

THE UNIVERSITY OF CALGARY

AN EXAMINATION OF LINGUISTIC PATTERNS AS A
PREDICTOR OF CHILD ABUSE

by

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A THESIS

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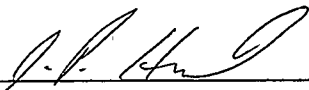
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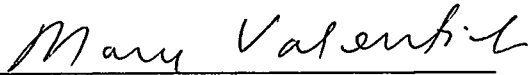
The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "An Explanation of Linguistic Patterns as a Predictor of Child Abuse" submitted by Irene Berry in partial fulfillment of the requirements for the degree of Master of Social Welfare.



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ABSTRACT

Considerable research has been generated to investigate precipitants of child abuse, including demographic, historical, psychological and psychosocial interactive determinants of these behaviors. What the prevailing research does not examine, however, is the nature and direction of the connections among the variables and the relationship to the incidence of the various indicators of abuse. This exploratory study investigated language patterns between an abusive and non-abusive group of mothers to determine whether or not they were providing the fullest linguistic representations of their communications to others. An integral part of the Neurolinguistic Programming model known as the meta-model, which is an extension of transformational grammar, was used to derive the language variables. The language variables used in this study were selected from the meta-model and the frequency of their occurrence was calculated using specific coding rules, from taped transcripts of interviews conducted on the abusive and non-abusive group of mothers. The statistically significant language variables derived from the first phase of the study were then compared with other previously proven predictors of abuse from the original study to determine the extent to which they could retain their predictive power in comparison with the other variables. The other variables derived from the parent study included by theoretical category were: a) psychological variables; 2)

childhood experiences of the mother; 3) parental interaction and behaviors; and 4) parental attitudes and beliefs.

A two-phase research methodology was employed to compare differences on language utilization between a group of high risk and child abusing mothers (N = 40), and a matched comparison group of non-abusing mothers (N = 18). The first stage of analysis involved the use of a t test to compare the differences between means of the abusers and non-abusers on the language variables. The second phase of the analysis tested the relative contribution of fourteen other independent variables in conjunction with the language variables in predicting group membership by the use of a stepwise discriminant function analysis.

The results of this study provide significant evidence in support of considering a linguistic component in the development of a multivariate, multidimensional, predictive model of child abuse. It was found that the language variables produced results that would enable them to stand on their own as a possible predictor of abuse. However, due to the complex, multifaceted nature of child abuse, they could ideally serve as an additional tool to be used in conjunction with other variables to determine potential causative factors in child-abuse that would emphasize interactive components.

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CHAPTER ONE

INTRODUCTION

Much attention has recently been focused on the issue of child abuse and the debilitating effect this has on the child and the family as a whole. Traditionally discipline and punishment have been the prerogative of the parent, with little or no concern to the community (Kadushin & Martin, 1981). A number of authors have pointed to physical abuse of children as being culturally sanctioned in North American society (Gil, 1970; Steinmetz & Straus, 1973) which provides for a normative legitimacy of family violence (Korbin, 1977). However, recent interest by professionals, government officials and the general public have raised the level of interest of all concerned towards the quality of care provided to children and their subsequent development (Cavanagh, 1983). This is predicated on the principle that the psychosocial development of the child is inexorably connected to the relationship between parent and child (Clarke & Hornick, 1984) and that developmental disturbances are a frequent occurrence in children who have been maltreated or abused by their parents (Perry, Doran, & Wells, 1983).

The profession of social work is particularly concerned with the issue of child abuse. Due to their heavy involvement in child welfare issues as well as the provision of treatment to families, social workers manifest a special need and responsibility in being able to examine and deal with this area from an ideological as well as a pragmatic perspective. Social work has a particular vested interest in this area due to the high rate of recidivism in reported studies which claim that over half of abused children have been previously abused (Herrenkohl &

Herrenkohl, 1979; Herrenkohl, Herrenkohl, Egolf, & Seech, 1979). These researchers also noted that younger children are at greater risk than older children for experiencing recurrent abuse.

Kadushin (1980) states that ". . . protective services present a problem for data assessment or diagnosis in that there are no typical . . . , neglectful parents" (p. 186). Little of the prevailing research examines the nature and direction of the connections among variables and the relationship to the incidence of the various indicators of abuse. The correlates which are evidenced, are frequently thought to be part of a recursive chain, with an expected increase in the probability of abuse as each variable is stimulated. However, it has not been determined which links are more significant than others in attempting to interrupt this cycle (Giovannoni, 1982). A few instruments have been devised, as well as a number of structured clinical interviews, which provide global indicators of parental inadequacy (Egeland & Brunmquell, 1979; Hunter, 1979; Milner & Wimberly, 1979; Schneider, Hoffmeister, & Helfer, 1976), but these do not delineate specific characteristics of child rearing abilities.

Unfortunately, much of the research which has been performed in the area of child abuse has not satisfied the basic requirements of sound empirical design (Plotkin, Azzar, Twentyman, & Perri, 1981), which brings into question decisions concerning child abuse which are made based upon an imprecise foundation of knowledge (Bolten, Laner, Gai, & Kane, 1981). Social work research can facilitate this process by expanding the knowledge base in this area through systematic investigation of the determinants of child abuse as a social problem (Smith, 1985) and subsequent efforts to develop appropriate treatment

alternatives. Through research, the practitioner will be provided with more empirical knowledge to facilitate his or her efforts in the identification and amelioration of child abuse concerns.

Objectives of the Study

The focus of this study was exploratory. The first phase was aimed at examining and comparing linguistic patterns exhibited by abusive mothers as compared to non-abusive mothers through the content analysis of their verbalizations utilizing the semantic ill-formedness portion of the meta-model. The meta-model which is a significant component of Neuro-linguistic Programming was created by Bandler and Grinder (1975), to assist in the identification and clarification of linguistic representations between speakers of a language. Neuro-linguistic programming is a model of communication developed in the early 1970s by Richard Bandler, a former mathematician and gestalt therapist, and John Grinder, a linguist. Through the systematic study of Milton H. Erickson, Virginia Satir and Fritz Perls, Bandler and Grinder were able to identify the language patterns, non-verbal communication skills, and interventive strategies used by these therapists to make them successful. The goal of this type of analysis in this study was an attempt at identifying the accuracy of an identified group of mothers' verbalizations, to determine whether or not they were providing the fullest representations of their communications to others. The research questions which were investigated in this study were:

1. Will child abusers manifest causal modeling to a greater extent than non-abusers?

2. Will child abusers manifest mind-reading to a significantly greater extent than non-abusers?
3. Will child abusers manifest lost performatives to a significantly greater extent than non-abusers?
4. Will child abusers manifest universal quantifiers to a significantly greater extent than non-abusers?

The strategy for analysis of this report involved two stages. The first stage of analysis involved the use of a t test to compare the differences between means of the abusers and non-abusers. The second phase of the analysis tested the relative contribution of several independent variables in predicting group membership (i.e., abuser and non-abusers) through a discriminant function analysis. This analysis was done in order to test the relative predictive power of the language variables in comparison with other predictive factors.

Definitions of Concepts and Research Variables

Given that the data used in this study are based on previously published research (Hornick, Patterson & Clarke, 1983), the definitions pertaining to "child abuse," "neglect," and "high risk" will be consistent with the aforementioned design. Definitions pertaining to language categorization are also presented.

Child Abuse, Neglect and High Risk (dependent variable): These three terms are grouped together because of the ambiguity and interrelatedness which exists in trying to make clear distinctions between them. For purposes of this study, child abuse is restricted to the neglect and

abuse imposed upon them by their mothers, within the confines of their own families. All three terms exist within an environment of ambiguity, equilibrating child, parent and societal rights. All possess legal, social, and cultural components. Definitions are, to a certain extent, based upon societal recognition and the vulnerability or visibility of the alleged abuser.

Emotional, physical, and sexual abuse, along with neglect are often frequently encompassed within the rubric of child abuse. The definition of child abuse put forward by the Ontario Child Welfare Act in 1978 is presented as follows:

- (a) physical harm;
- (b) malnutrition or mental ill-health of a degree that if not immediately remedied could seriously impair growth and development or result in permanent injury or death; and
- (c) sexual molestation (Child Welfare Act, 1978, Sec. 47).

In light of the fact that child abuse occurs in varying degrees, it is often difficult to measure the extent of harm to a child when it is not obviously physically severe. Thus, society depends on the judgements of certain "gatekeepers" (Gelles, 1979) (i.e., physicians, social workers, public health nurses, police, etc.) to accurately label child abuse.

"High risk" is clothed in a similarly ambiguous cloak to that of abuse. According to Hornick and associates, "high risk" is defined as a high probability for abuse, which perpetuates the problems inherent in the identification of abuse and the likelihood of occurrence.

Lack of clarity also exists with "neglect," although a general distinction exists between abuse which involves acts of commission as compared to acts of omission in neglect (cf. Burt Associates, 1975).

Again, the difficulty arises about who determines an incidence of neglect and by what criteria? The ultimate determinant for high risk and physical abuse cases used in this study were the social workers who were assigned to particular cases.

For purposes of this study, child abuse or high risk for abuse is defined as those behaviors exhibited by mothers in which: (1) physical abuse had been confirmed in a court of law; (2) situations in which a Family and Children's Services Agency had confirmed abuse although no legal action had yet been taken; and (3) situations which were classified by a child abuse team as high risk for physical abuse (Hornick & Clarke, 1986).

Semantic ill-formedness: This term refers to the broad category which serves as the umbrella for the meta-model language transformations which were utilized in this study. Specifically, semantic ill-formedness constitutes groups of words that are not syntactically well-formed or semantically well-formed (Bandler & Grinder, 1975). Semantics relates to meaning or relationship of meaning in language, and syntax describes the way in which words are put together to form phrases, clauses or sentences (Webster's Ninth New Collegiate Dictionary, 1984). Well-formedness in language refers to the accuracy and grammatically appropriate way in which a speaker verbalizes a message to another individual (Bandler & Grinder, 1975). Semantically ill-formed statements do not transmit meanings that are obviously understood by the receiver of the communication. When an individual speaks in a semantically ill-formed manner, the full message which they intend to communicate to another person is not transmitted in a clear and congruent fashion in the

translation from their thought processes to their verbalizations. When this occurs, the receiver of the communication may frequently misinterpret the message that was originally intended by the sender of the information. Stated another way, communication is distorted by the speaker, not connecting their Deep Structure (analogic portions of the message) with the Surface Structure (digital portions of the message). Deep Structure according to Bandler & Grinder (1975), refers to the full linguistic representation, or cognitive organizational process that an individual goes through in organizing a communication prior to verbalizing information which they wish to transmit to another individual. Surface Structure refers to the sentences derived from Deep Structures, which someone communicates to another person through speaking or writing.

The four language variables used in this study are derived in name and definition from the writings of Bandler and Grinder (1975).

1. Causal Modeling - This is a case of semantic ill-formedness where the referential index of responsibility is projected outside the speaker. Referential indices refer to specific persons or objects that exist in a person's environment. When the referential index of responsibility is placed outside the speaker, the cause for a particular event is not considered to be within the individual's control. These Surface Structures present the communicator's belief that one person or set of circumstances performs some action which necessarily causes some other person to experience some emotion or inner state. An example of this occurs in the Surface Structure, My son makes me mad. In this case, the son is

identified as the external referential index who causes the mother to feel angry.

2. Mind-reading - This involves any case in which one person believes they can know the internal state of another (thinking, feeling) without direct communication from the other. For example, I know what she is thinking.

3. Lost Performatives - These Surface Structures omit the authority behind some "should" or "must" statements. This is a case in which the speaker assumes that his perception or model of the world is the world, or minimally assumes that his model of the world should be similarly assumed by everyone else. For example, People should know better.

4. Universal Quantifiers - This is a case in which words are used to generalize to a whole class of experiences (all, never, everyone, always, nobody). For example, She never listens to me.

Contents of this Study

This study is comprised of four major sections. Chapter Two discusses the review of the literature pertaining to the etiology of child abuse as well as communication theories which are hypothesized as relevant to a further understanding of abusive parenting. Specifically the major topic areas reviewed which have been identified as associated with abuse in the literature are: (1) social-demographic factors; (2) psychological attributes; (3) parental history; (4) parental attitudes and beliefs; and (5) social-interactional factors. Communication theory will be presented in this study as an adjunct to the social-interactional perspective.

Chapter Three of this study presents the methodological components of both phases of the analysis. These include sample characteristics, coding rules for data selection and analysis.

Chapter Four provides the results of the bivariate analysis on the two groups using the language variables. This chapter also contains the empirical findings of the multivariate analysis which selected the most powerful predictors of child abuse from a listing of seventeen variables. A summary discussion section was included at the end of this chapter in an effort to tie together the statistical results.

Chapter Five contains a summary as well as recommendations for further study.

CHAPTER TWO

REVIEW OF THE LITERATURE

Etiologic Factors Contributing to Child Abuse

Considerable research has been generated to investigate precipitants of child abuse, including demographic, historical, psychological and psychosocial determinants of these behaviors (Goldstein, 1973; National Council of Welfare, 1979; Pelton, 1978). Currently, no consensus exists which would clearly demarcate a typology or pattern which identifies abusers from non-abusers, nor are there any consistent predictors which would alert authorities to high risk individuals.

Traditionally, studies investigating precipitants of child abuse have been largely theoretical (Plotkin et al., 1981), focusing on isolated determinants with little emphasis placed on multivariate, interactive empirical studies (Wolfe, 1985). However, more recent studies point to the use of comparison groups and inferential statistics to study the phenomenon of child abuse, with less emphasis being placed on pure clinical impressions. Nonetheless, the notion of the interactive components still fail to be adequately examined and tested in the literature.

Child abuse research has generally identified five main areas of study in its attempts to delineate etiologic factors in parents which heighten their propensity towards abuse: (1) social/demographic; (2) psychological attributes of the parent; (3) parental history; (4) parental attitudes/beliefs; and (5) parental interaction and behaviors. For this review, communication theory is examined, to connect specific components of language utilization with problematic family interaction.

Social Demographic Characteristics

There is a fairly large body of research which points to the overrepresentation of working and lower-class parents amongst child-abusers (Gelles, 1979; Gil, 1970, 1971; National Council of Welfare, 1979; Pelton, 1978). National surveys consistently reveal the disproportionate representation of lower socioeconomic groups amongst abusive parents (Gil, 1970; Galdstone, 1965; Young, 1964). In a nationwide survey of child abuse performed by Gil (1970) in the late sixties, over 60 percent of families implicated in abuse incidents were found to be on welfare with limited education and financial means. Other studies have also pointed to the limited economic means available to the families of abused children (Bennie & Sclare, 1969; Hornick et al., 1983; Kotelchuck, 1982).

This does not preclude the fact that case findings of child abuse are also present in middle-class groups (Spinetta & Rigler, 1972), and that a number of studies cite evidence supporting economic factors as being overstressed (Steele & Pollack, 1968). While many authors acknowledge the role of economic stressors, they caution against using economic factors as the sole indicators of abuse. Studies by Steele and Pollack (1968) and Kempe et al. (1962) also point to a number of other factors such as mental, physical and emotional stress as playing a large part in the etiology of child abuse. Although there is evidence of a high degree of varying types of stresses within underprivileged families, the vast majority of the poor do not abuse their children (Spinetta & Rigler, 1972). In the earlier cited studies by Gil (1970), he pointed to the high incidence of child abuse prevalent amongst the poor but qualified his findings by indicating that the overall cultural sanctioning of physical force in child discipline is more of a major causative factor.

Other studies point to other social demographic factors such as gender (Paulson, Abdelmonem, Chaleff, Liu, & Thomason, 1975), age (Kempe et al., 1962) and marital status (Pelton, 1978), as being associated with high risk. These studies, along with other findings, basically indicate that children are more likely to be mistreated by their mothers than their fathers (Schloesser, 1964; Silver, Dublin, & Laurie, 1971). The overrepresentation of mothers in this category is generally found to be as a result of such factors as: (1) a high incidence of single-parent caretakers with father absent, (2) more fathers working, who devote little time to childrearing, (3) high visibility of mothers to public service agencies (public health, child protection, etc.). Children have also been found to be abused by parents that are younger rather than older (Lauer, Tenbroeck, & Grossman, 1974), and by families that have been disrupted by separation, divorce or single-parent households (Hornick et al., 1983; National Council of Welfare, 1979; Pelton, 1978). A number of authors have found that demographic relationships are too weak to be of any predictive utility, although they cite the theoretical significance of these relationships due to their potential for generating causal hypotheses (Avison, Turner, & Noh, 1986; Turner & Avison, 1985).

Psychological Attributes of the Abusive Parent

Much of the early research on child abuse pointed to a defect in character structure (Holter & Friedman, 1968; Kempe et al., 1962), or psychiatric attributions concerning the abusive parent (Parke & Collmer, 1975). A number of studies placed the responsibility for abuse on certain personality characteristics of the abusing parent that would allow for free expression of hostility and aggressive behaviors towards others

(Wasserman, 1967; Merrill, 1962). Kempe who coined the phrase "battered child syndrome" in the early sixties while acknowledging poor impulse control of abusive parents, did not concur with some of the earlier evidence which pointed to psychosis as a prominent etiologic factor. Further evidence towards the end of that decade were more supportive of Kempe's view that most abusive parents did not exhibit psychotic tendencies (Steele & Pollack, 1968; Wasserman, 1967).

Other authors considered that low intelligence may be a contributor to child abuse (Smith, Hanson, & Noble, 1974), as in cases of severely handicapped parents (Haavick & Menninger, 1981). Psychological tests performed by Steele and Pollack (1968) on an abusive and non-abusive group of parents found no relationship between intelligence and abuse between the two groups. While some authors agree that there may be a correlation between parental inadequacy and mental disability, studies to date have not provided significant relationships between intelligence and ability to provide adequate child care (Haavik & Menninger, 1981).

A recent review by Wolfe (1985) identifies comparative studies of abusive and nonabusive parents with the abusers demonstrating such psychological difficulties as poor self-esteem, depression and impulse control problems. These findings reflected a theoretical view of personality functioning which led to the development of a child-abuse model that described a distinct personality syndrome or disorder in abusive parents. Wolfe cited case reports and controlled studies which investigated hypothesis related to abusive parents' personality profiles, coping and defense mechanisms and other information which would support the theory that psychopathology in parents was responsible for child abuse. However, in the review by Wolfe no consensus was

evidenced in the literature describing the source of such manifestations as aggressive impulses. Low self-esteem is frequently observed in abusive parents (Anderson, 1982; O'Brien, 1980) along with accompanying depression and somatic distress (Lahey, Conger, Atkeson, & Treiber, 1984). A controlled study of 111 abusive parents revealed that these individuals possess low self-esteem, along with a significant number of deviant signs which point to personality dysfunction (Anderson & Lauderdale, 1982). Data for this study was derived from a broader exploratory research project in the United States which investigated the impact of client intervention services. Abusive, normal and psychiatric in-patient groups were administered the Tennessee Self Concept scale to investigate differences on self-esteem and other personality measures. Now, while significant group differences were found on measures of self-esteem between the abusive and normal groups, no information is provided on how the normal group was selected. Similarly, the groups were not matched on such factors as age, education and income. Similarities were found on psychopathology factors between the psychiatric group and the child-abuse group, although no specific information is provided relevant to the selection of the psychiatric group. Other researchers have identified certain personality traits which seem to be characteristic of abusers. These include such traits as narcissistic orientation (Merrill, 1962; Steele & Pollack, 1968), poor judgement, immaturity (Kadushin, 1981; Meir, 1964; Young, 1964), low frustration tolerance and dependency (Melnick & Hurley, 1969).

It may be noted that although a number of studies indicated such psychological findings as lower frustration tolerance amongst abusers,

their results were not found to be statistically significant (Kertzman, 1980). Similarly, in a study by Starr (1982) comparing a matched group of abusive and non-abusive parents on personality functioning, no significant group differences emerged between the two groups. Another study investigated group differences on personal adjustment in abuse, neglect and control groups with the following results (Gaines, Sandgrund, Green & Power, 1978). In this particular study, personality questionnaires were administered to groups of abusers (N = 80), negligent mothers (N = 80) and control groups (N = 80) to determine differences in areas of personal adjustment. The outcome of this study pointed to no differences between the abuse and control groups on variables of stress, emotional needs, denial of problems or relationships with own parents. The negligent group manifested greater life stress than the abuse or control groups.

Parental History

The history and background literature relating to abusive parents generally point to relationship characteristics and exposure to various forms of discipline by their own parents as impacting their own propensity towards abuse. A number of researchers have been supportive of this position while others present evidence which contradict these findings.

Not surprisingly the literature reports that many abusive parents have experienced less nurturing relationships in their own development as compared to their non-abusive counterparts (Polansky, Chalmers, Bittenweiser, & Williams, 1981; Spinetta & Rigler, 1972). An earlier study by Melnick and Hurley (1969) compared two matched groups on

eighteen personality variables and discovered a correlation between abusive mothers and evidence of emotional deprivation in their own upbringing. Sixty abused children and their families were investigated and the results revealed that mothers of the maternal caretakers of children that had been abused were described as critical and rejecting (Green, Gaines, & Sandgrund, 1974). These findings are further supported by other writers who stress the importance of a painfully perceived childhood (Green, 1980) as the source of a caretakers later inability to provide empathetic care to their own children (Turner & Avison, 1985; Steele, 1970, 1980). A multivariate study performed by Kotelchuk (1982) found that for a child abuse and neglect group, unhappy maternal childhood was one of the most powerful risk indicators in predicting abuse.

A theory of previous history influences have been posited by a number of researchers. This involves a hypothesis that parents who were raised with physical punishment as a child training strategy and who were raised in a household plagued with violence, see this type of activity as a family problem-solving technique, (Parke, 1982) and also come to perceive this model of parenting as morally right and justified (Steele & Pollack, 1968). The parent who engages in abusive behaviors with their own children is basically recreating a learned pattern of response from their own upbringing (Gelles, 1979; Steele & Pollack, 1968). Child abuse is a way of coping with stress and bringing up a child. Some of this evidence suggest that parents who abuse their children have a limited repertoire of parenting skills, including a lack of appropriate disciplinary strategies other than physical punishment. This profile of parenting has been developed due to the mother's own history of child rearing only providing a limited range of child-care

alternatives--principally physical punishment (Disbrow, Doerr, Caulfield, 1977; Green et al., 1974).

Not all writers have been supportive of the notion of parents previous history being highly correlated with their own propensity for abuse. A multivariate study of abusing, neglectful, and control mothers found no significant differences between groups on measures involving relationship with their own parents (Gaines, Sandgrund, Green & Power, 1978). This perspective is supported by other authors who report that significant research findings do not support earlier conclusions of the earlier writers that the majority of child abusers were severely deprived or abused as children (Kadushin & Martin, 1981; Smith, 1984). This causative theory fails to answer the question why some parents, with a history of punitive and neglectful child-rearing relationships, become abusers but the vast majority do not (Parke, 1982). A number of authors while not rejecting the previous history hypothesis, advocate a multidimensional, multivariate approach in which a conglomerate of psychological factors in conjunction with previous unfulfilling childhood experiences and immediate environmental stress may be more predisposing factors than a more unilateral or one dimensional approach (Green, 1980; Parke, 1982).

Parental Attitudes and Beliefs Toward Child Rearing

The literature is quite mixed in regards to the position that parental attitudes contribute to the potential for child abuse. A prominent attitude which provides considerable conflict in dealing with abuse involves the social sanctioning of family violence (Steele & Pollack, 1968; Straus, 1980). For some parents, physical punishment (in serious

instances, abuse) is viewed as a legitimate and necessary aspect of appropriate child rearing (Parke, 1982; Steele, 1980). Much of the earlier writings regarding child abuse have suggested that many parents who are abusive, have unrealistic expectations of their children (O'Brien, 1980; Smith, 1984). More recent research is not suggestive of the same degree of support of this hypothesis.

Role reversal was a concept coined early in child abuse studies (Morris & Gould, 1963), which referred to a pattern exhibited by abusive parents in which they turn to the child for an inordinate degree of dependency gratification (Green, 1980). These authors perceive abusing parents as treating children as if they were little adults (Gladstone, 1965) and who were unable to understand the particular stages of development of their children (Steele, 1980; Starr, 1982). In Steele and Pollack's study (1968), the abusive parents manifested expectations of their children that were beyond their developmental capacities. Abusive parents feel insecure and so look to their children to satisfy their desires for unmet dependency needs (as if their children were capable of providing adult types of reassurance and love).

Not all studies have supported this theory. A research-based approach attempting to predict child abuse found no group differences on measures of developmental knowledge by a non-abusive group of parents and an abusive group (Starr, 1982). This perspective has been supported by other research findings which have also not found significant differences in expectations and attitudes of abusive and non-abusive mothers (Gaines et al., 1978). A further comment on the research indicates that while attitudes and behaviors of problem parents have been examined, very few of the reporting studies have been properly

controlled and little is understood about the prevalence and impact of this in the normal population (Avison et al., 1986).

Parental Interaction and Behaviors

Although much of the research on child abuse has centered on parental character traits, past experiences, social demographic characteristics, and attitudes, the failure to adequately explain this phenomenon has led to more recent interest in looking at interactional patterns in maltreating families. Differences in abusive and non-abusive groups have been found on quantity as well as quality of parent-child interaction.

A number of researchers have found that abusive parents use less verbal and physical interactions (Burgess & Conger, 1977, 1978; Dietrich, Starr, & Kaplan, 1980). These studies have found that overall levels of communication between parent and child are significantly less frequent and less positive. Abusive and neglectful families have also been found to show high rates of aversive mother-child interactions (Aragona, Eybers, & Sheila, 1981; Reid & Taplin, 1977). These families have been found to display more physical aggression and more negative commands than did families who show no evidence of child abuse. Researchers examining levels of positive behaviors toward children have shown that abusive parents provide fewer communicative and facilitative behaviors (Disbrow et al., 1977), demonstrate fewer physical and positive behaviors (Bousha & Twentyman, 1984), and manifest less positive emotion for appropriate behavior (Aragona, Eybers, & Sheila, 1981; Lahey et al., 1984), in their interactions with their children than non-abusive families.

In a videotaped study of interactional sequences between pairs of mothers and abused children and a matched experimental non-abusive group, differences were found on mutuality and reciprocity measures on the two groups (Robison & Solomon, 1979). The abusive mothers in this study were found to be more insensitive to the signals and moods of their children than their non-abusive counterparts.

Not all research is supportive of the position of differences in interactional behaviors between abusive and non-abusive mothers. In a study of 87 abuse and control families, significant group differences were not found in areas of demonstration of affection and presence of restrictive or punitive behaviors (Starr, 1982).

Some social interaction theorists have indicated that abusive parents fail to use effective strategies that would inhibit problematic occurrences with their children and fail to exercise positive techniques to teach their children appropriate behaviors (Burgess & Richardson, 1984; Friedman, Sandler, Hernandez, & Wolfe, 1981). Some of these studies point out that abusive parents tend to use ineffective child-management strategies such as lowered expectations of children as compared to non-abusive groups (Terrance & Twentyman, 1983; Spinetta, 1978). Another important aspect of this view is the role of the child in abuse. Some authors argue that it is hard to ascertain if children are abused because they are difficult, or if they are difficult because they have been abused (Smith, 1984). The role of the child is summarized in "The Abused Child" along six dimensions which may affect parent-child interaction: (1) unpredictable events impacting the mother-child relationship (e.g., difficult pregnancy, desertion by father whom child resembles, prematurity); (2) personal attributes of the child which make it difficult

to provide care for and the parent less able to reinforce positive mothering; (3) mismatch of the child and the parents' expectations; (4) attachment disruptions; (5) the child's provocative or attention seeking behaviors; and (6) the parents inability to deal with a particular developmental stage of the child (Martin, 1976). This has led to a belief by some authors that the basis of child-abuse is in the interaction between parent and child and that the behavior of the child is a necessary part of that interaction (Herrenkohl, Herrenkohl & Egolf, 1983). As a consequence, it has been suggested that the parental-child interaction takes on a cyclical pattern of aversive behaviors that may end up in harm to the child (Kelly, 1983). This bi-directional theory suggests that antecedent events in family interaction may precipitate abuse by the "triggering" of certain stimulus and response patterns which precipitates and maintains the use of excessive punishment (Burgess & Richardson, 1984; Kadushin & Martin, 1981). Gil (1975) makes reference to "triggering contexts," or circumstances that serve as elicitors of abusive behavior, where stress and frustration in the parent produce a reduction in or loss of self-control. In these situations, either the parent overreacts to something the child does, or responds to characteristics in the child which are stress-provoking and thus stimulates the abuse cycle. This bi-directional theory points to the abusive interaction as being reciprocal and dynamic between parent and child (Bell & Harper, 1977).

Although the interactional theory is relatively new in child abuse research, this area appears to be the least contentious in terms of conflicting results of the various etiologic theories. Thus, it would appear to be a potentially fruitful area of inquiry to examine in conjunction with

other predictive factors that have been previously studied in the child abuse area. The following section will attempt to make connections between parent-child interaction as it pertains to child abuse, by an investigation of communication theory, placing special emphasis on language utilization.

Communication - A Global Perspective of Models and Theories

Human interaction in its most basic form relies on verbal communication for any enduring relationship. The transmission of values, beliefs, attitudes, skills, etc. are universally reliant on communication. The expression of these components rely on the phonological, semantic and syntactical systems of language, which are a part of communication. So, in turn, each language has a set of linguistic rules that specify the possible sequences and combinations of elements to make internal representations of language clear and understandable (Bandler & Grinder, 1975). Fundamental to this notion is the concept that language is not experience, but rather a representation of experience (Bandler & Grinder, 1975; Korzybski, 1933; Watzlawick, Beavin, & Jackson, 1967). Words (Surface Structure) are meaningful only in that they create within an individual some sensory or full linguistic representation (Deep Structure) (Miller, 1967; Winograd, 1972). In the transformation of meaning, the Surface Structure is a sentence or sequence of words spoken by an individual to someone about information which that individual has organized within themselves. The meaning behind the spoken word is referred to as the Deep Structure. Surface Structure verbalizations are the outcome of a linguistic process called a derivation. Congruent or "well-formed" communication occurs when the speaker of a

language is able to successfully express itself in a syntactically and semantically well-formed manner (Bandler & Grinder, 1975). When an individual speaks, a series of choices are made (transformations), which is rule governed, about the form in which they will communicate their experience (Winograd, 1972; Miller, 1967).

Two levels of communication exist in every piece of information that is transmitted between individuals. Specifically, these levels involve a verbal (digital) and nonverbal (analogic) component. Different theorists have various ways of representing these two levels. Bateson (1972), Watzlawick, Beavin, and Jackson (1967) state that these two levels of communication involve content and relationship. Information is reported verbally through the content level. The way that this information is to be interpreted in the context of the interpersonal relationship is defined as the relationship level. Symbolic language is the vehicle utilized for communicating verbally on the content level. The relationship level is conveyed primarily through nonverbal channels such as facial expressions, gestures, etc.

In his book, Silent Messages, Mehrabian (1981) maintains that our words are overridden by our actions. His stance is that nonverbal messages are more potent in communication than the words we use. Words may be contradicted or reinforced by our silent messages. Bateson (1972) supports this notion by referring to non-verbal messages as being in a meta or higher position than verbal messages. Bandler and Grinder (1976), on the other hand, do not differentiate either verbal or nonverbal messages as being meta to the other. Rather, they believe that both levels of a message are of equal significance in communication.

Gordon (1978) speaks of content and style in communication. Content communication is transmitted via the contributions of various parts of the human organism in the course of a communication exchange. Voice tonality, posture, pattern of syntax, body gestures, and facial expressions demonstrate the communication style. Gordon cites that all communication is accompanied by stylistic components which affect, and are often part of, its message. What is not quite as obvious is that styles of communication presented by various individuals are unique and different for each individual.

Virginia Satir (1964, 1972) sees communication as an umbrella that encompasses and changes all that occurs between man. "Communication is the largest single factor determining what kind of relationship he makes with others and what happens to him in the world about him" (Satir, 1972, p.30). Satir indicates that people bring to a communication experience those elements including a body, values, expectations, sense organs, ability to talk and their store-house of knowledge, the brain. Satir believes that through the interaction of these elements in any communication event, individuals will experience any number of positive or negative experiences, (i.e., pain, joy, anger, compassion, etc.).

Research on parent-child interaction emphasizes that a major function of communication is to exchange referential information (Dickson, 1980; Glucksburg, Krauss, & Higgins, 1975). That is, a speaker possesses certain information which he desires to communicate to a listener (Bates, 1976). Further, accuracy of communication is perceived as the correctness of listener responses. Dickson (1980) reports that much of the research on parent-child interaction has focused on style with little attention afforded to accuracy. According to this author,

style in communication relates to the form of expression rather than the effects of the message. Accuracy of communication is defined as ". . . the fidelity with which a speaker-listener pair exchanges information" (Dickson, 1980, p. 119). Style of communication is more concerned with how a message is transmitted rather than how accurately it is communicated. It is the belief of a number of authors that more research needs to be focused in the area of accuracy of information transmitted in parent-child interaction, contrasted with only emphasizing communication style (Dickson, Hess, & Miyake, 1979; Dickson, 1980; Glucksburg et al., 1975). It is hypothesized that this type of research would be important for understanding both the effects of parent-child interaction and development of communication skills (Anglin, 1977; Whitehurst & Merkur, 1977).

Chomsky (1957, 1965) revolutionized the area of linguistics by pointing out that within the innumerable Surface Syntactic structures, there are Deep Syntactic structures which reflect formal rules of expressing meaning. These formal rules have been identified as an area of linguistics called "transformational generative grammar." This has made it possible to delineate a set of rules which enable the identification of specific sequences of words to make logical and understandable sense in language. This finding has made it possible to apply a scientific approach to the study of sentence meanings and their grammatical structure (Luria, 1982).

Similarly, the meaningfulness of an individual's communication is dependent upon how rich or how impoverished one's model of the world is. As an individual speaks (encoding of sensory experience into words) and as a second individual listens and transforms the auditory stimulus

into his/her own sensory representation (decoding) important information can be lost or distorted (Bandler & Grinder, 1975). Meanings are embedded in words. However, we need to appreciate that these words are idiosyncratic to the speaker and there are no assurances that the same meaning will be interpreted by the listener. This factor is especially relevant with young children. Young children are not naturally predisposed to know the idiosyncracies of a language (Cromer, 1970; Miller, 1981). Rather, the acquisition of meaning is a developmental process which occurs with physical and social maturation. Some evidence suggests that children under five do not know that ambiguous messages can cause communication problems (Cromer, 1970). These are central features of verbal referential communication which the child is not equipped developmentally to handle. It has been suggested by some authors that one reason for the child's apparent ignorance about the requirements of effective communication is that the parent fails to give the child a full enough linguistic representation of their Deep Structure to enable the child the opportunity to understand what they are talking about (Bandler & Grinder, 1975; Robinson, 1980).

Effective communication, according to English and English (1970), relates to ". . . an attempt by one person to influence another whom he addresses in such a way as to reduce discrepancies between them; communicating in order to change a person's ideas or actions" (p. 100). Costa (1981) indicates that communication is ". . . an emergent process of mutual meaning, creation and negotiation between interdependent individuals" (p. 1850).

Language patterns exhibited by child abusers fall within the same set of rules of communication as any other speaker. It might be argued,

however, that child abusers may possess more impoverished models of the world and thus experience more "language rule violations" than non abusers, thus decreasing the clarity and understanding of their messages. Failure of the child to respond to the parents' unclear message may lead to an increase in frustration and lack of understanding which could culminate in abuse or neglect. This observation is based on a notion that child abuse is based on a bi-directional interaction of parent and child (Kadushin, 1981). Abuse, according to this theory, is predicated on the belief that it is not necessarily the product of the exclusive input of the abuser, but rather is the result of the inputs of both parties involved in the interaction (Parke & Collmer, 1975). Other evidence indicates that young children are not aware that ambiguous verbalizations can cause interaction difficulties (Robinson & Robinson, 1977; Robinson, 1980), and that frequently misunderstanding occurs because adults fail to give children the information they need to process information sufficiently (Robinson, 1977).

A number of authors are proponents of the development of instruments which would analyze "ordinary language" patterns of parents to deduce their orientation towards their children (Harre & Secord, 1973). McGehee (1981) states that "instruments based on this analysis may enhance our predictive capabilities" (p. 125) in detecting child abuse. However, empirical research does not exist which would explain or suggest tested methods of assessment or intervention based on this type of communication analysis. Because measurable indicators of specific language skills are by and large absent in the literature, assessment and interventional treatment strategies are often cast in such global terms that they defy measurement and evaluation.

A recent investigation by Hornick et al. (1983) attempted to develop a multivariate, multidimensional predictive model of child abusers, as well as a comparative analysis of treatment effectiveness of two forms of treatment. While this study produced a number of statistically significant and useful results, an additional component investigating the "content of communication" of the abusers and non-abusers in this study may contribute another salient dimension to this analysis. That is, through the analysis of language patterns of the abusive and nonabusive mothers; it may be possible to delineate differences which may be significant in specifying predictive factors in the determination of abusive behaviors.

Until recently, methods of performing such an analysis have been absent in the literature. However, a former mathematician and Gestalt therapist and a linguist have developed a communication and therapy model called Neuro-Linguistic Programming which purports to answer some questions related to language utilization (Bandler & Grinder, 1975, 1976). A significant aspect of this model involves examining language transformations of people as they endeavor to communicate with one another. This element, known as the meta-model (see Appendix A), is an extension of transformational grammar, and was created by Bandler and Grinder to provide an identification of linguistic patterns which could become problematic in the course of communication, and a number of responses which communicants may use to insure more complete communication and reduce the ambiguous transference of information. That is, every time an individual hears, sees or feels a message from a significant other, that individual will have an internal sensory transform of the message. During the codification of sensory experiences into

words (as an individual speaks) and the process of decoding (as a second individual listens and transforms the auditory stimulus into his/her own sensory representation) important information can be lost or distorted. Bandler, Grinder and Satir (1976) have stated that semantic ill-formedness is the basis of a great deal of communication difficulties which result in serious upset and dissatisfaction for family members. It is suggested that an examination of language patterns of child-abusers may be a useful exercise in the exploration and understanding of this phenomenon.

Summary of the Literature

The body of knowledge which currently exists relative to the prediction of child abuse is far from conclusive. Although this area has been studied for over twenty years, much of the information which has been generated lacks empirical validation. The majority of studies have been of the discussion variety, lacking any systematic investigation. What is apparent in the literature is that most studies have focused on limited and isolated causal frameworks stating only a few key variables as explanatory factors. A number of authors have spoken about an interactional theory that would investigate multiple determinants of child abuse but until recently this type of analysis has only been provided "lip service."

It must be noted that although much of the knowledge base has not been systematically derived, sufficient theory has been generated to provide ample variables for empirical analysis. Relevant areas which have been identified in the literature are: (1) social-demographic variables, (2) psychological variables, (3) childhood experiences of the

mother, (4) parental attitudes and beliefs, and (5) parental interactions and behaviors.

The parental interaction variable has given rise to the central focus of this study. That is, the exploration of language variables of child-abusive parents as potential areas of examination to determine causation. For this study, the examination of language and its application to child abuse is exploratory; however, the presentation of the analysis to follow will provide both a bivariate and multivariate strategy of analysis, to determine the predictive potential of language, in conjunction with other predictors of abuse.

CHAPTER THREE

METHODS

This chapter provides a description of the methodological characteristics of this study. This will include a discussion of the sample which was studied, procedures for data selection, coding category rules and strategy of analysis for the two phases of this study.

This particular study involved a secondary analysis of pre-existing data for the purpose of answering new questions from the original data. The questions which were investigated and the method of data analysis were different from those in the primary study. The findings of the secondary analysis were designed to yield results and knowledge additional to those presented in the original report.

Sample

The sample for this study was drawn from prerecorded taped interviews of abusive and non-abusive mothers from the Hornick et al. study (1983). The first group consisted of a group of child abusers and/or high risk for abuse mothers ($N = 40$). The second group consisted of a matched comparison group of non-abusing mothers ($N = 18$). It is noted that the sample for the original study contained more subjects (abuser group, $N = 55$; non-abuser group, $N = 21$). The reduced number of subjects for this study was due to several of the tapes from the original study not being decipherable, or having been lost.

In the original study, the abusive group demonstrated the following characteristics: (1) mothers in families where the occurrence of physical abuse had been conclusively documented ($N = 11$); (2) mothers from

families where there was a suspicion of physical abuse, but not confirmed ($N = 9$); and (3) mothers from families who were deemed to be "high risk" for child abuse as evaluated by the social worker monitoring the case ($N = 35$). The non-abusive group had been selected from public health records and matched on areas of gender and age of the target child with that of the abuser group. The criterion for selection of the non-abusive group was that the subjects had not been previously involved with the Family and Children Services of the area.

Comparisons of the abuser and non-abuser group on gender and age of the target child was very similar. Mean age of the target child of the abusive group was 3.65 years ($s.d. = 2.0$), compared with 3.9 years ($s.d. = 2.3$) of the non-abuser group. Differences between the abuser and non-abuser groups on other demographic characteristics are presented in the results section of this report.

Procedures for Collecting Data

The data for the initial phase of this design were gathered through a content analysis of the verbalizations of mothers from the Hornick et al. (1983) study. This data collection initially involved typing transcripts of prerecorded taped interviews of the abusive and non-abusive group of mothers.

The data for the original interviews were acquired in the homes of both groups using a slight variation on the 47-item Parent Interview Schedule (Baumrind, 1967, 1972) which was derived from interviews and ratings produced by Sears, Maccoby and Levin (1957). In order that comprehensive information could be obtained regarding parent-child interaction, a number of questions from other instruments were also used

(Disbrow et al., 1977; Duvall, 1946; Hereford, 1963; Yarrow, 1968) in the Parent Interview Schedule. Since the sample for this study was obtained from multi-problem families and this questionnaire was designed for a more homogeneous middle class population, questions were somewhat altered and simplified to deal more adequately with this group. The interview schedule was administered by a trained interviewer as cited in the original design. The interview questionnaire was comprised of a number of open-ended questions aimed at parental attitudes, beliefs and practices. Rating scales were used to categorize and code responses to questions.

For the current study, the Nurturance Inventory which was derived from the 47-item Parent Interview Schedule (Clarke & Hornick, 1984) was utilized (see Appendix B). A three-phase analysis was used in the development of the Nurturance Inventory by the authors. Factor analysis of the Parent Interview Schedule was initially performed which measured a high degree of internal consistency, homogeneity and unidimensionality among items. From the factor analysis an eight question, eleven item subscale (Nurturance) emerged which was deemed to be a major underlying dimension describing child-rearing practices. Specific validation procedures were then employed including item-to-scale correlations, which produced relatively homogeneous and unidimensional items, and fairly high internal consistency of items (Cronbach's alpha, coefficient = .88). Concurrent and construct validation procedures were also used which demonstrated a significant relationship between items that calculated reported behavior and observed parental behavior. The third step involved the use of discriminant analysis to establish predictive validity based on membership of the abusing and non-abusing

group. See Appendix C for a complete listing of tables used in the development of the Nurturance Inventory.

Data for the current study were obtained from typed transcripts of the taped interviews of the Parent Interview Schedule. However, responses of the mothers to the eight questions from the Nurturance Inventory (Clarke & Hornick, 1984) were the only ones used in this study. Specifically, this involved using the semantic ill-formedness component of the meta-model as designed by Bandler and Grinder (1975) to determine whether the abusive mothers exhibit higher incidences of meta-model language rule violations than the non-abusive group. The categories of semantic ill-formedness included: (1) causal modeling, (2) mind-reading, (3) lost performatives, and (4) universal quantifiers. Each typed transcript of the Nurturance Inventory responses of the abusive and non-abusive group was subjected to a systematic search to detect incidences of the four language rule violations. The following discussion provides the criteria which were used for selection of meta-model language violations from the semantic ill-formedness category.

Coding Categories

The most significant element in determining the presence of semantic ill-formedness in communication is to determine whether the Surface Structure (verbalizations) is a complete form of the full linguistic representation from which it is derived--the Deep Structure. That is, as one person decides to communicate a message to another, they form a complete linguistic representation of their experience known as the Deep Structure. As the individual begins to speak, they make a series of choices about the form in which their experience will be communicated.

The choice of the utilization of the particular form of speech is, however, rule governed. The Surface Structure which emerges, is a product of the selective choices the individual makes in order to deliver their message.

The objective of this analysis was to determine whether the (Surface Structures) verbalizations of the abusive and non-abusive groups of mothers in this study contained a full linguistic representation of the information which they wished to communicate (Deep Structure).

As mentioned previously, semantic-ill formedness formed the broader generic category which included the four language variables. Semantic ill-formedness refers to the identification of statements which have not transmitted meanings that are congruent with the intention of the message. The operationalization of the four language variables were derived by counting the number of times they occurred in the typed transcripts of the two groups of mothers' verbalizations. The following discussion outlines the way the four categories of semantic ill-formedness were identified which had been adapted from Bandler and Grinder's (1975) discussion on semantic ill-formedness in their book, The Structure of Magic I, pp. 95-107, as well as the categories of the Meta-Model as described by Dilts (1977) in Appendix A.

a. Causal Modeling

Causal modeling is a case of distortion where persons assigns as outside of their control, responsibilities which are actually within their control. Bandler and Grinder (1975) have stated in their writings that it is not possible for someone to create and emotion within another

individual. They are basically any cause-effect statements which link two or more situations in a causal manner. For example:

My son makes me feel sad.

The coder can identify this sentence as possessing the form: Some person causes another person to experience an emotion.

This Surface Structure is said to be semantically ill-formed of the causal modeling case, which involves the belief on the part of one person that another individual may perform some act which necessarily causes another human being to experience some emotion or inner state. Generally, the person who is experiencing the emotion is portrayed as having no choice in responding the way that she does. It is literally not possible for one person to create an emotion in another, thus it is semantically ill-formed.

Bandler and Grinder (1975) indicate that ill-formed Surface Structures which are of this form can be identified in two ways:

(A)	X	Verb (cause)	Y z	Verb (feel experience)	Adjective (some emotion or some internal state)
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where X and Y are nouns which have different referential indices, i.e., refer to different people.

The Surface Structure just presented takes on the form of:

<u>My son</u>	makes	me	feel	sad
X	Verb (cause)	Y	Verb (feel experience)	Adjective (some emotion or some inner state)

The other form which is generally identified, involves the following types of Surface Structures:

You frighten me.

The application of the paraphrase test involves moving the verb in the original Surface Structure to the end of the new Surface Structure and insert the verb cause or make in the original position, and place the verb experience or feel in, producing:

You make me feel frightened.

Once again, it can be determined that the original Surface Structure possesses the same meaning as the second Surface Structure, thus identified as being semantically ill-formed.

b. Mind Reading

In Mind-Reading, persons, through their Surface Structures, have determined that they do not have a choice because they have already made a decision about what others may feel and think. When they communicate, they operate on assumptions that they have previously made about what others feel and think, thus creating the possibility that their assumptions about others may be invalid.

One form of Mind-Reading is a class of semantically ill-formed Surface Structures where one person believes they can know the internal state of another (thinking, feeling) without direct communication from the other. For example:

Everybody who is a parent knows what a good child is.

The speaker in this case is making a claim that they know what goes on in the minds of all members of this group.

Another class of Mind-Reading involves Surface Structures which presuppose that some person is capable of reading another person's mind. Some persons may consistently neglect to express their feelings

and thoughts because they assume that other people know what they are thinking and feeling. For example:

If he loved me, he would always do what I told him to do.

The task of the coder is to view the Surface Structure and determine if it involves a claim that one person comes to know what another person is thinking.

c. Lost Performative

Lost performatives, a term used by Bandler and Grinder (1975), involve statements and judgements that an individual considers to be true about the world but which are generalizations based on the individual's model of the world. The Surface Structure which the individual presents is not relativised to himself. There is not a recognition on the part of the person that there are other possibilities; nor does the individual recognize that the Surface Structure statement which they say is true of their particular view of the world. Lost performatives are used by a speaker when rules are used that are appropriate for that individual and their view of the world and puts them on others. Lost performatives are characterized by words like: good, bad, crazy, sick, wrong, true, false, right. For example:

It's wrong to hurt anyone's feelings.

That's a sick thing to do.

This is the right way to do it.

The identification of lost performatives involves observing the Surface Structures for generalizations about the world using words like "crazy, wrong, sick, etc." and identifying this as the person's model of the world.

d. Universal Quantifiers

Universal quantifiers are quite simply identified as words within Surface Structures which generalize to a whole class of experiences. For example:

I never do anything right.

He never listens to me.

Nobody pays attention to what I say.

Recognition of this type of semantic ill-formedness involves the identification of words such as: everybody, no one, always, every, never, nobody, all.

Each subject's meta-model violations were tabulated on a coding category sheet (see Appendix D) to determine the frequency of occurrence.

Data Selection for the Second Phase of the Analysis

In order to test the relative contributions of several independent variables in predicting group membership to the abusive and non-abusive group, a second phase of analysis was designed. This was done in order to test the relative predictive power of the language variables from the first phase of the analysis, in comparison with other predictive factors. The other variables were selected due to their previously determined predictive capability in selecting child abusers from non-abusers in the original Hornick et al. (1983) study.

Seventeen variables were selected for inclusion in this phase of the analysis. In addition to the statistically significant language variables from the initial phase, fourteen other variables were selected from the original study. The criteria for inclusion of only certain variables is

based upon the findings of the original study and their fit with the two groups, their relevance to the existing literature and degree to which they were deemed to be related to the language variables under study. The fourteen independent variables were derived in the parent study from specific questions in the aforementioned instruments. These same questions were used in the present study to elicit the same variables as in the original design. Refer to appendices for listing of questions used from these instruments. The other fourteen variables used in this study were included for analysis by theoretical category.

a. Psychological variables.

Two psychological variables were selected for this category. These included measures of the variable of self-esteem using Coopersmith's Self Opinion Form (see Appendix E), and an intelligence factor using the less/more intelligent subscale from Form E of Catell's 16 P.F. test (see Appendix F).

b. Childhood experiences of the mother

From the literature, two classes of parental childhood experiences were chosen. The parental childhood experiences involving fathers was dropped from the selection criteria due to insufficient data from the original design. Information from the original study indicated that most of the mothers came from single-parent households with no consistent father figure being present throughout their childhood. These included the type of discipline that the mothers were subjected to, as well as their relationship with their own mothers. Three forms of discipline which the mothers were subjected to in their upbringing were included

as independent variables. These were: (1) physical, (2) emotional, and (3) verbal discipline. Relationship variables included: (1) understood by mother as child, (2) understood by mother as teen, (3) compatibility with mother as child, and (4) compatibility with mother as teen. The data from questions: 38, 39, 42, 43, and 47 of the Introductory Interview Schedule (see Appendix G) were used to procure measures of these variables.

c. Parental interaction and behaviors

The variable of attentive parental involvement was used to measure this category. This variable contained such elements as mother's attentiveness toward the child, verbal interaction, awareness of child's needs, response to closeness bids, parent-child rapport and realistic parental expectations. The Parent Behavior Rating Scale was used in obtaining the data for this variable. Questions used to derive this variable included numbers: 5, 40, 41, 43, 44, 46, 48, 51, 52, and 54 (see Appendix H).

d. Parental attitudes and beliefs.

The Parent Interview Scale was used to derive the four variables for this category. These are listed as follows: (1) influence on child, (2) responsibility for effects, (3) appropriate expression of anger, and (4) persistence in discipline. Questions used from the Parent Interview Scale for these variables included: 3, 6, 10 and 13 (see Appendix I).

An in-depth discussion is provided in the results section on specifics of data selection and operationalization for the multivariate phase of the study.

Strategy and Techniques for Analysis

As mentioned previously, the analysis strategy for this study was two-fold. The focus of the first part of the study was exploratory rather than hypothesis testing and was aimed at examining and comparing linguistic patterns exhibited by abusive mothers and non-abusive mothers through the content analysis of their verbalizations using the semantic ill-formedness portion of the meta-model. The goal of this particular analysis was an attempt at identifying the accuracy of an identified group of mothers' verbalizations, to determine the existence of differences between abusers and non-abusers on whether they were providing the fullest representations of their communications to others.

The strategy for the second phase of the study was aimed at determining the relative contributions of other independent variables as predictors of child abuse in conjunction with the statistically significant language variables from the original phase of this study. The rationale for this tactic was to determine the extent to which the language variables would hold up against other previously determined predictors of child abuse. The results of this type of analysis would provide important theoretical implications for considering language variables in the etiology of child abuse.

Techniques for Statistical Analysis

Two statistical techniques were employed for analyzing the data in this study. The analysis strategy for the first stage involved the use of a one-tailed t test to compare the differences between the means of

the abusers and non-abusers on the four language variables. This technique was used in an attempt to answer the four research questions presented for this study.

A stepwise discriminant function analysis was used for the second part of this study. The stepwise technique was employed because of its suitability in providing the best set of discriminating variables for determining group membership of the abusive and non-abusive group of mothers used in this study. The technique initially selects the most discriminating variable, and then continues to select variables until all have been selected or the remaining variables no longer contribute to further discrimination. An added benefit in the use of this technique is that it considers variables simultaneously in identifying the best discriminating variables, along with their respective weighting and contributions.

Limitations of the Study

The areas noted as limitations of this study will be briefly discussed in order that the reader is not misled about the nature and outcome of this report.

- a. It is noted that although secondary analysis provides an opportunity for saving time and money in carrying out research, it does present some methodological problems. To the extent that the researcher must attempt to manipulate an existing body of data, the opportunity for randomness and generalizability is somewhat limited. Original research provides the opportunity to determine variables and rule out selection factors or bias through the design of the study. In secondary analysis, given that there is an existing body

of data, measurement must be tailored to accommodate the form in which the original data exists.

In this study, the collection of data may have been performed in a different manner had this been original research. The researcher may have designed her own questions that may have been more specific to this analysis and may have used audio-visual equipment examining a variety of interactive elements in conjunction with the language variables.

Although the limitations of secondary analysis are duly noted, it must also be said that these may also be seen as benefits when considering the overall results. To the extent that an existing body of data exists, it would be difficult to speculate that the researcher has manipulated the design to achieve the desired outcomes. In this case, the communication data on the mothers exist in a form that could not been previously manipulated, either consciously or unconsciously, by the researcher. Thus a neutral context has been provided in which to measure the existence of the various language variables. Similarly, this form of design provides the opportunity to measure the results of the bivariate analysis with other previously proven predictors of child abuse through the discriminant function technique.

- b. The role of the child has not been included within the context of this study. This was not done to downplay or negate the literature which points to considering the contributions of the child when looking at an interactional model for determining child abuse. However, it must be pointed out that the nature of the data presented in this study did not allow for considering the impact of the child

- as part of an interactional analysis. The interactive component of this study involved the communication of the two groups of mothers with the interviewer, in the acquisition of data via the taped interviews in the original study. Thus a context was created which provided a reflection of the accuracy of the identified group of mothers' verbalizations, to determine whether or not they were providing the fullest representations of their communications to others.
- c. In light of the fact that this study was exploratory, it is noted that there were no clear ways to operationalize the theoretical constructs of language from previous research or theory. The operationalization of the language constructs emerged from the design of this study.
 - d. A limitation of the sample selection in the original study occurred due to the non-random nature of group membership to the two groups. Selection of the abusive group used quota sampling and the non-abusive group was matched on the basis of the following criteria: (1) not previously identified as abusive or not considered to be high risk by the family service organization from which the abusive sample was obtained; and (2) target child was matched on age of child in the abusive group.
 - e. A further limitation of this study was that the researcher could not be totally blind in the coding of the language variables. This occurred because the differences in verbalizations contained in the tapes in the abusive and non-abusive groups were obvious. Thus, differences between the groups may reflect differences in education between the two groups.

- f. A limitation which is noted in this study was that an inter-rater reliability check was not performed on the data.
- g. It is noted that the absence of fathers in the research and in this study presents a general problem of interpretation and generalizability. In most studies investigating child abuse, the father is frequently absent from the home and so there appears to be an overrepresentation of mothers who are designated as abusers. This presents a challenge to researchers to not lightly assume that females possess a greater risk of abuse than males, when insufficient research has been performed which would include males when studying at-risk populations.

CHAPTER FOUR

RESULTS

The predictors of child abuse have been discussed at some depth in previous research and summarized in the current literature review. The purpose of this study was exploratory and focused on examining and comparing linguistic patterns exhibited by abusive mothers as compared to non-abusive mothers through the content analysis of their verbalizations, utilizing the semantic ill-formedness portion of the meta-model. The meta-model is a significant component of the Neuro-linguistic Programming model (Bandler & Grinder, 1975). Semantic ill-formedness is comprised of the language variables of: causal modeling, mind-reading, lost performatives and universal quantifiers. The aim of this particular form of analysis was an attempt at identifying the accuracy of an identified group of mothers' verbalizations, to determine whether or not they were providing the fullest representations of their communications to others. The research questions which were investigated in this study were:

1. Will child abusers manifest causal modeling to a significantly greater extent than non-abusers?
2. Will child abusers manifest mind-reading to a significantly greater extent than non-abusers?
3. Will child abusers manifest lost performatives to a significantly greater extent than non-abusers?
4. Will child abusers manifest universal quantifiers to a significantly greater extent than non-abusers?

The analysis strategy for this study involved two stages. The first stage involved the use of t test to compare the differences between the means of the abusers and non-abusers. The second phase of the analysis tests the relative contributions of several independent variables, in predicting group membership (i.e., abusers and non-abusers). This analysis was done in order to test the relative predictive power of the language variables in comparison with other predictive factors. The other independent variables included in this analysis by theoretical category included: (1) childhood experiences of the mothers, (2) psychological variables, (3) attitudes, and lastly, (4) interactive patterns.

Bivariate Test of Research Questions

In order to test whether child abusers will use the four language variables with significantly greater frequency than non-abusers, a one-tailed t test was computed on the variables.

Table 4.1 contains comparisons of language between the two groups. The findings indicate that the differences in group means of the language variables are all in the predicted direction. The most statistically significant differences between the two groups were obtained on the causal modeling variable ($p = .007$) with non-abusers manifesting mean scores of .06, compared with 1.12 on the abusive group. Differences between the group means of the non-abusers and abusers on the universal quantifiers variable were also in the predicted direction. These scores were statistically significant ($p = .004$), with non-abusers showing mean scores of 2.44, compared with 5.63 on the abusive group. Statistically significant differences were also obtained between the two groups

on the lost performatives variable ($p = .042$) with mean scores of 1.11 for the non-abusive group and 2.32 for mean scores of the abusive group. Now, while the differences of means on the mind reading category were not statistically significant ($p = .060$), with mean score differences of 2.11 for the non-abusers and 3.66 for the abusive group, it must be noted that the fourth category was very close to being significant.

TABLE 4.1

GROUP MEANS, STANDARD DEVIATIONS AND T-TESTS OF LANGUAGE
VARIABLES FOR NON-ABUSERS AND ABUSERS
(Internal level data)

Variable Label	Non-abusers			Abusers			t	p	range
	N	Mean	SD	N	Mean	SD	value	value	
Universal Quantifiers	18	2.44	2.03	40	5.63	4.59	2.78	.004	0-27
Lost Performatives	18	1.11	1.85	40	2.32	2.62	1.74	.042	0-12
Mind Reading	18	2.11	1.76	40	3.66	3.97	1.56	.060	0-17
Causal Modeling	18	.06	.23	40	1.12	1.74	2.54	.007	0-8

Results of this phase of the analysis would indicate that abusive mothers manifest a higher incidence of semantic ill-formedness on three out of four variables as compared to their non-abusive counterparts, in their communication to others. Theoretically, this would appear to be supportive of the literature that individuals who manifest difficulties in communicating accurately, frequently become embroiled in "calibrated communication cycles which result in pain and dissatisfaction for family members" (Bandler et al., 1976, p. 90). To the extent that mothers would not communicate in a semantically well-formed manner, the receiver of a communication is unable to respond to the message in a congruent fashion. The feedback loop which may ensue would manifest a

heightened level of frustration by the sender of the communication for not being responded to appropriately, with concomitant ambiguous responses by the receiver.

It is suggested that individuals who manifest a high incidence of semantic ill-formedness are not connecting the Deep Structure of their communication with the spoken Surface Structure of their message. These distortions of language are manifestations of a limitation of a persons' options, which reduce their ability to communicate in an effective and understandable manner.

While it may be argued that the presence of language distortions may be correlated with a higher incidence of child abuse, this does not preclude the possibility that other variables could, in fact, be the cause of language difficulty or certainly be more predictive of child abuse. The following phase of analysis reports on the predictive capabilities of the previously identified significant language variables in conjunction with other significant predictors, to produce a hierarchical ranking of child abuse factors.

Multiple Variable Analysis

Data Selection and Operationalization of Variables

Originally there were twenty variables including the language variables that were considered for inclusion in the second phase of the analysis. These variables were selected due to their previously determined predictive capability in selecting child abusers from non-abusers (Hornick et al., 1983), as well as their potential interrelatedness to the original language variables. The purpose for using the other variables was to determine the degree to which the three significant language

variables from the original phase of the analysis could stand up against other powerful predictors. The original twenty variables which included demographic data, were subsequently reduced to seventeen variables due to the assumption that demographic variables which may have been used were considered to be tautologically correlated. The elimination of the demographic variables was primarily tied to a limitation inherited from the prior study which occurred because of the systematic differences between the two groups on income, education, and age of the mothers. Although they were not included in the discriminant analysis, information pertaining to their contribution was considered significant to discuss for theoretical reasons. Specifically the categories of age, education and income were deemed important. In addressing the relationship of demographics to language variables, it could be debated that language is purely a function of demographics which point to language sophistication as a function of age, education or income. In the original study, the abusive group of mothers differed significantly on all three variables from the non-abusive group (see Table 4.2). As can be seen from the table, differences between groups are such that the correlations could be interpreted as tautological; thus they were not included in the analysis.

Composition of the seventeen variables selected for the second phase of the analysis included the three statistically significant language variables previously examined. Origin of the fourteen other variables selected for inclusion in the analysis were from the original data in the Hornick et al. (1983) study. Figure 1 provides a listing of variables by theoretical category that were included in this phase of the analysis.

TABLE 4.2

AGE, EDUCATION, AND INCOME FOR ABUSERS AND NON-ABUSERS						
Variable Label	Abusers		Non-Abusers		t-value	p-value
	N	Mean	N	Mean		
Age of mother	(55)	23.92	(21)	29.09	4.25	.0001***
Education of mother (number of years)	(55)	10.06	(21)	12.90	5.22	.0001***
Income	(55)	8913.38	(21)	21333.30	8.02	.0001***

*** Significant at .001 level or greater
(Hornick et al., 1983)

Data for the additional fourteen variables were derived from the scored responses from a series of questionnaires that were originally employed in the parent study. The subjects for this part of the analysis were the same (control group $n = 18$, abuse group $n = 40$) as were used in the bivariate analysis of the language categories. The instruments which were originally used to gather data on these subjects included the: Introductory Interview Schedule; Coopersmith's Self-Opinion Form; Cattell's 16 P.F. Test, Parent Interview Schedule; and Parent Behavior Rating Scale. See Appendices section for a complete listing of these instruments.

In addition to the language variables, the following provides a brief discussion of the fourteen additional variables by theoretical category, their reason for inclusion, and how they were derived.

Language Categories: The language categories used in this analysis were the three semantically ill-formed variables that were derived in the analysis of variance in the original phase of this study. These variables

FIGURE 1

INDEPENDENT VARIABLES INCLUDED IN THE DISCRIMINANT ANALYSIS WITH ASSOCIATED VALUES AND RANGES

Variable Name	Values	Range Low-High
I LANGUAGE CATEGORIES		
- Causal Modeling	0 to 8 occurrences	0 - 8
- Lost Performative	0 to 12 occurrences	0 - 12
- Universal Quantifiers	0 to 27 occurrences	0 - 27
II PSYCHOLOGICAL VARIABLES		
Intelligence - 16PF		
- Less - more intelligent	Low to high raw scores	0 - 8
Self-Opinion Form		
- Coopersmith total self-opinion score	Like me; Unlike me	0 - 47
III CHILDHOOD EXPERIENCES OF THE MOTHER		
Discipline - severity ranked low (1) medium (2) high (3). Composite scores using no - yes responses calculated with specific weights		
- Physical	(1) shook or shoved (2) spanked (3) hit with object	0 - 6
- Emotional	(1) isolation (2) withdrawal of love (3) ridicule	0 - 6
- Verbal	(1) reasoning (2) yelling	0 - 3
Relationship with Parents		
- Understood by mother as child	Never; All the time	1 - 5
- Understood by mother as teen	Never; All the time	1 - 5
- Compatibility with mother as child	Very poorly; Very well	1 - 5
- Compatibility with mother as teen	Very poorly; Very well	1 - 5
IV PARENTAL INTERACTION AND BEHAVIORS		
- Attentive Parental Involvement	Attentiveness toward child, verbal interaction cognitive insight, awareness of child's needs, suppression of hostility, response to closeness bids, parent-child rapport, initiation of inter- action, confidence during home visit, realistic parental expectations	1 - 5
V ATTITUDES/BELIEFS		
- Influence on child	Parent exerts weak to strong influence	1 - 5
- Responsibility for effects	Parent disowns their effects to high responsibility	1 - 5
- Appropriate expression of anger	No anger to appropriate anger	1 - 5
- Persistence in discipline	No compliance to immediate compliance	1 - 5

included causal modeling, lost performatives and universal quantifiers. The rationale for including these variables in the discriminant analysis was to determine the predictive capacity which they possessed when measured against other previously determined powerful predictors of child abuse.

Psychological Variables: The psychological variables of self-esteem and intelligence were included in this analysis to determine the contributions of this theoretical category in predicting group membership. Both of these variables had achieved statistical significance in the predicted direction on comparisons of group means in the original study on comparisons of the abusive and non-abusive groups of mothers. The intelligence variable from the 16-PF derived mean score differences of 7.54 for the abusive group and 8.57 for the non-abusers, which was statistically significant ($p = .001$). The clinical significance of this finding is suspect in light of the fact that only raw scores from Form E were used in the parent study and Form E was constructed for adults with lower intelligence. This form was used because of an earlier erroneous assumption which designated the abusive group at a lower educational level than the actual sample produced. The range on this variable was determined by the use of raw scores which varied from 0-10. The limitation imposed by the earlier study produced the obvious result of the two groups scoring higher than expected; thus limiting the clinical significance of the differences in mean scores. Self-Opinion score differences between the two groups were also statistically significant ($p = .015$), with abusers manifesting mean scores of 32.04, compared with 36.67 for the non-abusers.

a. Self-Opinion

The variable of self-opinion was incorporated into this analysis, to measure the subjects perceptions of themselves from a psychological viewpoint. It has generally been reported in the literature that abusers have a lower regard for their own self-image than non-abusers (Anderson & Lauderdale, 1982; Wolfe, 1985). Various authors have posited the theory that parents who do not feel very good about themselves are more focused on their own problematic issues, which has the effect of impairing their parental competence (Mash, Johnston & Kovitz, 1983; Parke & Collmer, 1975; Turner & Avison, 1985). In this study it was deemed significant to include such a psychological dimension to determine the degree to which self-esteem would contribute to a person's propensity for child abuse.

Results of Coopersmith's (1968) Self-Opinion Form were used in this study to provide a measure of the subjects psychological property of self-esteem. This scale possesses a total self-esteem score and three subscales: (1) general self-esteem, which pertains to general affective components of self-respect and self-satisfaction; (2) social self-esteem, which is a measure of the subject's perception of how others view him/her; and (3) self-achievement esteem, which is a measure of the value the respondent places on their abilities. For purposes of this study, only the total scores from the Self-Opinion questionnaire were used in this analysis.

b. Intelligence as a Potential Predictor of Abuse

The variable of intelligence was included in this analysis because of the correlation which could be assumed between language sophistication and degree of cognitive capacity. It could be assumed that language in

itself would not be considered a predictor of abuse, rather that intelligence of an individual would determine their linguistic fluency and thus be a more predictive factor (Smith, Hanson, & Noble, 1974). Cattell's 16 Personality Factor Test was used in this analysis to provide a measure of intelligence differences between the abusive and non-abusive group. Factor analytic procedures were employed by Cattell and his associates to provide a profile of sixteen personality source traits that can be utilized in the identification of a wide spectrum of overt personality behaviors. Identified by an alphabetical label, each trait is presented by two behavioral extremes. The test Form E was used in the original study as there was an early assumption made that respondents would be of lower academic levels. Information provided by the demographic data revealed that subjects were higher than the expected mean (grade ten) for the administration of this form of the test, so only raw scores were used by the original authors on the advice of the Cattell group. Consistent with the original design, only raw scores were used in the discriminant analysis on the less/more intelligent subscale to make within group comparisons.

Childhood Experiences of Mother: Much has been written in the literature on the effects of mothers' parenting due to their own childhood upbringing (Polansky et al., 1981; Spinetta & Rigler, 1972). These experiences include the discipline that was used (Gelles, 1979; Parke, 1982), as well as child and teen relationships with the parent (Green, 1980; Kotelchuk, 1982). In this analysis, three variables were included which were comprised of the mothers' own experiences of discipline as they were growing up. These were: physical, emotional and verbal

discipline. In addition, four variables looking at the relationship that the mother had with her own mother was also included. These included being understood by mother as a child and as a teen. Also, compatibility with mother as a child and teen was measured.

The relevance of using this variable in conjunction with the language variables for analysis is tied to the theory that adeptness in communicating may not be the significant factor in predicting child abuse. Rather, the mother's own previous history and what she learned in her own experiences of being parented may be a more causative factor in how she reacts to her children. That is, if they were abused in their childhood, a parent who is currently abusive, may simply be repeating a learned pattern of response from their own childhood experiences.

Questions from the Introductory Interview Schedule (see Appendix G) were used to derive the variables on the theoretical category of "childhood experiences of the parent." This category was subdivided into variables which distinguished parental discipline and relationship with parents.

The reliability of this category may be somewhat suspect due to the nature of the responses being historical and subjective, which by definition have less reliability. However, the consistency of the findings of this category in the original design were in the predicted direction and so were considered appropriate to use in this analysis (See Table 4.3)

TABLE 4.3

GROUP MEANS AND T-TEST FOR FAMILY EXPERIENCES
OF THE ABUSERS AND NON-ABUSERS

Variable Label	Abusers			Non-abusers			t	p
	Mean	(N)	SD	Mean	(N)	SD	value	value
CHILDHOOD EXPERIENCES OF MOTHER								
Severity of Discipline								
- physical discipline by mother	3.13	55	2.49	2.95	21	2.16	1.75	.04
- emotional discipline of mother	2.65	55	2.17	1.57	21	1.63	2.07	.02
- verbal discipline by mother	2.38	55	2.03	.76	21	.68	-.87	N.S.
Relationship with Parents								
- understood by mother as child	3.03	55	1.43	4.19	21	.81	-3.49	.000
- understood by mother as teen	2.51	55	1.36	3.38	21	1.18	-2.62	.005
- compatibility with mother as child	3.67	55	4.24	4.24	21	.89	-1.88	.03
- compatibility with mother as teen	3.13	55	1.43	3.52	21	1.29	-1.13	N.S.

Adapted from Hornick et al. (1983) study.

Parental Interaction and Behaviors: The variable of attentive parental involvement was included in this analysis to provide a measure of current parental characteristics which might have some bearing on differences manifested between the abusive and non-abusive groups. This particular variable was comprised of a number of components which illustrated the degree to which the child is exposed to maternal attention and affection. These included such things as: mother's frequency in initiating interactions with other family members, the extent to which the mother demonstrated an attentive attitude while interacting with the child, the extent to which the mother would teach understanding in the child and the amount of time spent in verbal interaction with the child. The range of affectional responses included recognition of the child's bids for physical and emotional closeness, and the presence of reciprocal

understanding and sympathy in the parent-child relationship. An added component of this category involved the extent to which the parental expectations were congruent with the age of the child.

The theoretical significance of the inclusion of this variable for analysis is tied closely to the research which places a high value on the correlation between abusive parenting and quality of parental practices (Burgess & Conger, 1977, 1978; Robison & Solomon, 1979). A significant element in this variable, is the mother's position of control in demonstrating affection and providing attention to the child (Bousha & Twentyman, 1984; Dietrich et al., 1980). Basically, this involves a mother's ability to be cognizant of the developmental level of the child and to gauge her responses to the child accordingly (Herrenkohl et al., 1983).

This category was originally measured via the Parent Behavior Rating Scales (Baumrind, 1967, 1972), which had been edited by the original authors of this study (see Appendix H). A thorough investigation of the psychological components of the Parent Behavior Rating Scales was performed through factor analysis to determine underlying empirical properties. Results of the factor analysis of the Parent Behavior Rating Scales produced nine factors which accounted for 79 percent of the total variance. Validation of the Parent Behavior Rating Subscales revealed a high degree of homogeneity and unidimensionality on item to scale correlation measures. In particular, the subscale of attentive parental involvement was highly indicative of this finding (see Table 4.4).

TABLE 4.4

MEANS, STANDARD DEVIATION AND ITEM-TOTAL CORRELATION
FOR THE ATTENTIVE PARENTAL INVOLVEMENT
SCALE OF THE BEHAVIOR RATING SCALE

<u>Items</u>	<u>Item - Total Correlation</u>	<u>Mean</u>	<u>S.D.</u>
- invitation of interactions	.75	2.68	1.08
- awareness of child's needs	.72	3.06	.79
- attentiveness towards child	.77	3.04	1.14
- realistic parental expectations	.78	3.16	.87
- response to closeness bids	.70	3.42	.87
- confidence during home visit	.68	3.33	.87
- parent-child rapport	.84	2.98	.96
- verbal interaction	.63	3.04	1.03
- cognitive insight	.79	2.84	.95
- suppression of hostility	.72	3.14	.97

Adapted from Hornick et al. (1983) study.

A further comparison of group means using a t test on the attentive parental involvement variable revealed significant differences ($p = .000$) between the two groups. Abusers manifested mean scores of 2.73, compared with 3.83 for the non-abusers. This subscale was utilized in the second phase of the analysis as a variable which measured the theoretical category of parental interaction and behaviors.

Internal consistency of the items on the various subscales were found to be acceptably high as measured by Cronbach's alpha with the lowest coefficient measuring out at .61. A series of one way ANOVAS were calculated to determine the significance of the differences between the means of the scaled scores with different groups and in general, the

results indicated substantial support for the validity of the scales on the Parent Behavior Rating Scale.

Parental Attitudes and Beliefs: The variables for inclusion in this theoretical category involve the beliefs and attitudes of parents regarding their roles in the psychological and physical development of their children. Tied closely to the parental interaction variable, this category involves the beliefs of parents about: their influence on the child, their responsibility for effects in the child, appropriate expression of anger, and persistence in discipline. Parental attitudes and beliefs are also a significant theoretical category addressed in the literature as a precursor to child abuse (Morris & Gould, 1963; Starr, 1982; Steele & Pollack, 1968) and so were included to determine their contribution in the hierarchical ranking of predictive factors in child abuse.

Data for this category were derived from the Parent Interview Schedule as edited by Hornick and Clarke (1981), in the original design (Hornick et al., 1983). A two-step procedure was employed to derive the psychological properties of the Parent Interview Schedule and the Parent Behavior Rating Scales. In order to discern the underlying empirical dimensions, a factor analysis of the items was performed. In addition, validity and reliability analysis were performed on the significant dimensions resulting from the factor analysis. The factor analysis of the Parent Interview Schedule revealed a high degree of internal consistency, homogeneity and unidimensionality among items. Results of the validation procedures demonstrated a significant relationship between items that calculated reported behavior and observed parental behavior through item-to-scale correlations, consistency, and concurrent

validation. Discriminant analysis was then performed to establish predictive validity based on membership of the abusing and non-abusing group. Appendix I contains the questions used to measure the theoretical category of potential attitudes and beliefs.

Discriminant Analysis of Predictor Variables

A stepwise multiple discriminant analysis was performed on the seventeen previously discussed variables to determine the linear combinations that would maximally discriminate group membership of the abusive and non-abusive group of mothers used in this study. The stepwise procedure was used because of its ability to consider variables simultaneously in the identification of the best set of discriminating variables, along with their relative weighting and contributions. In this way, the technique selects the most discriminating variable first, and then continues to select variables in combination with the first until all variables have been included or no further variables contribute to further discrimination (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975).

The SPSS technique (Nie et al., 1975) used the minimization of Wilks' lambda as the inclusion criteria for variable selection. This routine generates a single discriminant function to distinguish between the abusive and non-abusive groups. In addition to the standardized coefficients, a canonical correlation coefficient ranging from 0 to 1 was also computed. Separation between groups was determined by Wilks' lambda with an associated test of statistical significance using chi-square. Percentage of cases correctly classified was also computed as a further indicator of the power of the given independent variables to discriminate between the two groups on the discriminant function.

Table 4.5 contains the results of the standardized discriminant coefficients, means and summary statistics which revealed that six variables of the original seventeen were retained after the stepwise discriminant function technique. The theoretical category of parental behavior produced the variable of "attentive parental involvement" (coefficient = .675), as the most powerful discriminator. This was followed by a childhood experience variable, "understood by mother as teen" (coefficient = .469) as the second most powerful discriminator. A parental attitude category "appropriate expression of anger" (coefficient = .425) was third in the analysis, followed by the language variable of "lost performative" (coefficient = -.373). One each of a childhood experience and language variable were the last retained in the analysis.

TABLE 4.5

STEPWISE STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS
FOR RETAINED VARIABLES FOR ABUSERS AND NON-ABUSERS

Variables	Coefficients	Means	
		Abusers (N=37)	Non-Abusers (N=18)
- Attentive parental involvement	.675	2.74	3.87
- Understood by mother as teen	.469	2.35	3.72
- Appropriate expression of anger	.425	2.35	2.72
- Lost performatives	-.373	2.51	1.11
- Physical discipline	-.293	3.35	1.44
- Universal quantifiers	-.230	6.00	2.44

Wilks Lambda = .3711

Chi-squared = 49.569, df = 6, p = .0000

Canonical correlation = .7931

Overall, two of seven childhood experience variables were retained, along with two of three language variables, one of four attitude

categories and the one behavioral category. The theoretical categories of intelligence and self-esteem were not represented in the analysis. Summary statistics further revealed that this combination of variables obtained a high degree of separation on the Wilks Lambda = .371, with an associated test of statistical significance (Chi-squared = 49.56) of $p = .0000$ and a canonical correlation = .793.

The classification results are displayed in Table 4.6. Fifty-five of the original fifty-eight cases were used for printed output. None of the cases were excluded due to missing or out-of-range group codes, although three cases had at least one missing discriminating variable.

It is not surprising that two cases from the control group were incorrectly classified and only one from the experimental group. This can be explained by the heterogeneous nature of the control group as compared to the more homogeneous nature of the experimental group. This function correctly classified 97.3 percent of the experimental mothers, and 88.9 percent of the control mothers for a fairly impressive total accuracy rate of 94.5 percent.

TABLE 4.6

CLASSIFICATION RESULTS

Actual Group		No. of Cases	Predicted Group Membership	
			0	1
Group	0	37	36	1
Experimental Group			97.3%	2.7%
Group	1	18	2	16
Control Group			11.1%	88.9%
Percent of "grouped cases correctly classified: 94.55%				

The most powerful predictor of abuse in this study was found to be "attentive parental involvement," which is classified as an interactional theoretical category. Briefly, this variable involves the commission and omission of certain acts on the part of the mother, relative to affection and attention directed towards the child. Not only did these acts require a certain awareness of the child's level of development, but it also required a communication, by word or action, on the part of the mother of her understanding and concomitant display of that information to the child. From the results of this study, the abusive group of mothers displayed fewer of these attributes of interactive behaviors than did the non-abusive mothers.

The next most powerful predictor in this analysis was the mother's perception of being understood as a teen by her own mother. This would seem to imply that it was significant for a teenager to be supplied with a model of parenting that would emulate understandable communication in her own upbringing that would later provide the precursor for successful parenting on the daughter's part. The other childhood experience variable which was retained was the exposure of the parent to physical punishment when she was a child. This finding would lend support to the theory that parents recreate for their own children, a parental environment which was analogous to that which they were exposed to as a child. Variables which were not found to be predictive of group membership from this category were the discipline variables of exposure to maternal emotional and verbal discipline. In addition, the relationship with parent factors of compatibility with mother as child and teen and understanding by mother as a child were not included.

In the original research design, the variable of "appropriate expression of anger," as an attitudinal/belief category, relates to the parents' capacity to express appropriate verbal dissatisfaction towards the child. This expression of anger could be directed towards the child's conduct or feelings about the child in general. This variable appears to make distinctions between abusers and non-abusers on the parents' beliefs about providing congruent communication to the child. This involves their perceptions of punctuating their displeasure towards their child, that would be consistent with the current context of the interaction and not as a "scapegoating" maneuver or an overreaction to an accumulation of unresolved conflict with the child. In this analysis, the anger variable emerged as the third most powerful predictor of child abuse. Variables from this theoretical category which were not included were: the mother's influence on the child, responsibility for effects and persistence in discipline.

Two of the remaining three variables retained in the analysis, were from the language or communication category group that were originally investigated in this study. These were the lost performative variable as well as the universal quantifier category. Causal modeling was not included as a significant predictor. A common denominator which appears to exist amongst the retained variables from the discriminant analysis is one that exhibits a communicational component. More specifically, the retained variables, manifest similarities that would reflect a mother's ability to communicate congruently to others in a clear and understandable fashion as a possible correlational factor in determining membership to an abusive or non-abusive group. This notion would lend some support to the original research questions as well as some of the

interactional research which emphasizes the significance of accuracy of communication between parent and child as a potential inhibitor of abuse (Dickson, 1980; Dickson et al., 1979).

The multivariate model did not select for inclusion, the variable of intelligence as a significant predictor in this analysis. This finding appears to be consistent with existing research which places a lesser value on the variable of intelligence as a prognosticator of abuse (Holter & Friedman, 1968; Hertz, 1979). A possible interpretation of this finding may be tied to some of the interactional research that looks at the effects of communication, rather than the sophistication or style of language used in mother-child dyads. That is, the mother may not have to possess average intelligence or above and use highly complex language symbols in order to be understood by the child. Rather, the parent's ability to communicate information congruently would be the more pertinent factor in predicting the potential for abuse.

The measure of self-esteem derived from the self-opinion scales were also not retained by the discriminant function technique. Although this particular result is somewhat inconsistent with some other research findings pointing to poor self-esteem in abusive parenting as being a significant factor (Anderson & Lauderdale, 1982; O'Brien, 1980), it may be more supportive of studies which suggest that abusive parents do not manifest symptoms indicative of a psychological disorder (Green, 1980; Wolfe, 1985).

It is important to note that while the demographic variables were not included in the discriminant function analysis, due to the limitations in sample selection of the original study, an analysis which is not included here, included the variables of income, age and education.

The results of this The income variable was the most powerful predictor of abuse; however, universal quantifiers still obtained significance in the stepwise analysis.

Discussion of Results

A logical framework for considering language contributions in conjunction with other significant predictors in the etiology of child abuse has been examined in this study. The bivariate analysis of the language categories provided some statistically significant results which pointed to the utility of considering these variables when comparing abusive and non-abusive groups of mothers. The second phase of the analysis provided a structure for describing the relationships between variables by theoretical grouping which appears to have emerged from this analysis. The discriminative function routine provided the best combination of parental behaviors, childhood experiences of the mother, attitudes and beliefs of the parent and communication categories for differentiating the non-abusive group of mothers from the abusive group of mothers. From the results of this analysis it would seem that some steps have been made towards determining the nature and direction of the connections among the variables and relationships to the incidence of the various indicators of abuse. The correlates of this study would seem to suggest, that these variables may be connected in a way that has not been previously examined.

The results of this analysis would appear to point in the direction of including a linguistic component in the development of a multivariate, multidimensional, predictive model of child abuse. That is, the language categories used in this analysis would not serve as a replacement for

other significant predictors, rather they would serve as an enhancement to be used in conjunction with other variables to determine potential causative factors in child abuse that would emphasize interactive components.

An interesting question pertaining to transformational grammar emerges from the results of this analysis from a theoretical perspective. Recall that Surface and Deep Structures are the principal domains of transformational grammar in which the relationship between full linguistic representations (the set of Deep Structures) and expressed linguistic representations (the set of Surface Structures) are applied in the communication of meaning from one speaker to a receiver. Pertaining to this research, an interesting question to ask is whether child abusers possess more impoverished deep structures, or normal deep structures with concomitant difficulty in derivation or transformation to a full linguistic representation expressed in the Surface Structure? It might be argued that one can infer certain information about Deep Structures. These Deep Structures would possess individuals' understanding of a task, their fund for knowledge, depth and breadth of their experience, and knowledge in general. In comparing abusers and non-abusers, it is interesting to speculate as to whether abusers know less, or whether there is something about how their mental processes work that differentiates them from the non-abusers. From the literature, little support is found which would suggest that abusers know less. This was reinforced in the second phase of the analysis in which intelligence was not selected as one of the discriminating variables. Therefore, it would seem logical that there may be something about how abusers represent their experience that shows up in the transformation of language that would be

different from non-abusers and that these could be identified through an examination of their linguistic structures.

The semantic ill-formedness variables which were found to be statistically significant in the bivariate phase of the analysis might lead one to believe that abusers make less fine or cruder distinctions about human experience and interaction than non-abusers. Individuals who, to a significantly greater degree, maintain that another person may perform some act which causes another to experience some emotion or internal state (i.e., He makes me go crazy), or that only their view of the world is accurate and consistently generalize one experience to a whole class of experiences (i.e., He never listens to me), frequently limits the number of choices they have in responding fully in differing contexts. These type of people appear to possess an aura of powerlessness or lack of control in constructing new experiences because they have already developed a limited model of their world which inhibits their capacity to adapt to new experiences. The use of linguistic distortions such as universal quantifiers and lost performatives limit flexibility in parenting. To the extent that a parent would determine that "hitting kids is a part of rearing children," their belief system may not accommodate the notion that other methods of parenting are also possible. This would have the effect of limiting their flexibility and possibly increasing their potential for abuse given their limited number of options in their repertoire of childrearing strategies.

Overall, it would appear that the language variables derived in this study contribute a potentially valuable and powerful addition to the research on investigations of interactions comparing child abusers and non-abusers. As compared to making subjective impressions about

communications between parent and child, the meta model categories provide an overt measurement technique which could be used to measure these interactive patterns.

The results of this study would point to the utility of considering language patterns as a potential predictor of abuse. However, their value as a predictor may be further enhanced by combining them with other significant predictive factors to ascertain a multivariate predictive model of child abuse. The language element, in some measure, provides a measure of the nature and direction of relationships among variables and the relatedness to the occurrence of the differing manifestations of maltreatment as one link in the chain of understanding this complex phenomenon.

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS

Summary

This was an exploratory study of language utilization with the aim of identifying the accuracy of communication to others between an abusive group of mothers and a non-abusive group of mothers. An investigation of language patterns between these two groups was done to complement the small body of multivariate research which has been generated on etiologic factors contributing to child abuse. It is generally noted that the abuse of children is a multifaceted, highly complex phenomenon, with a broad spectrum of manifestations, etiologies and developmental sequelae. The literature indicates that most of the research on child abuse has not used a multivariate approach, but that many authors point to the value of this type of research. The current study although exploratory, attempted to contribute to the more systematic, multivariate studies that have investigated multiple measures of variables in order to assess the interplay of factors leading to child abuse.

The preceding study consisted of two phases. The initial phase involved the content analysis of language patterns of an abusive and non-abusive group of mothers to ascertain the existence and differences of certain language distortions between the two groups. The language distortion categories were derived from Bandler and Grinder's neuro-linguistic programming model of communication. Specifically, this involved the utilization of the semantic ill-formedness portion of the "meta-model" as a means of identifying verbalizations of speakers which

do not transmit meanings that are understood by receivers of a communication. Four language variables were used in this analysis. These were: (1) causal modeling, (2) mind-reading, (3) lost performatives, and (4) universal quantifiers. Utilizing pre-recorded taped interviews of the two groups of mothers, specific coding category rules were used to identify occurrences of the language variables.

The second stage of this study involved combining the statistically significant language variables with fourteen other predictors of child abuse, to ascertain the extent to which the semantic ill-formedness categories would hold up against other powerful predictors of abuse. Data for the fourteen other variables were derived from the results of standardized instruments administered to the abusive and non-abusive group of mothers in the original study.

The statistical technique employed for the first phase of the analysis involved the use of a t test to compare the difference between means of the abusers and non-abusers on the four language variables. The second phase of analysis used a stepwise discriminant function analysis to select the best set of discriminating variables for determining group membership of the abusive and non-abusive group of mothers.

The results of the first phase of the analysis provided information which indicated that three of the four language variables obtained statistical significance in the predicted direction. These variables were: (1) causal modeling, (2) lost performatives, and (3) universal quantifiers. Results of the discriminant function analysis revealed that six of the original seventeen variables were retained from the stepwise procedure. Four of the variables that were retained, were from the original study. These included (1) attentive parental involvement, (2) understood by

mother as teen, (3) appropriate expression of anger, and (4) physical discipline. Two of the remaining six variables which were retained, were the language variables of lost performatives and universal quantifiers.

Recommendations

Clinical Recommendations

The findings of this study point to a number of recommendations resulting from this research. From a clinical perspective, the results cited in this report have potential implications for the field of social work as well as other helping professionals who must deal with the highly complex issue of child abuse and the debilitating effects that this has on the child, the family, and society as a whole.

A danger inherent in any kind of diagnostic typology in assessment is the risk of creating "false positives" (ones who aren't abusers) or that one may be mislabelling an individual no matter how systematic or rigorous the assessment process may be. This is certainly more true when factors are considered in isolation from other variables. From the literature and the results of this study, one would consider a practitioner to be manifesting limited clinical judgement in the assessment of child abuse if they only considered one or two predictive factors (i.e., psychological variables, childhood experiences of the parent, or parental interaction) in making their determinations of abuse. However, the potential benefits of being able to sensitively and systematically make some determination of at risk families or be able to treat those who have been abusive, far outweigh the risks inherent in using limited knowledge to make a judgement or not label at all, for fear of incorrectly labelling

a family. The most crucial consideration is that the helping professional make his or her assessments based on a number of factors and how they interact with one another to make their determinations of at risk and abusive families.

The specific clinical recommendations which can be made regarding the contribution that the language variables investigated in this study can provide in assessment and treatment are as follows:

- (1) Universal quantifiers and lost performatives which were the language variables retained from the discriminant analysis, could be used as an additional diagnostic and treatment tool in determining the quality of communication which mothers exhibit towards others, including their children. This would entail the use of meta-model therapy to assist in the identification and amelioration of those linguistic distortions which have become problematic in the course of communication. The aim of meta-model therapy is to assist mothers in being more clear in their communications to others.
- (2) The use of linguistic strategies could also be implemented in assessing levels of attentive parental involvement as well as understanding more definitively the overt semantics of being understood as a child. Meta-model therapy could provide the linguistic structure to more definitively understand the interactive patterns of mothers in their own childhood as well as how they currently operate in conjunction with their own children.

Research Recommendations

- (1) A useful research project would be to design a similar study in which the actual interactions of mothers with their children could be measured using the linguistic categories derived from this study.
- (2) Further research could be developed that would be designed to measure whether there are differences in cognitive structures or processing of information comparing abusive and non-abusive groups of parents to more definitively understand the differences present in Surface Structures of communication.
- (3) Research focused on making within group comparisons on the relevance of semantic ill-formedness in other contexts would also be useful. The research question to be explored would entail asking whether the language distortions of semantic ill-formedness only occurs in contexts in which child abuse is evidenced, or whether these mothers exhibit similar linguistic distortions in other areas of their lives, whether they be successful or unsuccessful.

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APPENDICES

APPENDIX A

META - MODEL

Dilts (1977)

APPENDIX A

META-MODEL

1. Gathering Information:

This involves utilizing questions and responses to gain a full and accurate description of the content being laid out.

A. Deletions - Simple Deletions: occur whenever some object, person or event (noun phrases or arguments) have been left out of the surface structure. e.g., "I was always told that it is childish to cry."

Response: "Told by whom specifically?"

1. Lack of Referential Index: when an object or person that is being referred to in the surface structure is left out, or unspecified. This is a case of generalization which limits a persons model of the world by leaving out the detail and richness necessary to have a variety of options for coping. e.g., "They depend on me."

Response: "Who depends on you?"

2. Comparative Deletion: when a referrent is deleted during a comparison (i.e., food, better-best; more-less; most-least). e.g., "He's the hardest person to understand."

Response: "Hard for whom to understand?"

B. Unspecified Verbs: verbs which are not entirely explicit where sometimes the action needs to be made more specific. e.g., "He hurts me very deeply."

Response: "How did he hurt you specifically?"

C. Nominalizations: when an ongoing process is represented as a static entity which may distort its meaning. These are the process words (verbs) that have been transformed into nouns. The reversing of nominalizations assists people in recognizing that what had been perceived as an event, as finished and beyond control, is a continuing process which can be altered. e.g., "I can't stand her insensitivity."

Response: "Her sensing what and about whom; and how specifically?"

II. Limitations to an Individual's Model:

These are the limits that individuals place on themselves artificially. Challenging these limits can assist someone in expanding their potential.

A. Presuppositions: when something is implicitly assumed in the other persons communication which may, if taken for granted, cause limitations to a persons choices about the experience. e.g., "Why aren't you paying attention to me?" The presupposition is that person A is not paying attention to person B.

Response: "How do you know that I am not paying attention to you?"

B. Model Operators of Possibility and Necessity: statement identifying roles about or limits to an individual's behavior (i.e., possibility = can/can't, it's possible/impossible, will/won't, may/may not; necessity = should/shouldn't). e.g.,

1. possibility: "I can't relax." Response: "What stops you?"

2. necessity: "I shouldn't let anyone know how I feel about that."

Response: "What would happen if you did?"

C. Complex Equivalence: When two experiences or events come to stand for each other, but may not necessarily be synonymous. e.g., "She's always yelling at me - she hates me."

Response: "Does her yelling at you always mean that she hates you? Have you ever yelled at anyone that you didn't hate?"

III. Semantic Ill - Formedness: Sentences which are semantically ill-formed limit the person in identifying parts of their experience, which limits them in their availability of choices.

A. Cause - Effect: when an individual makes a causal linkage between their experience or response to some outside stimulus that is not necessarily connected, or where the connection is not clear. e.g., "I wish you wouldn't make me so nervous?"

Response: "How specifically am I making you nervous?"

B. Mind-reading: involves the belief on the part of the speaker that one person can know what another person is thinking and feeling, without a direct communication on the part of the second person. e.g., "Ralph never considers my feelings."

Response: "How do you know that Ralph never considers your feelings?"

C. Lost Performative: case in which the speaker assumes that their model of the world is the world, or minimally assumes that his model of the world should be everyone's model. e.g., "People should know better."

Response: "What should people know better?"

D. Universal Quantifiers: words which generalize a few experiences to a whole class of experience; (characterized by words like all, every, always, never) e.g., "She never listens to me."

Response: "How do you know that she never listens to you?"

APPENDIX B

THE NURTURANCE INVENTORY

Clarke & Hornick (1984)

APPENDIX B

THE NURTURANCE INVENTORY

1. Could you describe _____ to me? Give me a picture of what he/she is like?

Can you talk about what you like and what you like to preserve in _____ and what you dislike and what you might like to change?

In what ways is she/he like you or unlike you?

- (a) Rating Label--Accurate Perception of Child

Is the individual character of the child perceived? Rate the accuracy and clarity with which child is perceived and the degree to which parent can describe if at all:

- what the child's own interests and aversions are
- child's peer relations
- child's behavior with adults
- child's behavior with siblings
- the child in relation to other children of the same age
- complete rating on parent's initial description.

Perceptions marred by age/sex stereotyping and/or is greatly distorted by projections or idealizations

Somewhat aware of child's uniqueness

Perceptions clear differentiated. Sees child as person in own right.

1

2

3

4

5

- (b) Rating Label--Approval: Practice

Rate this scale on what the parent says about the child's personal qualities.

Generally disapproving: thinks little of child's ability or personal qualities

Very approving; thinks child is wonderful, admires and respects child

1

2

3

4

5

(c) Rating Label--Control of Hostility: Practice

Rate this scale on what the parent says about the child's behavior, e.g., always fighting.

Unusually hostile; obviously resents child, is annoyed by many aspects of his beha- vior, is disapproving	Temperate	Very little, if any expressed. Almost no evidence of re- sentment, annoy- ance, condemnation		
1	2	3	4	5

(d) Rating Label--Ability to Empathize With Child

Rate this scale on the degree to which the parent talks about the child's likes and dislikes, and interprets the child's feelings and behaviors.

Very distant. Almost complete lack of empathic understanding	Moderate degree of understanding	Very empathic. Parent feels close to child, has al- most complete under- standing of his feelings and view of world		
1	2	3	4	5

2. Would you way that _____ has been a difficult child to raise?
Does he/she tend to be strong-willed or is he/she easy to manage?
Does he/she ever downright refuse to obey?

Rating Label--Perception of Ease in Raising Child

Child perceived as very difficult to raise				Child perceived as not at all difficult to raise
1	2	3	4	5

3. What sorts of things do you enjoy doing with your child?

Rating Label--Expression of Pleasure When With Child

Does not enjoy child's company. Expresses little pleasure in contacts related to child	Enjoys child's company immensely. Expresses pleasure in child's person and performance			
1	2	3	4	5

4. Do you ever find time to talk with _____? What sorts of things do you talk about? What kinds of questions does he/she ask? How do you respond to these questions?

Rating Label--Verbal Interaction: Practice

Ignores child's attempts to verbalize; feels they have little in common to discuss

Seeks to develop child's verbal abilities; encourages curiosity with willing explanations

1 2 3 4 5

5. How much do you try to explain things to and reason with _____? Why do you do this? Can you give me some examples?

Rating Label--Use of Reasoning

Almost never uses reasoning

Very frequent use of reasoning

1 2 3 4 5

6. Do you enjoy holding _____ at times? Does he/she still sit on your lap at times or ask to cuddle? How does this make you feel?

Rating Label--Response to Closeness Bids

Parent is unsympathetic, ridiculing and/or irritated

Parent responds with a great deal of personal attention

1 2 3 4 5

7. Some mothers are very demonstrative in their affection towards their children, e.g., hugging, kissing, cuddling, others are more reserved. How would you describe yourself?

Rating Label--Expression of Affection

Not at all demonstrative

Openly affectionate sometimes

Sees self as very affectionate

1 2 3 4 5

8. Some mothers feel that their main job is to stay at home and take care of the children. At the same time, they sometimes feel that they owe it to themselves to do some outside work or to at least have a few outside interests. What is your point of view about this? How well do you feel you have been able to solve this problem in your own case? Have you ever felt you would rather be doing something else? Aside from these feelings, do you generally feel pretty good about what you are doing now?

Rating Label--Confidence as Parent

Acts without self assurance; does not regard self as competent parent

Is very self-sufficient; regards self as competent parent

1

2

3

4

5

APPENDIX C

TABLES FOR VALIDATION OF NURTURANCE SCALE

Hornick et al. (1983)

Table 1

MEAN, STANDARD DEVIATION, AND ITEM-TOTAL CORRELATION
FOR ITEMS COMPOSING THE NURTURANCE SCALE

Item	<u>Item-Total Correlation</u>	<u>Mean</u>	<u>Standard Deviation</u>
- Accurate perception of individual character of child	.70	2.70	.95
- Control of Hostility: practice	.75	2.94	1.13
- Approval: practice	.77	3.06	.96
- Ability to empathize with child	.64	2.80	.97
- Verbal interaction: practice	.39	3.10	.81
- Use of reasoning	.51	3.32	1.02
- Perceptions of ease in rearing child	.54	.62	.49
- Expression of pleasure when with child	.53	3.08	.99
- Expression of affection	.54	3.40	.93
- Response to closeness bids: practice	.55	3.53	.94
- Confidence during interview	.61	3.18	.87

Table 2

CORRELATION BETWEEN SUBSCALE, NURTURANCE OF THE
PARENT INTERVIEW SCHEDULE AND ITEMS FROM THE
PARENT BEHAVIOR RATING SCALES

<u>Parent Interview Schedule</u>	<u>Parent Behavior Rating Scale</u>		
<u>Item</u>	<u>Item</u>	<u>r</u>	<u>p</u>
- Accurate perception of individual character of child	- Realistic parental expectations	46	.001
- Approval: practice	- Control of criticism	27	.05
- Control of hostility	- Suppression of hostility behavior	49	.001
- Ability to empathize with child	- Parent child rapport	24	.05
- Verbal interaction: practice	- Verbal interaction: behavior	07	N.S.
- Use of reasoning	- Explanation of discipline policy	24	.05
- Expression of pleasure with child	- Attentiveness towards child	34	.01
- Expression of Affection	- Expression of affection: behavior	43	.001
- Response to closeness bids: practice	- Response to closeness bids: behavior	41	.001
- Confidence during interview	- Confidence during home visit	58	.001
- Perception of ease in rearing child	- Disciplinary harmony	38	.01

Table 3

ONEWAY ANOVA OF NURTURANCE SCORES FOR THE TEST,
CONTROL I, AND NON-ABUSER SUB SAMPLES

	<u>Test</u>	<u>Control</u>	<u>Non-Abusers</u>
Mean	2.70	2.80	3.53
S.D.	.67	.41	.46
N	17	18	15

<u>Source</u>	<u>df</u>	<u>f</u>	<u>p</u>
Between groups	2	11.52	.0001
Within groups	47		
Total	49		

<u>Contrasts</u>	<u>t</u>	<u>df</u>	<u>p</u>
T vs C	.60	47	.55
T vs N	3.92	47	.0003
C vs N	4.44	47	.001
T + C + N	4.77	47	.0000

Table 4

THE STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS
FOR THE NURTURANCE ITEMS, FOR THE ABUSERS AND NON-ABUSERS

Variables	Coefficients
Nurturance Items	
- Control of hostility: practice	.79
- Accurate perception of individual character of child	.39
- Verbal interaction: practice	.33
- Approval: practice	.20
- Confidence during interview	.19
- Ability to empathize with child	.14
- Perception of ease in rearing child	.14
- Expression of pleasure with child	.13
- Use of reasoning	.13
- Expression of affection	.06
- Response to closeness bids	.004

Eigenvalue = .98

Wilk's Lambda = .50

Canonical correlation = .70

Chi-squared = 38.65, df = 11, p = .0001

Percent of cases correctly classified = 88%

APPENDIX D

CODING CATEGORIES

APPENDIX D
CODING CATEGORIES

#	Causal Modeling	Mind Reading	Lost Performatives	Universal Quantifiers
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APPENDIX E

SELF OPINION FORM
(Coopersmith)

SELF OPINION FORM

Please mark each statement in the following way;

If the statement describes how you usually feel, put a check () in the column, "Like Me."

If the statement does not describe how you usually feel, put a check () in the column "Unlike Me."

CARD 4

Col. _____ (1-3)
 T.D. _____
 Date of Interview _____ (4-9)

- | | Like Me (1) | Unlike Me (2) | |
|---|-------------|---------------|------|
| 1. I spend a lot of time daydreaming. | _____ | _____ | (11) |
| 2. I'm pretty sure of myself. | _____ | _____ | (12) |
| 3. I often wish I were someone else. | _____ | _____ | (13) |
| 4. I'm easy to like. | _____ | _____ | (14) |
| 5. I find it very hard to talk in front of a group of people. | _____ | _____ | (15) |
| 6. I wish I were younger. | _____ | _____ | (16) |
| 7. There are few things about myself I'd change if I could. | _____ | _____ | (17) |
| 8. I can make up my mind without too much trouble. | _____ | _____ | (18) |
| 9. I'm a lot of fun to be with. | _____ | _____ | (19) |
| 10. I frequently ask someone to tell me what to do. | _____ | _____ | (20) |
| 11. It takes me a long time to get used to anything new. | _____ | _____ | (21) |
| 12. I often regret a decision I have made. | _____ | _____ | (22) |
| 13. I have a lot of friends. | _____ | _____ | (23) |
| 14. When asked to do something, I generally do it well. | _____ | _____ | (24) |
| 15. I give in very easily. | _____ | _____ | (25) |

- | | | | |
|---|-------|-------|------|
| 16. I can usually take care of myself. | _____ | _____ | (26) |
| 17. People often expect too much of me. | _____ | _____ | (27) |
| 18. I'm proud of my skills. | _____ | _____ | (28) |
| 19. I understand myself. | _____ | _____ | (29) |
| 20. Things are all mixed up in my life. | _____ | _____ | (30) |
| 21. No one pays much attention to my ideas. | _____ | _____ | (31) |
| 22. I can make up my mind and stick to it. | _____ | _____ | (32) |
| 23. I have a low opinion of myself. | _____ | _____ | (33) |
| 24. I don't like to be with other people. | _____ | _____ | (34) |
| 25. Generally I'm not shy. | _____ | _____ | (35) |
| 26. I often feel self conscious. | _____ | _____ | (36) |
| 27. I'm not as nice looking as most people. | _____ | _____ | (37) |
| 28. If I have something to say, I usually say it. | _____ | _____ | (38) |
| 29. My friends understand me. | _____ | _____ | (39) |
| 30. I don't care what happens to me. | _____ | _____ | (40) |
| 31. I'm a failure. | _____ | _____ | (41) |
| 32. I get upset easily when I'm criticized. | _____ | _____ | (42) |
| 33. Most people are better liked than I am. | _____ | _____ | (43) |
| 34. I always know what to say to people. | _____ | _____ | (44) |
| 35. I often get discouraged. | _____ | _____ | (45) |
| 36. Things usually don't bother me. | _____ | _____ | (46) |

- | | | | |
|---|-------|----------|------|
| 37. I can usually be depended upon. | _____ | _____ | (47) |
| 38. I wish I could be more trust-
worthy. | _____ | _____ | (48) |
| 39. I'm full of aches and pains. | _____ | _____ | (49) |
| 40. I wish I were more interesting
to talk to. | _____ | _____ | (50) |
| 41. I generally look neat and
presentable. | _____ | _____ | (51) |
| 42. I am a friendly person. | _____ | _____ | (52) |
| 43. I enjoy playing competitive
games. | _____ | _____ | (53) |
| 44. I take the blame for things
without getting angry. | _____ | _____ | (54) |
| 45. I forgive others easily. | _____ | _____ | (55) |
| 46. I find it hard to talk to
strangers. | _____ | _____ | (56) |
| 47. I often act like I'm all thumbs. | _____ | _____ | (57) |
| | | <u>4</u> | (80) |

APPENDIX F

16 P.F. TEST (Cattell)

This test may be obtained from:

The Institute for Personality and Ability Testing
1602 Coronado Drive
Champaign, Illinois, U.S.A.

APPENDIX G

INTRODUCTORY INTERVIEW SCHEDULE QUESTIONS

38. In general, did your mother figure understand you in your early childhood?

All of the time Never
 1 2 3 4 5

39. How about when you were a teenager?

All of the time Never
 1 2 3 4 5

42. We all have our ups and downs with our parents, but generally speaking, did you get along with your mother figure in your early childhood?

Very well Very poorly
 1 2 3 4 5

43. How about in your teenage years? Did you get along with your mother figure?

Very well Very poorly
 1 2 3 4 5

47. What did your mother figure do when she was upset with you?

- (a) spanked with hand
- (b) told you she didn't love you
- (c) scolded, nagged, yelled
- (d) shook or shoved
- (e) shamed or ridiculed
- (f) withheld a privilege
- (g) explained why you shouldn't act that particular way, reasoned with you
- (h) isolated you
- (i) hit you with something

APPENDIX H

PARENT BEHAVIOR RATING SCALES QUESTIONS

5. Attentiveness toward child.

Rate the reactivity of the parent during contacts with the child. Did the parent react readily and vigorously; or did the parent tend to disregard the child during contact situations? Rate only in situations where there was opportunity for stimulation--independent of duration of contact.

1. Actively attentive at points of contact.
2. Readily attentive.
3. Fairly active, responsive, alert.
4. Accessible, half-hearted, reserved.
5. Perfunctory, passive, retiring, taciturn, bored, busy.

40. Verbal interaction.

Rate the parent's tendency to satisfy the child's intellectual curiosity. Did the parent readily respond to the child's "Why?" and "How?" questions; or was the child thwarted in attempts to get information and explanations from the parents?

1. Answers child's questions as adequately as possible. Anticipates questions. Encourages curiosity with willing explanation.
2. Goes out of way to answer fairly involved questions, but may evade when busy or tired.
3. Usually tries to satisfy child's curiosity. Sometimes loses patience with persistent "Why?"
4. Answers simple questions when in good humor and pre-occupied, but seldom goes out beyond minimum needed to silence child.
5. Explanations are grudging and reluctant where any mental effort is required. Parent often evades the issue or thwarts child's curiosity.

41. Cognitive Insight.

Rate the extent to which parent attempted to sharpen the child's observational powers or enrich his/her understanding during contact situations. Did the parent simply manipulate or coerce the child during interaction situations? Or did he/she make a consistent attempt to instill understanding in all dealings with the child?

1. Parent fails to instill understanding and sharpen child's observational powers because he/she is not aware or insightful and therefore not able to instill insight, or because while he/she may have the capacity to invoke cognitive insight in child, he/she has no real desire to do so.
 2. Parent's interactions are seldom aimed at instilling understanding, sharpening powers or observation, or enriching child's experience; parent limits interactions almost exclusively to manipulating or coercing child rather than invoking insight.
 3. Sometimes parent's interactions with child are aimed at instilling understanding, sharpening powers of observation, and enriching child's experience, but at other times parent just manipulates or coerces child for sake of expedience or convenience.
 4. Parent's interactions with child are aimed at instilling understanding, sharpening powers of observation, and enriching child's experience, although not to the extent of 5 below.
 5. Parent seeks consistently to instill understanding, sharpen child's powers of observation, and enrich child's experience. Parent places such matters above his/her own convenience or the controlling of the child's behavior and/or parent operates naturally on this level as his/her own chosen medium.
43. Awareness of Child's Needs.

Rate the quality of response made by the parent to the needs (not demands) of the child. Did the parent seem largely unaware of and/or unresponsive to the child's needs, or was he/she unusually aware and/or responsive to the child's needs?

1. Parent is neglectful, i.e., unaware of and/or unresponsive to child's needs.
2. Parent does not always pay adequate attention to child's needs, frequently letting child take care of himself in situations where parent's participation would be helpful.
3. Parent is adequately attentive to child's needs, and responds as demanded.
4. Parent is very attentive to child's needs.
5. Parent is unusually aware of and responsive to child's needs.

44. Suppression of hostility.

Rate the parent's acceptance of the child into his own inner circle of loyalty and devotion. Did the parent act in such a way as to indicate that the child is considered an intimate part of the family? Or did the parent act as though he resents the child's intrusion and rejects the child's intrusion and rejects the child's bid for a place in his primary area of devotion?

1. Parent's behavior toward child connotes devotion and acceptance into his innermost self.
2. Parent clearly accepts child. Includes child in family councils, trips, affection, even when it is difficult or represents sacrifice.
3. Parent neither devoted nor rejecting.
4. Acceptance taken for granted, yet parent excludes child frequently so that to the child, the rejection attitude may seem to predominate.
5. Parent's predominant tendency is to avoid and exclude the child.

46. Response to closeness bids.

Rate the parent's response to child's bids for closeness (both physical and emotional closeness). Did the parent respond to the child with a great deal of attention or enthusiasm? Or did the parent act irritated when the child made such bids?

1. Parent responds to child's bids for closeness with a great deal of personal attention.
2. Parent responds to child's bids for closeness, but with less attention than above.
3. Parent responds to child's bids for closeness, but without enthusiasm, or ambivalently.
4. Parent is unresponsive to child's bids for closeness, or responds perfunctorily.
5. Parent is unsympathetic, ridiculing and/or irritated, or parent is so closed to child that child does not make bids for closeness any more.

48. Parent-child rapport.

Rate the closeness of the psychological relationship between parent and child. Did they show a high degree of rapport; or

were they distant and out of touch with each other "spiritually," tending to be inhibited in each other's presence.?

1. Implicit trust and confidence in each other.
2. Close mutual understanding and sympathy, but with occasional, temporary lapses.
3. Moderate degree of rapport in most situations; achieves close confidence in a good many respects, but fails in others.
4. Do not get along together any too well, but occasionally a close relationship is temporarily established.
5. Perfunctory or superficial relationship, inhibited in each other's presence.

51. Initiation of interactions.

Rate the parent's tendency to initiate interactions with other family members. Did the parent tend to take an active role in promoting family interactions, or did she/he take a more passive, retiring stance, responding only when required?

1. Parent almost always takes the initiative in relations with other family members.
2. Parent often initiates interactions with other family members (although he/she may be reactive in relations with other family members at times).
3. Parent is interactive, taking the initiative or responding, and is not bothered by either in relations with other family members.
4. Parent is not an active agent. Much of what the parent does is in response to other family member's actions.
5. Parent seldom initiates an interaction. Almost everything the parent does is in response to other family member's.

52. Confidence during home visit.

Rate the parent's reaction to the researcher in the home. Did the parent appear to be rather closed, withdrawn, possibly threatened by the researcher's presence? Or did the parent act in a self-assured and non-threatened manner in this situation?

1. Parent is very insecure and/or withdrawn during visits.

2. Parent behaves in an insecure or unsure manner during visits.
3. Parent is generally secure during home and office visits, but occasionally becomes withdrawn or insecure.
4. Parent behaves in a secure and self-accepting manner during home and office visits.
5. Parent is completely secure and non-threatened during home and office visits.

54. Realistic parental expectations.

Rate the parent's tendency to take the child's developmental level into account when formulating expectations about the child's behavior. Did the parent tend to have realistic expectations of his/her child/s behavior based on knowledge of child/s personality, age, and developmental level, or did the parent's expectations of the child seem to be unrealistically high or low, with little attention given to the child's personality, age, or developmental level?

1. Parent takes considerable care to tailor his/her expectations for the child, so that the child/s unique characteristics, as well as age, stage and developmental level are fully taken into account.
2. Parent's expectations for child take into account age, stage, and developmental level, parent also makes some effort to tailor expectations for child to child's unique characteristics.
3. Parental expectations take into account some aspects of child's developmental level, but in accord with a somewhat stereotyped or idealized view.
4. Parental expectations do not generally take age, stage, developmental level or personality of child into account.
5. Parent has totally unrealistic expectations for the child, given age, personality and developmental characteristics.

APPENDIX I
PARENT INTERVIEW SCHEDULE QUESTIONS

3. In general, how much influence or control do you feel you have over your child's life?

Rating: Influence on child.*

1. Parent exerts a strong influence in the child's life and has a realistic understanding of the extent of his/her influence.
 2. Parent exerts considerable influence on the child, but is either unaware of the extent of this influence or parent believes self to be considerably more or less influential than in fact he/she is.
 3. Parent is about as influential as other forces in the child's life, such as the other parent or the child's peers.
 4. Parent exerts weak or inconsistent influence on the child, but is either not aware of this or parent perceives self as a considerably weaker or stronger influence than in fact he/she is.
 5. Parent exerts a weak influence on the child's life and is aware of his/her own impotence.
6. Do you think that parents are basically responsible for how their children eventually turn out?

Rating: Responsibility for effects.

1. Parent disowns possible effects and/or is unable to comprehend the nature of the effects of his/her child-rearing practices on child, claiming that innate nature or social conditions are responsible for the kind of person the child is becoming.
2. Parent shows little awareness of the possible effects of his/her child-rearing practices on child and/or takes little responsibility for their effects on child.
3. Parent realizes that his/her child-rearing practices have effects on child, but is not clear about the, cannot delineate them.
4. Parent is not quite so clear as in (5), but is aware of the possible consequences of his/her child-rearing practices and accepts responsibility for child's development.
5. Parent is very aware of the relationship between his/her child-rearing practices and their effects on child's development and can delineate and takes responsibility for their possible consequences.

10. Do you believe that a parent should express his negative feelings towards the child just as he feels them; or should he control what and how he says things to the child? Why?

Probes: (a) regarding the conduct of the child; (b) regarding his feelings about the child in general.

Rating: Appropriate verbal expression of anger.

1. Parent is reluctant to verbally express any anger even in situations where it is warranted.
 2. Parent is somewhat reluctant to verbally express anger even when it is appropriate.
 3. Parent will not deliberately provoke a verbal confrontation, but states it is bound to occur.
 4. Parent will usually express anger verbally towards child when it is warranted.
 5. Parent expresses anger verbally and gives good reasons to express anger and disagreement openly, e.g., anger is a deterrent to bad behavior, or enhances the honesty of the relationship, or confrontation is better than trying to gloss over one's displeasure.
13. Some parents expect their children to obey immediately when they are directed to something. Others do not think that it is terribly important for a child to obey right away. How do you feel about this?

(a) Rating: Persistence in discipline.

1. Parent does not believe directives should be fought over and does not believe in persisting if child disobeys, on principle that this is the best way to raise a child.
2. Parent says that he/she prefers not to push the child if child refuses to obey, although not on principle as above.
3. If child fails to comply, parent believes that he/she should make some attempt to obtain compliance, but not persist to the point of a scene.
4. Parent believes that, generally speaking, child should comply and parent should persist in seeking compliance, although not on principle as in (5) below.
5. Parent indicates in interview that he/she believes that a child of this age (except in unusual circumstances) should comply immediately with parental directives and that

parent should see that child does on principle that this is the best way to raise a child.

(b) Rating: Reasons given for advocating obedience.

- 1 = Parent's convenience/ease in running household
- 2 = Child's welfare
- 3 = Conformity to what is socially acceptable
- 4 = An absolutist moral imperative for religious or traditional purposes ("It is never right to talk back to one's parents.")
- 5 = An ethical standard which is part of parent's personal morality

(c) Rating: Reasons given for not advocating obedience.

- 1 = Child ought to make own decisions
- 2 = Parent's uncertainty as to what is right
- 3 = Parent's reluctance to enforce own standards

(d) Rating: Clarity of reasons for obedience.

- 1. Parent lacks any idea of reasons, cannot articulate them.
- 2. Parent has vague idea of reasons or finds it difficult to describe them.
- 3. Parent can articulate reasons to some degree.
- 4. Parent has clear idea of reasons and can articulate them, although not as clearly as in (5) below.
- 5. Parent very clear about reasons given, can integrate these reasons into general child-rearing philosophy.