depressed parents. Canadian Psychiatric Association Journal, 16, 41-47.

Robins, C. (1985). Construct validation of the Sociotropy-Autonomy Scale: A measure of vulnerability to depression. Paper presented at the annual meeting of the Eastern Psychological Association, Boston.

Ryan, P. J. (1986). The contribution of formal and informal systems of intervention to the alleviation of depression in young mothers. British Journal of Social Work, 16, 71-82.

Sameroff, A. J., Barocas, R., & Seifer, R. (1984). The early development of children born to mentally ill women. In N. Watt, E. J. Anthony, L. C. Wynne, & J. E. Rolf (Eds.), Children at risk for schizophrenia. Cambridge, England: Cambridge University Press.

Schachtel, E. (1954). The development of focal attention and the emergence of reality. Psychiatry, 17, 309-324.

Seitz, R. (1970). Five psychological measures of neurotic depression: A correlational study. Journal of Clinical Psychology, 26, 504-505.

Seligman, M. E. P. (1975). Helplessness. San Francisco: W. H. Freeman.

Spitzer, R. L., Endicott, J., & Robins, E. (1978). Research Diagnostic Criteria: Rationale and reliability. Archives of General Psychiatry, 7, 198-205.

Steele, B. F., & Pollack, C. (1968). A psychiatric study of parents who abuse infants and small children. In R. E. Helfer & C. H. Kempe (Eds.), The battered child. Chicago: University of Chicago Press.

Susman, E. J., Trickett, P. K., Ianotti, R. J., Hollenbeck, B. E., & Zahn-Waxler, C. (1985). Child-rearing patterns in depressed, abusive, and normal mothers. American Journal of Orthopsychiatry, 55, 237-251.

Teti, D. M., & Gelfand, D. M. (1991). Behavioral competence among mothers of infants in the first year: The mediational role of maternal self-efficacy. Child Development, 62, 918-929.

Weintraub, S., Prinz, R. J., & Neale, J. M. (1978). Peer evaluations of the competence of children vulnerable to psychopathology. Journal of Abnormal Child Psychology, 6, 461-473.

Weissman, M. M., Paykel, E. S., & Klerman, G. L. (1972). The depressed woman as a mother. Social Psychiatry, 7, 98-108.

Weissman, M., & Siegel, R. (1972). The depressed woman and her rebellious adolescent. Social Casework, 18, 563-570.

Weissman, M. M., & Paykel, E. S. (1974). The depressed woman: A study of social relationships. Chicago: University of Chicago Press.

Weissman, M. (1983). The depressed mother and her rebellious adolescent. In H. Morrison (Ed.), Children of depressed parents: Risk, identification and intervention. New York: Grune and Stratton.

Weissman, M. M., Prusoff, B. A., Gammon, G. D., Merikangas, K. R., Leckman, J. F., & Kidd, K. K. (1984). Psychopathology in the children (ages 6-18) of depressed and normal parents. Journal of the American Academy of Child Psychiatry, 23, 78-84.

Wolkind, S. (1985). Mothers' depression and their children's attendance at medical facilities. Journal of Psychosomatic Research, 29, 579-582.

Appendix A

CONSENT FORMS

Consent Form I

I understand that I am completing questionnaires that will be used to select subjects for a psychological study of the responses of various groups of mothers to childrens' everyday behavior. I have been informed that the information that I supply will be strictly confidential and will be available only to Vici Johnson, the principal investigator in this study, and Dr. Susan P. Keane, a member of the faculty in the Psychology Department of the University of North Carolina at Greensboro.

I understand that if I am selected for participation in this study, the experimental procedure will be explained to me more fully. At that time, I will be given another opportunity to decide whether or not I want to continue to participate. I further understand that my participation in this study is completely voluntary, and that I may feel free to withdraw from the study at any time.

Signed: _____

Witness: _____

Date: _____

Consent Form II

I, _____, agree to participate in a psychological study investigating the responses of various groups of mothers to childrens' everyday behavior. I have been informed of the general nature of the experiment, and I understand that I will be debriefed immediately following the experiment. Any questions that I may have regarding specific details of the study will be addressed at that time.

I also understand that any identifying information obtained from me during this study will be kept strictly confidential, and will be available only to Vici Johnson, Principal Investigator, and Dr. Susan P. Keane, a member of the faculty in the Psychology Department of the University of North Carolina at Greensboro. A research number will be assigned to me so that I will not be identified by name.

I have been informed that this study is not designed to constitute psychological or psychiatric treatment of any kind. I understand that no drugs will be administered to me, and that when my data has been collected there will be no further contact between myself and the individuals conducting this study. I further understand that my participation is completely voluntary, and that I may feel free to withdraw from this study at any time.

Signed: _____

Witness: _____

Date: _____

Appendix B

S A S

Appendix C

BECK INVENTORY

Appendix D

MMPI D-SCALE

Appendix E

S A S INTERVIEW

Appendix F

RECORDING FORMS

Recording Form A

1. Time videotape was stopped _____.

2. Briefly describe child's behavior at the point where you stopped the videotape.

3. Rate this behavior on the scale below by circling a number.

1	2	3	4	5	6	7
extremely positive			neutral			extremely negative

4. Describe briefly how you as the child's mother would respond to this behavior.

5. Explain briefly why you chose to respond in that way.

6. Given your response, what would your child do?

7. How would you feel if your child responded that way?

8. How typical is this behavior for children of this age? Circle the number on the scale below.

1	2	3	4	5	6	7
very typical			typical			not typical

Recording Form B

1. Briefly describe child's behavior.

2. Rate this behavior on the scale below by circling a number.

1	2	3	4	5	6	7
extremely positive			neutral			extremely negative

3. Describe briefly how you as the child's mother would respond to this behavior.

4. Explain briefly why you chose to respond in that way.

5. Given your response, what would your child do?

6. How would you feel if your child responded that way?

7. How typical is this behavior for children of this age? Circle the number on the scale below.

1	2	3	4	5	6	7
very typical			typical			not typical

8. [ ] Put a check ( ) in this box if you would not respond to this behavior.