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ABUSIVE MOTHER-CHILD INTERACTIONS: A CONTROLLED
ASSESSMENT OF PARENTING SKILLS

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ABUSIVE MOTHER-CHILD INTERACTIONS:
A CONTROLLED ASSESSMENT OF PARENTING SKILLS

by
Fred Edward Schindler

A Dissertation Submitted to the Faculty of the
DEPARTMENT OF PSYCHOLOGY

In Partial Fulfillment of the Requirements
For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College
THE UNIVERSITY OF ARIZONA

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THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the Final Examination Committee, we certify that we have read
the dissertation prepared by Fred Edward Schindler

entitled Abusive Mother-Child Interactions: A Controlled
Assessment of Parenting Skills

and recommend that it be accepted as fulfilling the dissertation requirement
for the Degree of Doctor of Philosophy.

Robert B. Beckett

10/15/81
Date

Nel Aukowitz

10/15/81
Date

George Hochman

10/15/81
Date

Robert M. ...

10/15/81
Date

George Knight

10/15/81
Date

Final approval and acceptance of this dissertation is contingent upon the
candidate's submission of the final copy of the dissertation to the Graduate
College.

I hereby certify that I have read this dissertation prepared under my
direction and recommend that it be accepted as fulfilling the dissertation
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Nel Aukowitz
Dissertation Director

10-15-81
Date

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A sound man's heart is not shut within itself, but is open
to other people's hearts;

I find good people good, and I find bad people good
If I am good enough

I trust men of their word, and I trust liars
If I am true enough;

I feel the heart-beats of others above my own,
If I am enough of a father, enough of a son.

Writings of LAO TZU #49

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ABSTRACT

Few controlled studies exist that examine specific hypotheses about abusive families, especially with regard to direct behavioral observation. Despite two decades of research on child abuse, surprisingly little is known about the specific behavioral excesses and deficits in the parenting skills of abusive parents. In this study, 11 physically abusive mother-child pairs were compared with 12 nonabusive matched controls in a laboratory playroom situation. Parenting skills, as well as interaction patterns, were assessed using three different tasks designed to create varying levels of parental stress and child frustration. One task, known as the Child's Game, consisted of the mother playing with her child in a free play situation where the child was given the instructions to select the toy or game. On the second task, the Parent's Game, mothers were told to select the activity and motivate their children to play along with them. The last task, the Bean Game, required mothers to induce their children to put beans into a decorated jar for a relatively long period of time.

Mother-child interactions were observed and coded, providing frequency (rate per minute) and proportion (percentage of each behavior relative to total behavior) data on the occurrence of twelve behaviors hypothesized from the literature to be potentially relevant to parenting ability. Questionnaire measures of knowledge of child behavior, and social desirability were also administered.

Discriminant function analyses of the data revealed that 10 of 11 abusive mothers and 10 of 12 control mothers could be correctly identified, representing an 87% classification rate. The predominant difference between the two groups was in overall rate of activity. Abusive mothers were seen to engage in significantly less behavior than control mothers; behavior rates were essentially similar for both groups of children. On individual behaviors, questions and approval statements were the only two categories that significantly differed, with abusive mothers less likely to engage in either one. However, when frequency of behavior was corrected for overall rate effects, no differences on individual behaviors were found. Abusive mothers were also observed to use less contingent praise while abused children were found to comply to commands less often.

Speculation as to which behavioral patterns mediate abusive episodes, as well as suggestions as to how to better design diagnostic, treatment and prevention programs are offered.

INTRODUCTION

The pervasive tragedy of child abuse is finally attracting the concern and interest of a broad spectrum of mental health professionals. Primarily as a result of the Kempe et al. (1962) pioneer work, where the battered child syndrome was identified, awareness of child abuse and neglect as a legitimate field of study has greatly increased. Nevertheless, psychologists, until recently, have been underrepresented in this area. This is unfortunate, given the need for an empirical data based orientation in the child abuse field. Psychology, however, is the profession which more often (though by no means exclusively tends) to emphasize data collection and experimental assessment prior to implementing interventions. Both these emphases are clearly needed in the abuse field. As will be documented below, the need to generate more meaningful data about the prevention of abuse and the treatment of all members of abusive families is acute.

The prevalence of child abuse and neglect, often referred to as nonaccidental injury or child maltreatment, is of epidemic proportion. Episodes of abuse or neglect account for the third leading cause of death in children under age three (Gelles and Straus, 1979), and it is estimated that at least 5,000 children of all ages die at the hands of their parents or caretakers each year. Recent data (Fraser, 1979; Gelles, 1978) estimate that between 665,000 and 1.7 million instances of abuse occur each year. Other investigators (Gil, 1970; Light, 1973; Nagi, 1975) cite incidence rates ranging from 200,000 to 1.5 million cases per year. A

true estimate of abuse rates may never be known. The discrepancies in these figures occur as a result of the broad spectrum of definitions of child abuse and the reluctance of professionals to report its occurrence, especially in higher socioeconomic groups (Williams, 1977).

It is not difficult to understand why a standardized definition of child abuse is lacking. Consider the problems inherent in coming to a consensus on the thorny, value-laden issue of deciding which parental behaviors (if any) are "acceptable" as physical punishment, and which overstep the boundary of "normal discipline". Furthermore, as is often the case with emotional abuse, behaviors which do not leave physical injury may have even longer term deleterious effects on a child. As Starr (1979) notes in his comments regarding this problem, most definitions conceptualize abuse as an act of commission by a parent or caregiver somewhere along a continuum ranging from slaps to spankings to infanticide, and in some way account for variables such as intentionality.

As an example of the complexity involved, consider Gil's (1975) definition of physical abuse as "...the intentional, non-accidental use of physical force or intentional, nonaccidental acts of omission on the part of a parent... interacting with a child in his care, aimed at hurting, injuring, or destroying that child." This "liberal" definition would view a non-accidental shove given to an unruly child as an act of abuse. The reality, however, is that the vast majority of American families use physical punishment at some time (Gelles and Straus, 1979), yet are not considered abusive by most people. Nevertheless, as one reads Gil's definition, it does not seem unreasonable to label

acts which intentionally hurt or injure a child as abusive. From the research perspective, some studies have sidestepped this issue by using as subjects individuals who have been adjudicated as abusers by legal standards (usually involving cases of extreme injury). Others have more commonly selected subjects judged as abusive by Child Protective Services Caseworkers using their subjective criteria.

With a few recent exceptions (e.g. Crozier and Katz, 1979; Frodi and Lamb, 1980; Sandler, Dercar and Milhoan, 1978), methodologically well designed research in the field of child abuse has been lacking. Cicchetti, Taraldson, and Egeland (1978) incisively review and indict research on the etiology and treatment of child abuse as follows:

The literature in the area... is characterized by inadequate and biased sampling, concatenation of confounding variables, illegitimate inferences, and sweeping generalizations. Scientifically well-designed studies are a rarity. ... Only a paucity of studies actually set out to test any specific hypotheses (and) practically all of the research is ex post facto and fraught with all of the flaws that accompany the retrospective research method (p.329).

They also note that most studies have used questionnaires and have had inappropriate or no control groups. Verifiable subject selection criteria, as well as matching on socioeconomic indicators and other relevant variables has been the exception rather than the rule.

Consequently, interpret the findings detailed below with a degree of caution. Most are based on clinical opinion of a small number of cases or, in the better studies, the results of psychological tests given to abusive parents and a group of controls.

Determinants of Abuse

Role of the Parent

Much of the literature on child abuse is devoted to studying the personality attributes and deficiencies of known abusers and/or attempting to identify individuals at risk for becoming abusers. Presented below is a brief survey of representative findings. The reader is referred to Alvy (1975), Burgess (1978), Cicchetti, Taraldson, and Egeland (1978) and Spinetta and Rigler (1972) for more comprehensive reviews of the literature, although the picture that emerges from their reviews may seem to reflect more agreement among authors than actually exists.

MeInick and Hurley (1969) compared abusive and non-abusive mothers and found abusive mothers to have lower self-esteem, less family satisfaction, more pathogenicity, less need to provide nurturance, a deficient capacity to empathize, and a higher frustration of dependency needs. In this well controlled study, 20 lower class women were administered the Thematic Apperception Test. The findings noted above reflect clinical interpretations of responses to these stimuli.

Similarly, Paulson and co-workers in a series of studies (1974, 1975, 1976) used a discriminant function analysis to compare abusing and non-abusing parents on the MMPI. Male abusers were found to be "hedonistic, self-centered, suspicious, and in conflict with parents' and society's demands", while female abusers were described as likely to engage in counterculture behaviors, and as suspicious and distrustful.

While interesting, the findings from personality inventory approaches as exemplified by these two examples do not bridge the gap of describing how deviant parents interact with their children. Thus, for example, what does a "suspicious" woman do, or what are the behaviors associated with low self esteem in child-rearing practices?

Some authors, however, have conducted research which aims to link parental characteristics to subsequent behavior. Child abusing parents have been found to have low impulse control (Bennie and Sclare, 1969) particularly but not limited to the expression of aggression. Steele (1975) and Spinetta (1972; 1978) conclude that situations of stress are particularly difficult for child abusing parents. Coping mechanisms tend to involve displaced aggression. Polansky, Borgman, and DeSaix (1971, 1972) in their studies of Appalachian families, found a correlation between an inadequate social and physical environment for the child and the mother's immaturity. These results were based on scaled ratings of apathy, futility, childishness, and impulsiveness.

The evolution of a battering parent is best understood when parental characteristics are shown to be products of their own personal histories. Steele (1975) presents a "natural history of child abuse". Much of what follows is drawn from his outline and elaborated upon from the literature. There is unanimous opinion (Bleiburg, 1965; Burgess, 1978; Fontana, 1968; Kempe, et al., 1962; Nurse, 1964; Steele and Pollock, 1968) that abusing parents were abused themselves. Many authors report that these parents were beaten, felt rejected, or were treated with hostility in their own childhood. Hostility begets hostility; Berkowitz (1972), in a theoretical paper, argues that expressions of aggression

often lead to more aggression. He cites some sociological research to support this contention.

Spinetta and Rigler (1972) report that abusive parents often experienced frustration of their own dependency needs, citing in particular Melnick and Hurley (1969). Physical abuse is a potent means of teaching a child not to depend upon or trust the parent. Some authors (Galdston, 1965; Nurse, 1964) posit a "role reversal" in which abusive parents now look to their children for gratification of personal dependency needs that were never met. Steele (1975) asserts that a crying child may seem like an attacking figure (i.e., their own parent) rather than a dependent child who needs comfort. This is not the only misperception that abusive parents have of their children. Steele and Pollack (1968), for instance, contend that they expect and demand too much too soon in terms of understanding and performance from their children. "Failure to satisfy the caretaker's wishes implies stubbornness or purposeful meanness on the baby's part" (Steele, 1975). These unreasonable expectations are best understood by noting the common finding that abusive parents also experienced a high degree of demand for performance to satisfy their caretakers. They pass this legacy on. Note, however, that each of these preceding descriptions are drawn from the opinions, clinical judgement, and experiences of the authors, and are not experimental research findings.

Similarly, most abusing parents believe that a baby should not be given in to or "spoiled" by being picked up when it cries (Helfer and Pollack, 1967). They also strongly believe that they have the moral right and duty to punish their children for wrongful acts (Wasserman, 1967).

Remember too, that often these wrongful acts are behaviors that the child is developmentally incapable of correcting. The potential for a dangerous cyclical pattern of mutual frustration is thus established. Consider the picture of a person who suffered severe deprivation of his own dependency needs as a child, was often beaten, and who could never "measure up" to expectations. Trust in self and others is unlikely to develop in such an environment. Small wonder, then, that another common finding is the inability of abusive parents to cope with crises, large or small (Steele, 1975). In all likelihood abusive parents had little modeling to provide the opportunity for learning coping techniques and now have insufficient trust in themselves and/or self confidence to develop them.

In sum, then, the fact that abusive parents are far more likely to have been battered themselves than non-abused parents (Kempe et al., 1962, Spinetta and Rigler 1972) is linked to other common findings: little self trust, excessive expectations of and inability to empathize with their own children, impulsive behaviors and inadequate coping mechanisms. The legacy of battering is passed from generation to generation as parents teach their children the self-defeating behaviors they learned. The potency of this cycle is documented by Oliver and co-workers (1969, 1971), who present two case studies of a five generation and a six generation pedigree of child abusers.

It may very well be the case that parenting skill deficits are a key factor that differentiate abusive from non-abusive parents. Professional opinion in the literature, in spite of insufficient research, is in uniform agreement that inadequate understanding of appropriate child

rearing practices and unrealistic expectations of normal child development are characteristic of abusive parents. (DeLissovoy, 1973; Fontana, 1968; Galdston, 1965; Spinetta and Rigler, 1972; Steele and Pollock, 1968). Gregg and Elmer (1969) for example, found that abusive parents possessed less knowledge of child development milestones and less ability to provide appropriate health care than a control group of parents of children who had suffered accidental injuries. Unfortunately there do not exist enough well tested instruments to measure parenting skills or knowledge of child development. The authors of the above studies however, did not view this as a problem. None used a standardized instrument that assess knowledge of developmental milestones. Instead, conclusions were based on pediatrician's opinions, and clinical judgments. Controlled studies of knowledge of child development are needed.

Some authors have tried to develop typologies of abusing parents which might adequately differentiate populations of abusers. The most commonly quoted typology is that of Merrill (1962), who defined four distinct groups of abusing parents through factor analysis of personality variables. This early study used responses to questionnaire items and should be noted for its descriptive findings. However a problem with this work is that the small sample size precludes meaningful conclusions, suggesting that the classification of abusers into four distinct types should be interpreted as an interesting hypothesis rather than fact. Merrill's (1962) groups are described below:

- I. Mothers and fathers of the first and largest group are characterized by continuous and pervasive hostility which has its roots in their own childhood. Their anger is often expressed through excessive

and displaced aggression (e.g., in beating children for minor offenses).

II. These parents are characterized by rigidity, compulsiveness, and lack of warmth and reasonableness. They defend their right to use severe punishment, and tend to find their children troublesome rather than pleasurable.

III. Passivity and dependence are typical of these parents, who are reticent about expressing their needs and desires. They appear unaggressive, but are moody and immature.

IV. This group is comprised of young, intelligent men who became unable to support their families because of physical disabilities and had to remain home. Frustration in these men led to swift and severe punishment. They tended to use angry, rigid discipline.

Boisvert (1972), DeIsordo (1963) and Zalba (1967) have also developed similar classification schemes. Boisvert, on the basis of 20 cases, divided abusing parents into two types: those who commit "Controllable Battering" and those who engage in "Uncontrollable Battering". By analyzing cases, he hoped to identify the basic problem within a parent and how it translates into abuse. The uncontrollable battering typology was divided into four classifications: psychotic, inadequate, passive-aggressive, and it was part of a long-standing personality problem. Controllable battering was divided into displacement of aggression and cold compulsive discipline. Differential treatment strategies are proposed for each typology by Boisvert. These typologies differ but also have some points of similarity. However, note that six types of abusers were identified on the basis of a sample of only 20. In summary, then, empirical verification of the effectiveness of this

hypothesized abuse type/treatment matching strategies is clearly necessary.

Early anecdotal descriptions of child abusers suggested that a large proportion of them were psychotic. Kempe, et al. (1962) asserted however, that only a small number of abusers actually are, and subsequent work has confirmed this. For example, Blumberg (1974) states that most abusing parents (90% - 95%) have some type of personality disorder and/or behavioral deficits but are not psychotic. Psychotic abusers, however, are more likely to perpetrate the most sadistic forms of abuse as well as murder their children (Blumberg, 1974). No empirical investigation of the percentage of psychotic abusers could be located.

Role of Stress

A conclusion drawn from the preceding discussion is that abusing parents often have few skills for coping with crises and stress. Yet there is evidence that suggests that abusers have experienced an inordinate number of circumstances in their lives which are recognized as stressful. For instance, Justice and Duncan (1976), using a matched control design, found that abusing parents had experienced a greater number and intensity of life change events (e.g. death, divorce, pregnancy, marriage, injury) than had non-abusive controls who reported problems with their children. In this nicely designed questionnaire study, a measure of stressful events was administered to 35 identified physical abusers (abuse having occurred within the last year) and to 35 controls. Controls were matched on appropriate demographic variables and were selected from classes offered to parents who were experiencing behavior problems with their children. Results revealed that abusive parents had experienced a significantly higher number of major life

stresses or crises in the year prior to their participation.

Other stressors implicated in the literature have been marital discord (Bennie and Sclare, 1969; Kempe, et al., 1962), social isolation and lack of friendship supports (Elmer, 1967; Helfer, 1973; Young, 1964), unemployment (Elmer, 1967; Young, 1964), premarital conception and illegitimacy of children (Smith, Hanson and Noble, 1974), and medical problems in the family (Elmer, 1975).

An especially interesting analogue study has been done to evaluate maternal punitiveness as affected by situational stress (Passman and Mulhern, 1977). This study is presented in some detail as an example of the specificity of information, beyond correlational data, that can be gained in the controlled environments which analogue studies can provide.

Ten non-abusing mothers of ten children participated in the study. In the first part, mothers were given either an easy or stressful, uncertain task to perform. Concurrently, they were to monitor and punish (via a response cost procedure) a child's "mistakes" (programmed by the experimental design) on a task he was supposedly performing out of the mother's sight. Mothers consistently chose higher intensity punishment when they were performing a stressful task than when they were performing an easy task. In the second part of the study, children produced stress by interrupting the mother's work. The more the children interrupted, the more intensely they were punished for mistakes, even though the number of mistakes the children made did not differ.

Passman and Mulhern (1977) concluded from the first part of the study that circumstances in which the parent is working (stressed or

nonstressed) can affect her punitiveness toward her child. From the second part of the study they concluded that the child's behaviors can also determine the strength of punishment. The authors also found that the shortest decision times were associated with highest intensity of punishment, indicating that the most punishing behaviors were also the most impulsive. It remains to be demonstrated whether these analogue-study results generalize to real stresses in the lives of abusive (or non-abusive) mothers.

Role of the Child

Some authors have posited that certain children introduce exceptional stress into a situation, provoking frustration and abuse from their parents. This explanation is consistent with the findings that crying and ill babies (Adelson, 1961; Lynch, 1975; Taylor, 1973), developmentally delayed children and physically handicapped children (Friedrich and Borishkin, 1976; Glaser and Bentovim, 1979), and premature babies (Fomufud, 1976; Klein and Stern, 1971) are likely targets of abuse. Supposedly because they demand so much, they introduce additional stress and frustration into the family. An interesting alternative, or additional explanation, is finding its way into the literature. According to this new theory, premature and ill infants are particularly susceptible to abuse because the early separation of infant and mother has resulted in a failure of the mother to form a bond with the child during the critical period immediately following delivery (Gray, et al., 1977; Klaus and Kennel, 1970). This interpretation is elaborated by Fanaroff, Kennel, and Klaus (1972) who found that mothers of premature babies who visited the nursery infrequently

had "disorders of mothering" in high proportion, and by Lynch (1975), who compared abused children with their non-abused siblings and found higher incidence of birth complications, neonatal separation, and other separation during the first six months in the abused children.

Children who cry excessively may also be at high risk for abuse. Frodi and Lamb (1980) found that abusive mothers are more easily physiologically aroused by crying infants. In this well designed study, 14 physically abusive mothers and 14 well matched controls were shown videotapes of crying babies and smiling babies. Abusive mothers showed greater cardiac arousal (a measure of negative emotional reaction) than controls. Furthermore, abusive mothers displayed similar aversive reactions to stimuli consisting of videotapes of smiling infants. This led the authors to speculate that this unusual response pattern "developed through transactions with children who, because of their temperament or their parent's incompetence, are difficult to care for" (Frodi and Lamb, 1980. p. 241). On the other hand though, it is possible that abusive mothers develop an abnormal sensitivity to crying prior to interacting with their infants. Further investigation to resolve the environmental versus heredity explanations of such abnormal arousal patterns is warranted.

Conclusions

It appears that there are some generalizations that can be made about physically abusive or neglecting parents. Because they often had inadequate parents themselves, they tend to be immature, have low self-images, have deficient knowledge about child development, and have difficulty empathizing with others. Perhaps there has been a failure in the process of forming attachment to the child, either because

of a deficiency in the mother or because circumstances in the neonatal period prevented it. Stress (including poverty or excessive demands from the child) may be a precipitant of abuse in a parent who already has a predisposition.

What is missing from this review is data that specifically and functionally describes the interactions between abusive parents and their children. Descriptive analyses of the personality characteristics of abusers or abused children are not sufficient. What is needed are data detailing what abusive parents and children actually do together, a sentiment strongly echoed by Burgess and Conger (1978). This is a crucial problem because such analyses do not suggest appropriate remediation. For treatment and prevention programs to be maximally effective, data are needed that pinpoints deficits and excesses in parenting ability. Such an empirical or cognitive-behavioral perspective has been markedly absent from previous work in the abuse field. A review of the literature located only four studies that directly assessed parent-child interactions in neglecting or abusing families.

For example, Burgess and Conger (1978) made home observations on 34 abusing or neglecting families. Frequency data were collected on rates of verbal and physical contact. Briefly, the results indicated that abusive families were characterized by lower overall rates of verbal interactions (especially between mothers and children) and increased rates of negative interactions (e.g. dislike and disapproving statements, threats, aversive physical contact). Positive verbal and physical interactions (praise, hugs, statements containing affectional content) were also lower when compared to controls. More specific

findings from this study are detailed in the following section.

This work provides a first step in identifying the parenting skills of abusive parents. More data are needed that address knowledge of common child management skills (e.g. use of contingent praise, direct commands, questions, responses to child verbalizations); these types of assessment studies have not yet been done. Numerous parent training programs for children with a variety of behavior problems have noted inappropriate use and/or deficiencies in parents of children with a variety of behaviors problems (e.g. Gordon, 1975; Patterson and Gullion, 1969). It seems reasonable to assume that effective parents would demonstrate appropriate use of such parenting techniques while abusive parents might show deficits.

To date, this question has only partially been resolved. A number of single subject design treatment studies have been reported where attempts were made to extinguish aversive behaviors such as threats, hitting, and disapproving, while concurrently shaping other more positive behaviors such as praise and clear commands. For example, Denicola and Sandler (1980) and Sandler, VanDercar, and Milhoan, (1978) describe treatment studies that successfully increased the use of praise and frequency of laughing and smiling in abusive mothers. The authors assumed, and subsequently verified, that these behaviors occurred in low frequency in the interactions of abusive families. What remains unanswered is the link between these behaviors and abuse. From an empirical or behavioral perspective it might be theorized that the increased occurrence of positive behaviors and decreased presence of irritating or provocative ones on the child's part makes it less likely

that the parent would be sufficiently aroused to engage in an abusive act.

Crozier and Katz (1980) assessed changes in overall aversive and positive behaviors following behaviorally based training in child management skills. Subjects read Patterson and Gullion's (1969) book, Living With Children and had supervised practice. Results indicated that abusive mothers could learn to increase the frequency of positive behaviors and decrease the frequency of aversive behaviors. Corresponding improvements in child behavior and more positive attitudes of the mothers towards all children in the family were reported. No followup assessment of future incidents of abuse was done.

In a recent, related study, Aragona and Eyberg (1981) examined mother-child interactions in neglecting parents, parents with behavior problem children and control parents. In a laboratory procedure, parents were observed playing with their children under two varied conditions. One involved a free play type of situation while the other required the mother to select an activity and keep the child playing with her. Behaviors measured included commands, descriptive statements, praise and critical statements, along with total verbal output. Neglecting mothers were found to praise their children less often than controls in the structured task and criticize them more often during the nondirective play portion of the assessment. They also criticized their children more often in general.

This study is to be commended for its methodological rigor, Although it might have been more useful if additional behaviors had been coded.

Nonetheless, this study provides clear, detailed information about how neglecting mothers differ from other mothers, at least in a controlled laboratory setting. This type of information is needed for physically abusive parents since it is just this level of specificity that is necessary to improve treatment efforts. It is tempting to want to conclude that results of such an investigation of abusive mothers would be similar, given the tendency to see physical abuse and neglect as related types of child maltreatment. Unfortunately the one naturalistic study of abusive and neglectful mother-child interactions (Burgess and Conger, 1978), demonstrated that neglecting mothers behave similarly to controls on some behaviors and tend to resemble abusive mothers on others.

What is now needed is an investigation of abusive and non-abusive family interactions across a number of different parenting-related behaviors. Only after precise knowledge of parenting problems is gathered can the problem of child abuse. The current study addresses this need by providing a detailed, controlled behavioral assessment of the interactions between abusive mothers and children in a laboratory setting.

SPECIFIC HYPOTHESES

1. Burgess and Conger (1978) found significant or near significant differences in communication rate directed from mothers to children. Furthermore, the withdrawal and isolation (Elmer, 1977; Helfer, 1973) which typifies many abusive mothers also suggests that they may be less involved with their children. Therefore it is hypothesized that abusive mothers will exhibit significantly (all significance levels to be .05) less overall behavior than non-abusive controls.
2. Burgess and Conger (1978) also demonstrated that positive interactions between mothers and children were less frequent (at the .08 level) in the abusive mothers. Therefore it is predicted that mothers in this study will show significantly lowered frequency on the "positive" behavior categories of Mother Question, Mother Approval, and Mother Command.
3. Negative behaviors were found by Burgess and Conger (1978) to be more likely in abusive mothers (at the .06 level). It is thus predicted that abusive mothers in this study will also exhibit higher frequencies of "negative" behaviors, e.g. Mother Disapproval, Mother Non-Comply, and Mother Threat.
4. Because abusive mothers are known to be more likely to have experienced more stress (Justice and Duncan, 1976), are isolated, and are likely to have been stigmatized by the process of being labeled abusive by legal authorities, it is speculated that they might develop distrust and resentment of authority. If that is true, then they should portray

themselves in as favorable light as possible on a self description questionnaire. It is therefore predicted that abusive mothers will score significantly higher than non-abusive matched controls on a questionnaire measure of Social Desirability.

5. An attempt is being made to assess knowledge of child development and parenting skills. Given the DeLissovoy (1973), Fontana (1968), Galdston (1965), and Steele and Pollock, (1968) descriptions of deficits in this area, it is predicted that abusive mothers will score lower on a questionnaire designed to measure "Understanding of Children".

6. It is difficult to develop hypotheses regarding child behavior. Assuming a modeling interpretation, it should be the case that abused children will be less active than non-abused children, since their mothers will probably display less behavior. Similarly, abused children should be less likely to engage in approval or praise. The children in the Burgess and Conger (1978) study were observed to be more negative than controls, indicating the possibility that the children in this study will be as well.

METHOD

Subjects

A number of months were spent developing liaisons with appropriate people in referral agencies that had contact with abusive mothers. These included Child Protective Services caseworkers, Parent's Anonymous volunteers, and community mental health center therapists. Over the course of eight months, 11 abusive mother-child pairs agreed to participate in the study. All of these mothers had been identified by legal authorities, caseworkers, or therapists as being physically or exceptionally emotionally abusive to one of their children within the last six months. It was decided to exclude sexual abuse subjects from the project given the many differences between physically and sexually abusive parents. As one example, consider that more of physical abusers are female while males account for the vast majority of sexual abusers. Also there is often a quality of lack of control present in most physical abuse as compared to the more seductive often gentle persuasion that characterizes many sexual abusers. It should also be noted that about 16 mothers indicated interest in the project to their therapist or caseworker, but when contacted by the experimenter decided not to participate or failed to arrive at the laboratory when scheduled.

Twelve non-abusive mother-child pairs were recruited at local pre-schools and served as controls, for a total subject group of 23 pairs. All of the interested control mothers who agreed to participate ultimately did so.

Since the laboratory facility used in the study was designed as a playroom for preschool to about age eight, and the assessment procedures were inappropriate for infants, only children between the ages of three and eight were used as subjects in the study. In the event that a particular mother had more than one child in that age range, she was asked to bring the one who she considered to be the most difficult to manage, and/or felt had the most problems.

Control subjects were matched to the abusive subjects on the following variables (or as many of them as were possible) with rank order of priority as follows: (1) age of child, (2) age of mother, (3) marital status of mother, (4) education of mother, (5) sex of child, (6) race or cultural group. Subject demographic data are detailed in Table 1.

Assessment Instruments

Mother-child interactions were coded with a modified version of the Patterson System for coding family interactions (Patterson, Ray, Shaw, and Cobb, 1969). This coding system, which has been used extensively in investigations and treatment studies with families of delinquent youths and children labeled as behavior management problems, (c.f. Arnold, Levine, and Patterson, 1975; Johnson and Katz, 1973) is designed to provide an accurate running account of social interactions among family members. The original system codes 29 behavioral events. For purposes of laboratory assessment of abusive mother-child interactions and in light of the enormous effort necessary to secure reliable observations on 29 independent codes, it was decided to modify the system somewhat by limiting observation to 12 behaviors hypothesized from the literature to be relevant to child abuse. These categories were: Mother Command,

Table 1. Demographic data used in selection and matching of subjects.

<u>Matching Variable</u>	<u>Abuse Subjects</u>	<u>Control Subjects</u>	<u>Significance</u>
Mean Age of Child (including range and)	4.91 (3-8, 1.39)	4.67 (3-8, 1.42)	ns
Mean Age of Mother (including range and)	29.36 (23-34, 4.57)	30.18 (22-36, 5.36)	ns
Marital Status of Mother	Married - 6 Cohabiting - 2 Divorced - 0 Separated - 3	Married - 6 Cohabiting - 2 Divorced - 4 Separated - 0	
Sex of Child	Male - 11	Male - 10 Female - 2	ns
Education of Mother	Some College -7 Some High School-3 Below High School-1	11 1 0	
Race	Caucasian - 8 Mexican-Am.- 3 Black - 0	10 0 2	
Number of Children (range and σ)	2.82 (1-4, 1.25)	1.83 (1-3, 0.84)	t = 5.07, p < .001

Child Command, Mother Threat, Mother Question, Child Question, Mother Approval/Praise, Child Approval/Praise, Mother Disapproval, Child Disapproval, Child Comply, Child Non-Comply, Mother Non-Comply. An operational definition of each behavioral code is presented in Table 2.

According to instructions for use in the original system, trained observers mark the occurrence of all behavioral events in six second intervals, with one coder focusing on each family member. In the current study the system was adapted somewhat in order to allow data to be directly machine scored onto cassette tapes (and subsequently transferred to computer disks). Two initially blind observers (they were told that this was a study assessing interactions of mothers with different types of children) coded all behaviors of mother and child from behind a one-way mirror. One observer admitted post-hoc a suspicion that abuse was in some way a focus of the study. Reliability was obtained by computing percent agreement between the two coders for each occurrence of each of the 12 behavioral categories. An agreement was noted if a given behavior was scored by one coder within 10 seconds of the other. Percent agreement for each of the 12 behaviors was calculated by dividing the number of instances where agreement was noted within 10 seconds by the total number of occurrence of the behavior. These agreement coefficients were then multiplied by 100 to yield a percent score. A subsequent overall reliability figure was then computed by averaging the individual coefficients obtained on each of the 12 coded behaviors. Two trained undergraduate assistants coded every subject, thus reliability measures were obtained for 100% of the sample. The mean percent agreement rate obtained over the entire sample was 88.44%. Table 3 presents percent agreement figures for each of the 12 coded behaviors.

Table 2. Operational definitions of behaviors coded.

<u>BEHAVIOR</u>	<u>DEFINITION</u>
Command (Mother or Child):	A direct, reasonable and clearly stated request or command made to another person. The statement must be sufficiently specific as to indicate clearly the behavior which is expected from the person to whom the command is given.
Question (Mother or Child):	Behavior which seeks a person's opinion or preference; giving a person a choice of responses.
Approval (Mother or Child):	Physical touching of another person in a friendly or affectionate manner, or clear gestural or verbal approval which indicates clear positive interest or involvement.
Disapproval (Mother or Child):	The person gives verbal or gestural disapproval of another person's behavior or characteristics, or humiliates or makes fun of another person.
Mother Non-Comply:	Mother does not do what is requested of her by the child. Can occur only as response to Child Command.
Mother Threat:	A kind of anger, sarcasm, or humiliation directed towards the child. Aversive consequences are implicitly or actually threatened if compliance is not immediate.
Child Comply:	The child does what is asked of him or her. Can only occur following (directly or indirectly) a Mother Command, Mother Threat or Mother Disapproval.
Child Non-Comply:	Child does not do what is requested of him or her by mother. Can only occur after Mother Command, Mother Threat, or Mother Disapproval.

Table 3. Interater reliability data for each behavior coded.

<u>BEHAVIOR</u>	<u>PERCENT AGREEMENT</u>	<u>STANDARD DEVIATION</u>
Mother Command	85.86	13.67
Mother Question	89.03	9.53
Mother Approval	88.00	20.38
Mother Disapproval	94.30	14.60
Mother Non-Comply	--(a)	--
Mother Threat	--(a)	--
Child Command	89.52	18.22
Child Question	87.35	20.15
Child Approval	80.00	41.40
Child Disapproval	93.20	12.62
Child Comply	82.57	20.71
Child Non-Comply	61.40	39.83

(a) insufficient data for meaningful computation.

In order to substantiate the observations noted by many writers that abusive parents have unrealistic expectations of their children, and are relatively uninformed about developmental processes (DeLissovoy, 1973; Fontana, 1968; Galdston, 1965; Spinetta and Rigler, 1972; Steele and Pollock, 1968), a paper and pencil measure of knowledge of basic parenting skills was administered. A portion of the Parenthood Questionnaire (Petersen, et al., 1978) developed for use in evaluating the Education for Parenthood Program (Kruger, Marland, and Rosoff, 1973), a federally funded nation-wide parent training program for teenagers, was completed by subjects prior to beginning the behavioral assessment tasks. The section entitled, My Understanding of Children consists of a combination of 30 true/false questions and vignettes related to knowledge of developmental milestones, knowledge of alternatives to punishment, awareness of danger signs in children's health, and understanding of children's behavior. This enables the calculation of a percent correct score. Only 28 of the questions were asked as two of the items pertain to abuse and were omitted to avoid arousing potentially sensitive abusive subjects. Validity data, other than face validity, has not as yet been obtained; thus results from this instrument will need to be seen as speculative.

An additional written instrument, the Social Desirability Scale (Crowne and Marlow, 1964) was also administered. This 33 item questionnaire assesses the degree to which a person portrays herself in favorable, socially desirable terms in order to achieve the approval of others. It consists of two types of statements: culturally acceptable but probably untrue traits, and probably true but undesirable characteristics. Copies

of both these instruments are in the appendix.

Procedure

Referral sources were provided with a simplified description of the project that indicated that abusive parents were needed for a study of mother-child interactions. The experimenter met with and maintained contact with all agencies in order to facilitate referrals. Questions were answered and concerns that therapists/caseworkers had about encouraging mothers on their caseloads to participate were addressed. Referring sources were asked to make initial contact with prospective abusive mothers. Given the distrust and social isolation noted in many abusive mothers (Elmer, 1968; Helfer, 1973; Young, 1964), it was felt that having the project initially explained by a familiar person (albeit one who might be seen in an adversary role if the mother's child(ren) had been removed from the home) would be beneficial. A known person would be most likely to help subjects overcome the reluctance they might have to participate in a project that required observation of their parenting skill. Therapists were asked to stress the ten dollar financial reimbursement for participating and the need to gather more data about how abusive mothers interact with their children.

Following initial contact by the referring agent, and assuming the mother had agreed to participate, the experimenter contacted the mother. He provided another, more complete description of the study, and attempted to relieve any anxieties the subject may still have been feeling. A time was then set for the mother and child to come into the Child Psychology Laboratory, with transportation provided if needed.

Control subjects, obtained from preschools through a similar process as described above, were also briefed by phone prior to the

scheduling of laboratory time. Procedures for both abusive and non-abusive groups, after initial contact, were identical.

Upon arrival at the laboratory, the mother and child were escorted to the playroom, a facility equipped with a one-way mirror and observation room. The playroom contained a variety of toys and games appropriate for children from age three to eight. While the mother read and completed the subject consent form, information form, and the two questionnaires, (copies of which are in the appendix), the child was allowed free access to the toys. Included within the consent form was a description of the three interaction tasks.

Prior to beginning actual data collection, the mother and child were shown the observation room and one-way mirror (in order to familiarize themselves with the role of the coders and experimenters in the study), and allowed to interact together as a "warm up" period. Following this, the first phase of observation was begun. The experimenter, using a modified Hanf procedure (Hanf, 1969) informed the parent that she and her child would be asked to play together. The Hanf technique consists of structured parent-child interactions under two differing instructional sets. In the first part, the "Child's Game", the parent was told the following:

Ms. X, it's time for the Child's Game. Let your child choose the play or activity. It is the Child's Game and your child makes the rules. You play along with him. Do this until I tell you to stop.

The Child's Game phase was run for approximately 13 minutes with no data collected during the first three minutes in order to allow

some time for habituation to the task and setting.

In the next phase of observation, the Parent's Game, the instructional set was changed and the parent was given more control of the task. Verbal instructions were as follows:

Now Ms. X, it's time to play the Parent's Game. In this part you will choose the play or activity. It is your game and your rules. Keep your child playing in this with you. Do this until I tell you to stop.

Data was recorded for 10 minutes.

The third and last assessment period involved a task known as the Bean Game (Patterson, 1980). It is a game designed to create conditions of mild frustration and stress for mother and child. The mother was given a decorated plastic milk jug with a small opening at the top, and a coffee can full of pinto beans. She was given these instructions:

Ms. X, I want you to pretend that you and your child are on a TV game show. Your job is to get as many beans as you can into this jug. The way to do this is to get your child to put them in. You may do anything you want to get him/her to put the beans in except put them in yourself. Let's see how many your child can get in. Do this until I tell you to stop.. and, good luck!

Data were collected for 15 minutes in this phase.

A debriefing period followed where questions were answered, a more involved explanation of the project was given (if requested) and the mother was paid for her participations. The child was allowed to select a prize from a group of inexpensive toys.

RESULTS

Combined Analysis Across All Assessment Tasks

As a first step in interpreting the data, two overall frequency rates of behavior were calculated. Figure I presents two graphs, one representing a sum of all six mother behavior categories across all three assessment tasks; the other an analogous measure for the six child behaviors coded. Note that abusive mothers emitted an average of 3.81 behaviors per minute compared with a 5.22 rate of behavior for control mothers. One way ANOVA on this frequency data was significant, $F(1,1) = 4.93, p < .05$. Control children's overall rate of behavior was somewhat higher than abusive children's ($\bar{x} = 3.42, \sigma = 2.10$ versus $\bar{x} = 2.41, \sigma = .78$), although this difference was not significant. It is important to clearly understand the meaning of the overall rate finding. This can be done by noting that even small differences in frequency rates of behavior are meaningful. Thus, in evaluating the mother behavior rate, observe that in a 10 minute assessment session, control mothers emitted approximately 52 (5.22 x ten minutes) coded behaviors versus 38 for abusive mothers, which essentially means that they demonstrated 37% more codable behavior over the course of the task.

As a next step, the combined rate of behavior statistic for each of three separate assessment tasks (Child's Game, Parent's Game and Bean Game) was calculated. Here it was revealed that it was during the Child's Game and Parent's Game that the greatest differences between the mothers occurred. Abusive mother's overall rate of behavior on the Child's Game

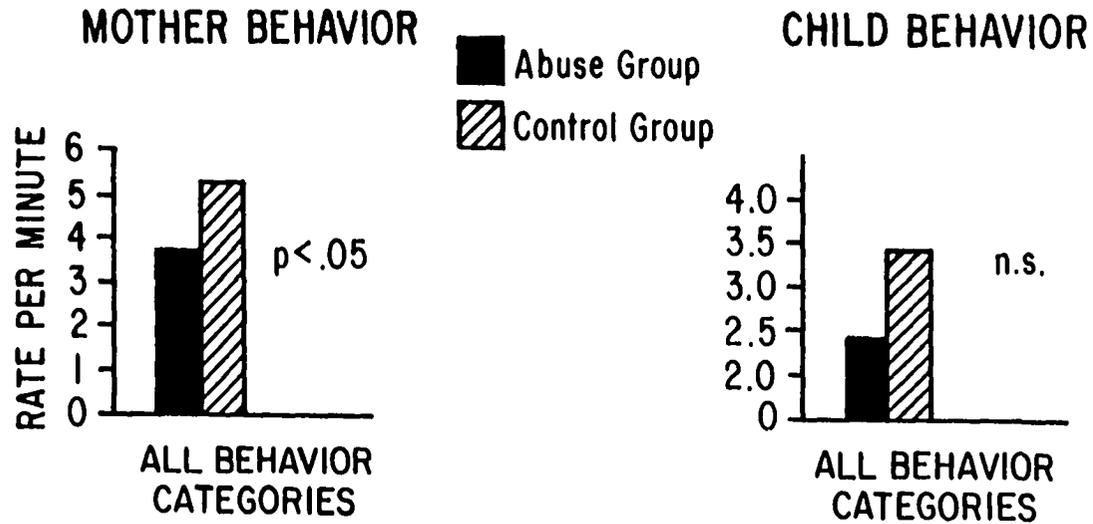


Figure 1. Overall frequency data (rate of behavior) across all assessment tasks.

was only 2.72, compared to 4.37 for the controls. A one-way ANOVA revealed that this was a significant difference, $F, (1,21)=6.78, p<.05$. The differences between mothers on the Parent's Game were also significantly different; abusive mothers exhibited a mean of 4.24 behaviors per minute compared to 6.10 for the non-abusive mothers, one-way ANOVA, $F (1,21)=5.09, p<.05$. On the Bean Game mothers were observed to perform more similarly. Abusive mothers overall rate was 4.47 compared to 5.19 for the controls ($P>.05$).

Children's total behavior output varied somewhat between groups from one game to another. For example, on the Child's Game, abused children showed a mean of 1.58 behaviors per minute which is to be contrasted with nonabused children's 4.14. This difference failed to achieve statistical significance, primarily as a result of the large variance obtained from children in the control sample. On the Parent's Game, no significant differences between the children were found. Abused children displayed a mean of 2.58 behaviors per minute versus control children's 3.00. The children were most similar during the Bean Game; abused group children exhibited 2.76 behaviors per minute and controls showed 3.11 ($P>.05$).

Therefore it seems that both the Child's Game paradigm (an unstructured, free play type of situation where the child is made to be in control), and the moderately authoritative Parent's Game format are problematic for abusive mothers, at least when total behavior rate is the basis of comparison. In the following section each of the 12 individual categories will be examined separately.

As a beginning point in interpreting more specific differences between the two groups, Table 4 presents means and one-way ANOVA

Table 4. Mean rate per minute for all coded behaviors.

<u>Behavior</u>	<u>GROUP MEAN</u>		<u>Univariate F</u>	<u>Significance</u>
	<u>Abuse</u>	<u>Control</u>		
Mother Command	1.81	1.95	< 1	ns
Mother Question	1.58	2.60	9.30*	.006
Mother Approval	0.25	0.52	6.36*	.020
Mother Disapproval	0.16	0.13	< 1	ns
Mother Non-Comply	0.00	0.00	2.32	ns
Mother Threat	0.01	0.02	< 1	ns
Child Command	0.47	0.65	1.35	ns
Child Question	0.75	0.84	< 1	ns
Child Approval	0.01	0.03	1.78	ns
Child Disapproval	0.05	0.07	< 1	ns
Child Comply	1.01	1.70	2.98	ns
Child Non-Comply	0.11	0.14	< 1	ns

* $p < .05$

univariate F ratios for each behavior, averaged across all three assessment tasks. Rates of Mother Question and Mother Approval are seen to be the only individual behaviors which differ significantly between the groups, with control mothers demonstrating a high rate.

It was decided at this point that it would be appropriate for further analyses to transform each frequency rate (for the 12 different behaviors, as in Table 4) into proportions. This was done by dividing each mother's behavior rate by the total rate of all mother behavior; a similar procedure was also done for child behaviors. The reasoning behind this decision was to determine whether the observed differences in the Mother Question, and Mother Approval categories occurred primarily as a function of the fact that non-abusive mothers simply behave more in general, or as a result of a significant difference in the probability of either group engaging in questioning or approving behavior. The answer to this problem can be gleaned from examination of Figure 2. There it is revealed that 40% of all abusive mothers' coded behaviors is comprised of questions - a result not significantly different from the 50% figure obtained for the proportion of total behavior that control mothers spend asking questions. In fact, consideration of the data in this fashion demonstrates that both groups of mothers exhibit similar patterns of behavior in all categories. In other words, the amount of any given behavior, expressed as a percentage of total behavior, is similar for the two groups except that control mothers display far more overall behavior.

For child behaviors, the situation is less complicated. The most interesting result occurs in the Child Question category. Even though

both groups of children asked questions at the rate of about .80 per minute (See Table 4), Figure 2 shows that significantly more of abusive children's total behaviors is comprised of questions. One way ANOVA of group means, $F(1,21) = 4.93, p < .05$. Other than that the proportion data for all other child behaviors is not significantly different. Also of interest in Figure 2 is the low frequency of approval, disapproval, and noncompliance for mothers and children in both groups.

Despite the fact that individual behaviors were not significantly different, it was hoped that when all the categories were considered together differences between groups would emerge. Consequently a step-wise discriminant function analysis was conducted on these data. A significant function was obtained that utilized three of the behaviors: Mother Command (coefficient = 1.10), Mother Non-Comply (-.78), and Child Comply, (.98). The Canonical Correlation was .632, Wilks Lambda = .601, $F = 9.95, 3df, p < .05$. Classification of subjects into abusive or control groups was 87.0% accurate, with 10 out of 11 abusive, and 10 out of 12 control pairs correctly identified.

The result of this discriminant function analysis serves to demonstrate that meaningful differences exist between the two groups when clusters of behaviors are compared simultaneously. In the present example, it was thus determined that 20 of the 23 subject pairs could be correctly classified as abusive or control by consideration of their scores on Mother Command, Mother Non-Comply and Child Comply. The coefficient values in parantheses represent the relative contribution of each behavior to the classification equation, with higher coefficients reflecting greater predictive power.

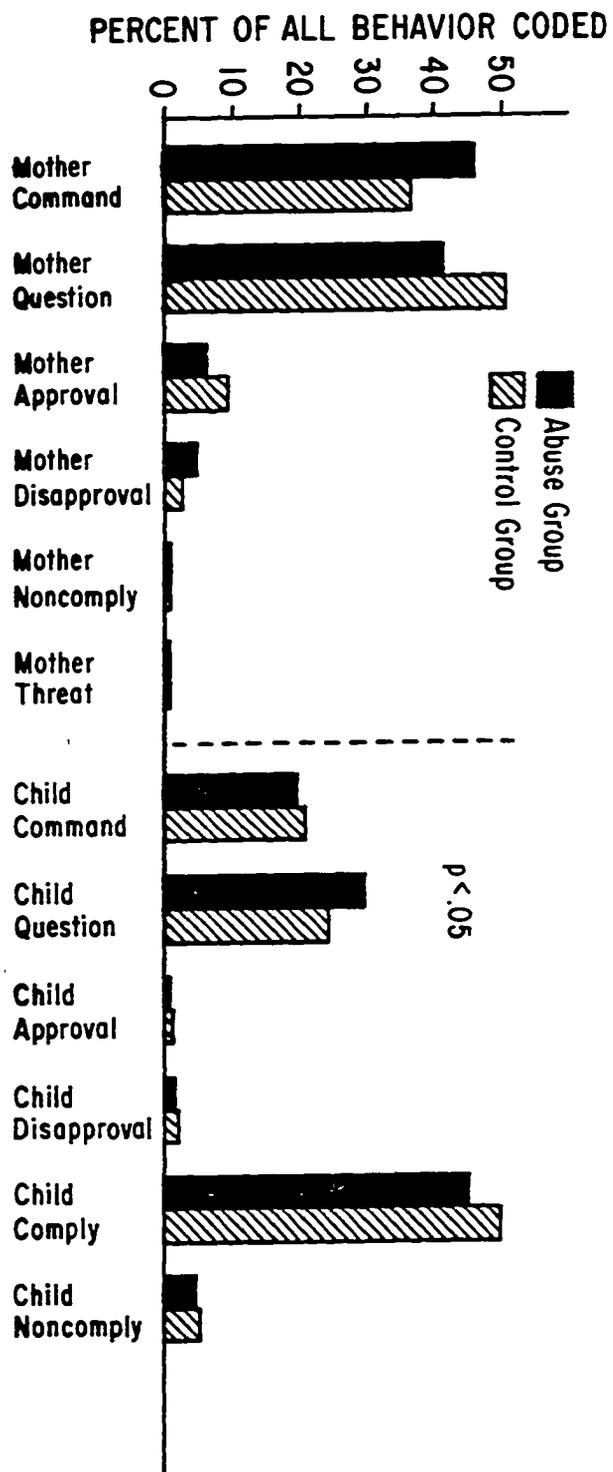


Figure 2. Proportion data for each behavior category across all assessment tasks.

Individual Task Analyses

Figures 3 and 4 present both mean rate of behavior and proportion of behavior data for mothers and children respectively in the Child's Game, Parent's Game and Bean Game. These graphs allow comparison between abusive and control pairs for each behavior, as well as portray differences across the types of assessment tasks. Of primary interest is the differences for both groups between Mother Command in the Child's Game versus the other two games, a consistent result given the instruction set of allowing the child to make the rules and choose the toy to play with. Also, Child Command shows an expected inverse relationship of increasing during the Child's Game and then dropping during the other two games (Figure 4).

Mother behavior during the Bean Game task consisted of a non-significant trend for control mothers to disapprove less. Child behaviors were again essentially similar for the two groups of children, although there was a trend for abused children to ask more questions and comply less often. A discriminant analysis was able to isolate the more subtle differences and find a function which, although insignificant (Canonical Correlation = .54, Wilks Lambda = .708, $\chi^2 = 6.74$, 3df $p = .08$), was able to correctly classify 82.6% of the pairs (nine of 11 abusives and 10 of 12 controls). The discriminating behaviors used, and coefficients obtained, were Mother Question (-.677), Mother-Comply (.776), and Child Question (.85).

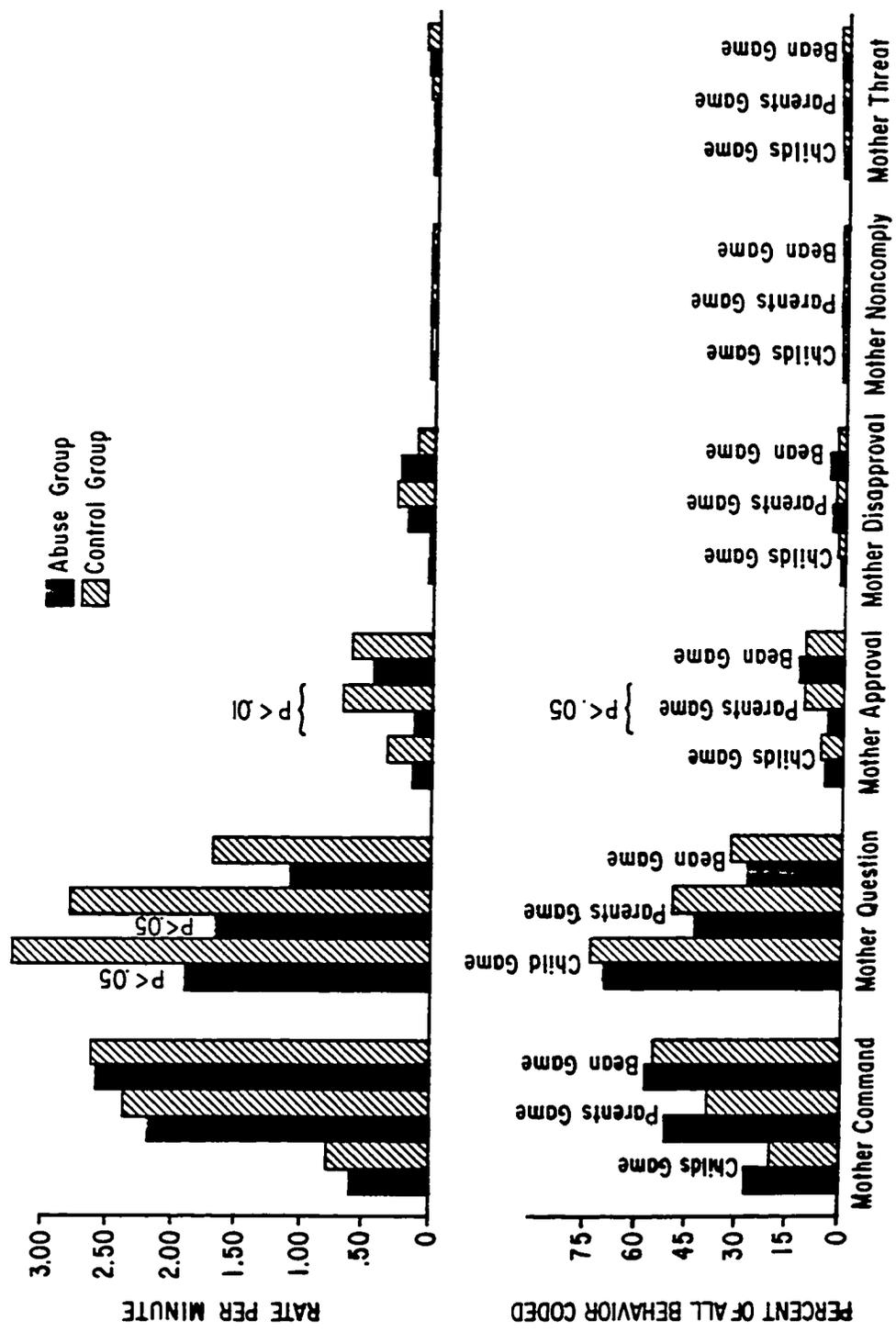


Figure 3. Mother behavior in each assessment task.

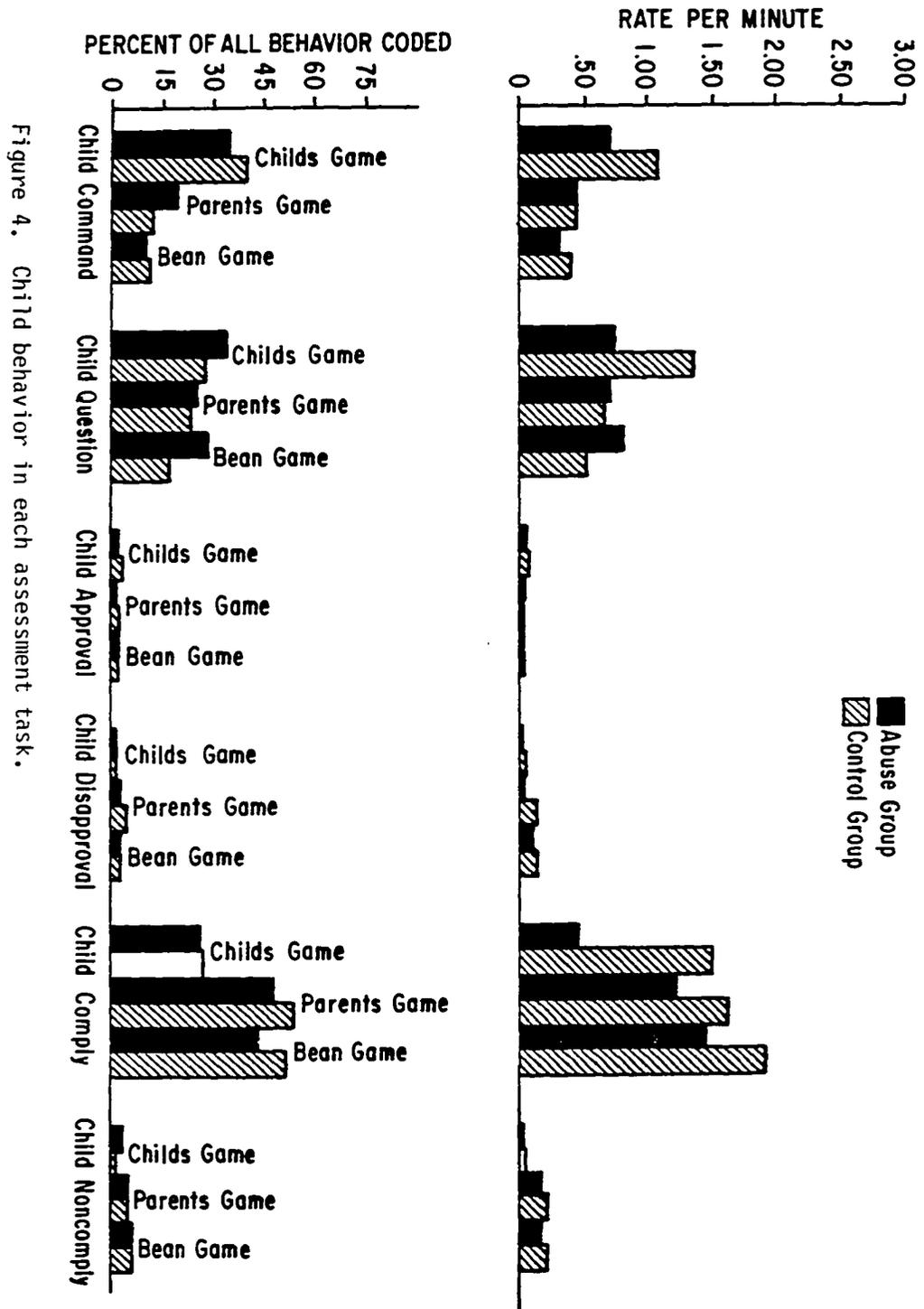


Figure 4. Child behavior in each assessment task.

Conditional Probability Analysis

For the next stage of analysis, it was decided that the Child Comply and Mother Approval categories did not capture the interactional quality which is present when a child complies to a command or a mother elects to give approval. In other words, these two categories were initially defined as able to occur at any time, regardless of what behavior preceded them. For example, note that a mother conceivably could give approval after her child does not obey, yet this inappropriate approval would be considered equivalent to the more appropriate approval given after the child had complied. Thus, behaviors have different psychological meaning depending on their timing and sequencing.

Therefore, the data were re-analyzed to determine what percentage of the time a Mother Approval occurred within ten seconds of a Child Comply, and what percentage of the time a Child Comply followed a Mother Command by 10 seconds or less. These results are presented in Tables 5 and 6, and demonstrate that abused children comply far less often to commands than do controls, $t=2.39$, $21df$, $p<.05$. Rates of contingent praise are surprisingly low for both groups although significantly lower for abusive mothers, $t=2.14$, $21df$, $p<.05$. Furthermore, they do not increase during the Bean Game where mothers were encouraged to do whatever they could to motivate their child to continue the potentially boring task. The contingent rates were correlated with the initial Child Comply category and revealed that the two measures were significantly related (Pearson Correlation Coefficient = $.367$, $p<.05$). However, this figure represents less than 15 percent of the variance, which demonstrates the fact that the contingent compliance rate is a substantially different

Table 5. Mean percentage of Mother Command followed by Child Comply (Compliance Rate).

<u>Group</u>		<u>Assessment Task</u>			
		<u>Overall</u>	<u>Child's Game</u>	<u>Parent's Game</u>	<u>Bean Game</u>
Abusive	\bar{x} =	47.42%	40.82%	51.18%	50.27%
	σ =	12.05	10.39	16.77	20.78
Control	\bar{x} =	59.92%	56.33%	60.25%	63.17%
	σ =	11.87	24.80	16.91	11.60
<u>t value,</u>	21 df	2.39*	1.85*	1.23	1.78*

* $p < .05$

Table 6. Mean percentage of Child Comply followed by Mother Approval.

<u>Group</u>		<u>Assessment Task</u>			
		<u>Overall</u>	<u>Child's Game</u>	<u>Parent's Game</u>	<u>Bean Game</u>
Abusive	\bar{x} =	4.24%	0.46%	5.91%	6.36%
	σ =	3.69	1.51	10.20	7.38
Control	\bar{x} =	9.33%	5.17%	12.17%	10.67%
	σ =	6.65	9.39	11.22	10.37
<u>t</u> value, 21 df		2.14*	1.57*	1.33	1.09

* $p < .05$

measure than the Child Comply rate that has been used thus far in this paper.

Coder Classification Results

After debriefing, the three coders were asked to guess whether each subject pair was abusive or control. Overall, they were able to correctly identify 59.1% of the abusive mothers and 84.9% of the controls, for an overall hit rate of 72.3%. This figure is significantly better than chance, $\chi^2 = 8.58$, 1df $p < .01$. Individually, the coders' correct hit rates were 68.2%, 71.4%, and 77.3%.

Following this initial classification, the coders were next asked to operationalize what criteria they had used in making their decisions, and via informal discussion determined that two subjective factors, mother's interest in her child, and mother's skill as a parent, were instrumental in their choices. However, when the coders were asked to give each mother a Likert scale rating (from 0-7) on these factors, there were no meaningful or significant differences between the two groups on either measure. Furthermore the two constructs were found to correlate .921 ($p < .001$) with each other, indicating a high likelihood that it was difficult for the coders to separate their perceived ratings of mothers on the basis of interest and skill.

A multiple regression analysis was done to see which of the twelve coded behaviors were most predictive of the interest rating (and thus presumably salient in influencing their categorization of mothers into groups); Child Approval and Mother Threat emerged as the best predictors: Interest = 3.30 + 32.39 Child Approval + 26.05

Mother Threat, $R^2 = .364$, Incremental $R^2 = 20.0\%$ (Approval) and 16.4% (Threat), $F(1,20) = 7.33$, $p < .05$. Thus it appears that the coder's classification can be adequately predicted by utilizing Child Approval, and Mother Threat scores. It can therefore be speculated that the way that coder's judged parents as abusive or not was by assessing the number of threats the mother exhibited and the degree to which the child approved of his mother.

Questionnaire Results

On the Social Desirability Scale, abusive mothers endorsed significantly fewer of the socially desirable items ($\bar{x} = 4.00$, $\sigma = 4.71$), as compared to $\bar{x} = 19.57$, $\sigma = 4.35$ for the controls ($t = 2.51$, $23df$, $p < .05$).

On the scale measuring attitudes towards, and knowledge of, child development (My Understanding of Children), both groups answered a similar majority of the items correctly (\bar{x} abusive = 23.00 of 28 , $\sigma = 4.61$ versus \bar{x} control = 23.79 , $\sigma = 3.04$).

DISCUSSION

The key finding from this study is the significantly lower overall rate of behavior shown by the physically abusive mothers and their children. In formulating this project, the aim was to assess which specific behaviors or patterns of behaviors, under what conditions, effectively discriminated abusing from non-abusing mothers. Initially, abusive behavior was hypothesized to be a result of potential parenting skill deficits (Crozier and Katz, 1980; Sandler, VanDercar, and Milhoan, 1978). In fact, however, few meaningful differences on specific behaviors were found. While it is true that mean frequencies for rates of questions and approval differed significantly, when corrections were made for overall rate (the proportions analysis), these differences were no longer evident. Instead, it is the lowered overall rate finding, consistent with Burgess and Conger's (1978) study of interactions in the home setting, that deserves the most attention. They, too, found that abusive mothers had a significantly lowered overall rate of behavior towards their children when compared to non-abusive mothers.

It appears that it is the Child's Game paradigm which is the most diagnostic for the abusive mothers. It was on the Child's Game where the greatest differences in overall behavior rate were found although on first impression it would seem that this should have been the easiest task for the mothers. In fact the decision was specifically made to play the Child's Game first for all subjects in order to avoid having

some abusive mothers begin with the more structured (and assumed more difficult) Parent's or Bean Games.

What accounts for the differences on the Child's Game? Recall that this paradigm requires the mother to play along with her child in an unstructured, free play situation where the child is given the responsibility to choose the toy or activity. Two explanations seem possible: either abusive mothers are not interested in playing with their children and thus withdraw when given a chance, or simply do not know how to behave with them in non-demanding, non-authoritative situations. To wit, note that the contingent approval rate (Table 6) was significantly lower for abusive mothers in the Child's Game, and could be used to support either hypothesis. Also the coder's ratings of abusive mothers as less interested in their children provides corroborating evidence that they tend to withdraw.

Aragona and Eyberg (1981) detailed the same result for neglecting parents using an assessment paradigm similar to the Child's Game. They speculated it was the mother's inability to provide positive attention, and tendency to engage in increased criticism, that was a causal factor in the difficulty.

Differences in overall rate occurred on the Parent's Game as well. Here, contingent approval rates (Table 6) were relatively similar for both groups of mothers. It appears then that abusive mothers were less able than controls to assume a motivating, authoritative stance with their children, although they contingently praise with equal frequency. On the Parent's Game, children were seen to obey commands approximately equally often, however, compliance during the Bean Game

task was significantly lower for the abused children.

One other main finding with regards to the children is in rate of questioning. Abused children spend a greater percentage of the time that they interact with their mothers asking questions. This was especially true during the Child's Game. One possible explanation for this is that the child sensed his mother's inadequacy or withdrawal and attempted to involve her via the asking of questioning. It may also be the case that abused children, as a result of their unpleasant experiences, develop a need to identify all potential threats in a situation and thus tend to ask their mothers numerous questions in order to become as secure as possible in a new environment.

In summary, then, it appears that one main difference between the mothers is in a construct which might be described as interest or involvement with the child. Evidence of parenting skill deficits or excesses, is essentially limited to the approval rate differences (Table 6). This follows from the essential similarities between the two groups once overall rate is controlled. In other words, it is clear that abusive and control mothers basically exhibit similar patterns of behavior with the one exception that abusers give less contingent praise. It is only the amount of behavior which differs.

But how does withdrawal or lack of interest mediate abusive episodes? One possible explanation is that a vicious cycle is established wherein the child learns to become increasingly persistent in seeking attention from a mother who continues to withdraw. Finally the frustration leads to an explosive defensive attack aimed

at the perceived, annoying aggressor -- the child. Accounting for abusiveness based on a lack of skill seems easier, e.g. the mother punishes tantrums severely rather than ignores them. Unfortunately the evidence in this study does not strongly support such a hypothesis.

In general it seemed that mothers approached the assessment wanting to appear as competent as possible. Being on their "best behavior" explains the low rate of aversive behaviors observed for both groups. As a clinical observation, it appeared that for some abusive mothers, a "vacuum effect" occurred. Especially during the Bean Game, these mothers were seen to interact with their children at a higher rate than controls over the first few minutes of the task, and then, once boredom became a factor for their child, appeared to become uncomfortable and their behavioral output slowed down. Not wanting to lose face by yelling, threatening, or criticizing their child, yet unable to motivate continued compliance in their child, they became somewhat paralyzed and sat at the table looking helpless or defeated.

The results of the paper and pencil measures were quite surprising. On the Social Desirability Scale (Crowne and Marlow, 1964), the fact that control mothers described themselves in significantly more favorable, socially desirable terms than abusive mothers was opposite to prediction. It seemed reasonable to assume that the abusive mothers would have had more incentive to demonstrate to the experimenters that they were in fact honest, "good people", in spite of the social stigma of their label. One explanation for this unexpected result is that both groups of mothers felt strong needs to portray themselves in a favorable light. They probably construed the situation of having their parenting

skills observed as an anxiety provoking one where they needed to impress the observers. However, suppose that control mothers were able to more effectively discriminate which items on the questionnaire were associated with a more socially desirable portrayal. This speculation is based on the assumption that control mothers are more aware of social norms and socially desirable behavior since they tend to lead more active lives and have more friends (Elmer, 1967; Helfer, 1973; Young, 1964) In this sample they also had a little more education and were informally judged by the experimenter to be at a slight higher socioeconomic level.

It is also surprising that no differences emerged on the Parenting Questionnaire. Other writers (DeLissovoy, 1973; Fontana, 1968; Galdston, 1965; Spinetta and Rigler, 1972; Steele and Pollock, 1968) have commented on, or investigated abusive parent's lack of knowledge of child care and developmental milestones. It might have been the case that the items on this instrument, which was designed for teenagers, were so simple that a floor effect occurred, wherein the material was insufficiently challenging to discriminate varying levels of knowledge.

On the other hand it may be that abusive mothers are aware of good child-rearing practices, can perform them under observation, and certainly are able to identify them on a questionnaire, but when placed under different stimulus conditions may not utilize them. In other words, abuse and poor parenting skills may be situation-specific, emerging under stressful conditions, thus making what mothers say they know about them somewhat irrelevant. More controlled investigations, using other, better standardized instruments (which still need to be developed) would be a valuable addition to the abuse literature

Before proceeding to some speculative comments on the implications of this project, and some of the frustrations associated with conducting research on abusive populations, some comments on weakness of this project are warranted.

It is interesting to speculate on how behavior would have differed in the home setting. Questioning the validity of laboratory observations is one possible criticism of this study. Perhaps more aversive or negative behaviors might have been likely in a familiar environment, and thus some more evidence of parenting skill deficits (other than the fact that abusive mothers praise less often and have children who consequently comply less often) might have emerged. However, home assessment is not a clear alternative Jacob. (1981) and Johnson and Bolstad (1975), among others, address the reactivity which is present even when observations are made in the home setting, although they also point out the potential of naturalistic assessment when creative techniques are used.

Furthermore, it is possible to question how relevant the three assessment paradigms are to the naturalistic environment. Although the Child's, Parent's and Bean Game format intuitively seems to provide a variety of opportunity for fostering mother-child interactions, it may have been better to have provided less structure, e.g. and instructional set encouraging mothers to simply play with their child as they might do at home. Alternatively subjects could have been required to engage in "real-life" situations such as cleaning up, cooking, or problem solving. It would also have been nice to have assessed each subject on a number of occasions.

Another flaw with this work is the possible differences in perceptions and attitudes which may have been present between the two groups of mothers. Although both groups were given identical instructions and descriptions once in the laboratory, on some level all of the abusive mothers must have been aware that their behavior was under particular scrutiny. This is in contrast to control's perceptions that they were being observed in a study of parenting skills. It was decided that a minimum of deception was to be employed. Therefore, a detailed explanation of the purpose of the assessment was given to any mother who requested it; and it was reluctant abusive mothers who tended to be more suspicious. Whether different perceptions significantly influenced parenting behavior remains open to question.

Two last methodological criticisms are the small sample size and imperfect matching of controls. It is quite possible that the presence of an additional child, as well as the potential socioeconomic differences (controls tended to be slightly more educated) served as confounding variables. It would have been nice to have secured 20 more subjects per group; recruitment difficulties are addressed below.

It is important to reiterate that a discriminant function analyses, a relatively sophisticated technique led to an impressive near-90% correct classification of mothers. On the other hand, coders who spent up to two hours with each subject pair, in addition to viewing them on videotape, could only correctly identify 72% of the sample. This indicates, that at least on casual observation, abusive mothers do not behave noticeably different than controls. Rather, the differences are more subtle ones

that emerge when patterns of behavior are considered simultaneously, as is possible only with computer analysis. Similarly, multiple regression analysis of the coder's predictions revealed that it was rate of child approval and mother's threats, considered together, which played a key role in their judgements (although these categories correlate highly with other behaviors). It seems reasonable to speculate since threats were the most negative behavior observed (and only rarely) when one did occur it might have led coders to label a mother as abusive. In addition, very little child approving was observed. However, when it did occur coincidental with parental threats, the coders may have evaluated such approval as the child's attempt to avoid aversive consequences by trying to appease his/her mother.

Perhaps the most difficult and frustrating aspect of this project was in subject recruitment. Developing and maintaining liasons with appropriate referral agencies was time consuming and sometimes fruitless. This does not reflect the unwillingness of agencies to be helpful, but rather is a statement about the extraordinary distrust and reluctance to be observed which typified the abusive group. Even with the \$10 incentive and free transportation, persuading prospective abusive subjects to participate required much patience. Interestingly though, once through with the procedure, most abusive subjects (as well as controls) agreed that it had been useful or interesting and that they had learned something new to do with their children. Even when mothers had become mildly upset over failure to motivate their child in the Bean Game they reported enjoyment overall with their experience.

The problem of subject recruitment in abuse studies deserves

more attention, especially when researchers are not directly affiliated with agencies that are in direct contact with this population group. Given the isolation and distrust which is often associated with abusive families (Elmer, 1967; Helfer, 1973; Young, 1964), it logically follows that behavioral observation methodologies will be more difficult to implement. Furthermore the biases inherent in using only those abusive parents who agree to participate (often after three phone calls to allay fears and one or more missed appointment) as opposed to a more random sample of all abusers, i.e. identified and not yet caught, is a potentially serious yet unfortunate consequence of abuse research. Thus it might be possible that only less intelligent abusers were used (e.g. those who got caught) or less violent ones (e.g. those who did not go to jail). More important is to consider which abusers referral sources felt would be appropriate for the study. Perhaps agencies did not want to contact more hostile, angry abusers to tell them about the project.

What sorts of implications for treatment, assessment and prevention of abuse can be gleaned from the findings of this study? Crozier and Katz (1980) and Sandler, VanDercar and Milhoan (1978) have based their treatment approaches on a skills deficit model, wherein targeted behaviors are increased or decreased by behavioral interventions. From that perspective it seems that we need to teach abusive mothers how to interact more with their children, especially in free-play type of situations. A useful and needed study would be to train abusing mothers to play the Child's Game more effectively, e.g. increases empathy statements, praise, descriptive feedback, and questions,

tions, and then see if this leads to prevention or reduction in abusive behavior. Such a study could be done with confirmed abusers or high risk parents.

What interventions, though, would be most effective in changing the more nebulous factor of lack of interest in a child or the parenting role? Perhaps strategies aimed at decreasing isolation, having smaller families, or teaching techniques to plan enjoyable activities with children would be valuable treatment/preventive techniques.

Also cognitive restructuring techniques could be employed to change parent's perceptions of interactions and interpretations of their child's behavior. Little is known about what an abusive parent's says internally while interacting with his/her child. Modifying such evaluative cognitions could serve to change unjustified attitudes about child rearing, e.g. "This kid knows I'm no good" or "I know that the only reason he doesn't obey is stubbornness". In the spirit of the empirical clinician, abusive parents could be shown videotapes of their interactions with their children. Any number of data generating strategies could be employed to teach improved communications as well as demonstrate the potentially reinforcing aspects of interacting with children.

In addition to developing better treatment programs one trend in the abuse field has been towards development of instruments which might ultimately be refined enough to predict abuse. Milner and co-workers (Ellis and Milner 1981; Milner and Ayoub, 1980, Milner and Wimberly, 1979, 1980) have developed and validated the Child Abuse Potential Inventory (CAPI) while Schneider, Hoffmeister, and Helfer (1976) have completed a number of studies with a similar instrument, The

Michigan Screening Profile of Parenting (MSPP). Both the CAPI and MSPP are important instruments which yield classification percentages in the upper 80's on retroactive studies of abusive populations. The assessment procedure developed for use in this study also was able to discriminate abusive parents with 87% accuracy, suggesting numerous possibilities for improving discrimination. Correlating performances on the MSPP and some refined version of this assessment package for instance, might produce valuable data. Using just a discriminant analysis of the Bean Game (82.6% classification rate), or contingent compliance and approval rates on the Child's Game in conjunction with one of these questionnaires might produce sufficiently high classification to be worth expense of training coders, etc. With such a low base rate phenomena as child abuse, the potential for misclassifying parents is huge; even with a 95% accurate instrument the number of false positives who would be identified were the instrument to be used predictively, (say, for example, on all first pregnancy parents) is a serious problem. However, if some identification of risk could be determined in advance, then the potential exists for utilizing the results of this study for diagnostic purposes.

In an era of limited resources available for coping with social problems, research efforts need to be geared towards interventions that are effective at low cost. Presently, problems associated with child abuse far exceed the capacity of caseworkers or social workers (the typical professionals who deal with abuse) to help facilitate change. The aim of this study was to provide a first step at understanding more specifically what behavioral factors differentiate abusive mothers from

matched controls. Implicit in this rationale was the longer term goal of developing more specific interventions for treatment and prevention of child abuse that do not require the intensive effort and expense of traditional individual psychotherapy modalities.

APPENDIX A

MOTHER-CHILD INTERACTION PROJECT

Subject Consent Form

The purpose of this project is to learn more about some of the ways mothers talk to and play with their children. We are trying to better understand the important relationship between mothers and children. We are interested in observing mothers and children then they are give some games to play. We are also intersted in finding out how comfortable mothers are in their understanding of how to talk to children and take care of them.

There are three main parts to this project. The first part involves completing some questionnaires that ask you about your feelings, and about your attitudes and knowledge of children and their problems. An example of these questions might be somehting like "Do you agree that giving newborn babies all they want to eat will spoil them?" Most of these questions concern feelings or opinions and will not be too difficult. These questionnaires can be completed before you come to the University and can be mailed in or brought with you.

The second part of this study involves your playing with your child in our playroom in two different ways: first your child will choose which toy or game to play with and then you will pick the toy or game (or vice-versa). During this time we will be watching from behind a one-way mirror. We will tell you more clearly what

to do once we begin. The last part of the project consists of you and your child playing another game where you will be asked to put beans into a jar. Again you will receive complete instructions when we get to that part.

The entire project will take about an hour and should be interesting for you and your child. We are very interested in making sure that you feel comfortable during the time that you are here. Please feel free to ask any questions now or at any time during the experiment. At the end of the project we will pay you ten dollars, give you a certificate that shows that you have participated in this project, and will let your child have a small toy.

You also know that in a few months we will be happy to provide you with a complete summary of the findings. We will not, however, be able to give you specific results about how you and your child performed. It is important for you to understand that we will not be able to give individual parents suggestions or comments about how they interact with their child.

I understand and have read this subject consent form. The nature, demands, risks, and benefits of the project have been explained to me. I understand that I may ask questions and may withdraw (leave) at anytime should I feel that I want to. I also understand that this consent form will be kept, along with the questionnaires I fill out, in a secure place and the information will be confidential. A copy of this form is available if I ask for it.

Subject's Signature _____

Child's Signature _____
(if over 7 years old)

Witness _____

Date _____

Hal Arkowitz, Ph.D.
Associate Professor
Department of Psychology

Fred Schindler, M.A.
Advanced Clinical Psychology
Graduate Student
626-2386

APPENDIX B

MOTHER-CHILD INTERACTION PROJECT

Information Form - confidential

NAME _____

AGE _____ CHILD'S AGE _____

OTHER CHILDREN AND AGES _____

MARITAL STATUS Married _____ Divorced _____ Separated _____

Living with someone _____

EDUCATION Junior High School _____ Some High School _____

Some College _____ Graduated College _____

SPOUSE'S EDUCATION (if married or separated) Junior High School _____

Some High School _____ High School _____

Some College _____ Graduated College _____

EMPLOYMENT Where do you work? _____

Where does your husband work? (if married) _____

ADDRESS (to be used to send you information) _____

PHONE _____

HOW DID YOU HEAR ABOUT THIS PROJECT?

APPENDIX C

MOTHER-CHILD INTERACTION PROJECT

My Understanding of Children

Here are some statements about infants and children. Please circle either true or false depending on what you feel is the best answer to the statement. If you do not know whether the statement is true or false, then please give your best guess.

- | | | |
|--|---|---|
| 1. Children may learn to be aggressive from watching T.V. | T | F |
| 2. Physical punishment is necessary in order to get children to behave. | T | F |
| 3. The normal two year old tends to be stubborn and negative. | T | F |
| 4. Parents should worry if their one year old child doesn't like to play with other children. | T | F |
| 5. Young children should show respect to their parents by the time they are two years old. | T | F |
| 6. Infants must be touched and held in order to develop normally. | T | F |
| 7. Young children should be allowed to express their anger to adults. | T | F |
| 8. Babies and very young children should be able to show consideration of their parent's feelings. | T | F |
| 9. If newborn babies are fed whenever they want to be fed, it will spoil them. | T | F |
| 10. Children should be toilet trained by the age of 15 to 18 months. | T | F |
| 11. Small babies often deliberately try to make their parents angry. | T | F |

- | | | |
|--|---|---|
| 12. The most important period for the development of intelligence is the first three or four years of life. | T | F |
| 13. It is not important to talk to babies until they start talking themselves. | T | F |
| 14. Children should be punished whenever they do something wrong. | T | F |
| 15. Children should participate in family decision making. | T | F |
| 16. Children should share in work and responsibilities around the house. | T | F |
| 17. If a newborn infant is healthy, he or she does not need a medical checkup until about three months of age. | T | F |
| 18. Dental care is not needed for children until all the permanent teeth have come in. | T | F |
| 19. Vomiting after a fall is a danger sign, and the child should be taken to a doctor. | T | F |
| 20. Babies should be encouraged strongly to eat as much as possible because a fat baby is usually healthier than a thin one. | T | F |

Now here are nine situations that may occur in any family. Tell us what you think.

1. Maria and Carlos are the parents of a new baby. Maria and Carlos are talking with the baby's grandparents about how to take care of a newborn baby. Each person has a different idea about what is MOST IMPORTANT IN CARING FOR A NEWBORN BABY.

GRANDMOTHER believes that a newborn baby should be taught as soon as possible that he must wait for food.

MARIA believes that a newborn baby needs lots of interesting things to look at and listen to.

CARLOS believes that a newborn baby must learn right away to recognize the mother.

GRANDFATHER believes that a newborn baby needs to be fed whenever he is hungry and held and cuddled while he's being fed.

Who do you agree with the most?

GRANDMOTHER _____ MARIA _____ CARLOS _____ GRANDFATHER _____

2. Maria, Carlos and the grandparents also have different ideas about TALKING TO A NEWBORN INFANT WHILE HE EATS.

GRANDMOTHER says, "Don't talk to the baby while you feed him because it will disturb his eating."

MARIA says, "It is good to talk in a soft voice while you feed the baby because it will help him learn to associate the human voice with good things."

CARLOS says, "Don't bother to talk to babies because they can't understand what you say."

GRANDFATHER says, "Don't talk to the baby while he eats because he will always want attention from adults when he eats."

Who do you agree with most?

GRANDMOTHER _____ MARIA _____ CARLOS _____ GRANDFATHER _____

3. Jeanette is the mother of a 12 month old baby. She has a talk with some of her friends about the BABY'S CRAWLING AND GETTING INTO THINGS.

Each of the friends has different advice for her.

JOAN says, "Don't take any chances, keep your child in a playpen at this stage."

RUTH says, "Let her crawl around, but tell her 'No, no' every time she starts to touch something dangerous or valuable."

MARY says, "Let her crawl around, but stay with her all the time."

PAULA says, "Let her crawl around, but put all of the dangerous and breakable things out of her reach."

4. Jeanette is discussing her 12 month old baby with her friends. She is concerned about the BABY WANTING SO MUCH ATTENTION.

JOAN says, "When my baby wants my attention, I try to give it to him so that he feels that he has some influence on what happens to him."

RUTH, says, "Don't give him attention whenever he wants it. He will begin to think he's too important."

MARY says, "A parent should stop whatever she is doing, no matter how important, to give the baby attention anytime he wants it."

PAULA says, "The parent should always decide when to give the baby attention. Otherwise the baby will begin to think he's the boss."

Who do you agree with the most?

(3) JOAN _____ RUTH _____ MARY _____ PAULA _____

(4) JOAN _____ RUTH _____ MARY _____ PAULA _____

5. Tim is 18 months old. He's the baby in a large family. his older sister tells him to get in his high chair for dinner. HE SAYS "NO" AND RUNS AWAY. The other brothers and sisters in the family suggest what to do about this behavior.

JOHNNIE (11 years old) says, "I give him a soft spank on the bottom when he does that."

HENRY (16 years old) says, "I just pick him up and put him in his high chair."

JENNIE (18 years old) says, "I give him a little talk about how important it is for him to obey."

BILLY (14 years old) says, "I tell him he's a bad boy and then ask him to come get in his high chair."

Who do you agree with the most?

JOHNNIE _____ HENRY _____ JENNIE _____ BILLY _____

6. Two year old Mary is having at least one temper tantrum every day. Mary's parents and grandparents are talking about the BEST WAY TO STOP THESE TANTRUMS.

MOTHER says, "Maybe we should spank her every time she has a tantrum."

FATHER says, "I think we should check to make sure she is not going to hurt herself and then ignore her tantrums."

GRANDMOTHER says, "I think if you would scold her and tell her she's a bad girl it would help."

GRANDFATHER says, "I would pick her up, cuddle her and hold her close until she calms down."

Who do you agree with the most?

MOTHER _____ FATHER _____ GRANDMOTHER _____ GRANDFATHER _____

7. Johnny, who is 2 1/2 years old, is becoming more and more demanding. When mother won't give in THE CHILD SCREAMS, "I HATE YOU." Mothers wonders what to do.

GRANDMOTHER says, "He has no business talking to you that way. You should send him to his room."

MOTHER says, "I'm probably doing something wrong and he really hates me."

AUNT MATILDA says, "Let's not make a big scene. It's common for children of this age to say this. Just ignore him."

UNCLE HENRY says, "The little darling doesn't know any better. Just tell him he doesn't mean it, that he really loves you."

Who do you agree with most?

GRANDMOTHER _____ MOTHER _____ AUNT MATILDA _____ UNCLE HENRY _____

8. Fernando is 5 years old. He is having dinner with his family and refuses to eat. Everyone starts talking about the problem GETTING FERNANDO TO EAT.

UNCLE DAVID says, "I think he should have to stay in his high chair until he eats everything on his plate."

AUNT SOFIA says, "Forget it for now. He'll eat at the next meal if you don't feed him in between meals."

MOTHER says, "Let's tell him he can have some candy when he finishes eating."

FATHER says, "He needs his food. Take a spoon and put the food in his mouth. He'll have to eat."

Who do you agree with most?

UNCLE DAVID _____ AUNT SOFIA _____ MOTHER _____ FATHER _____

APPENDIX D

PERSONAL ATTITUDE SURVEY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

- | | | |
|--|---|---|
| 1. Before voting I thoroughly investigate the qualifications of all the candidates. | T | F |
| 2. I never hesitate to go out of my way to help someone in trouble. | T | F |
| 3. It is sometimes hard for me to go on with my work if I am not encouraged. | T | F |
| 4. I have never intensely disliked anyone. | T | F |
| 5. On occasion I have had doubts about my ability to succeed in life. | T | F |
| 6. I sometimes feel resentful when I don't get my way. | T | F |
| 7. I am always careful about my manner of dress. | T | F |
| 8. My table manners at home are as good as when I eat out in a restaurant. | T | F |
| 9. If I could get into a movie without paying for it and be sure I was not seen, I would probably do it. | T | F |
| 10. On a few occasions, I have given up doing something because I thought too little of my ability. | T | F |
| 11. I like to gossip at times. | T | F |
| 12. There have been times when I felt like rebelling against people in authority even though I knew they were right. | T | F |
| 13. No matter who I'm talking to, I'm always a good listener. | T | F |
| 14. I can remember "playing sick" to get out of something. | T | F |
| 15. There have been occasions when I took advantage of someone. | T | F |

- | | | |
|--|---|---|
| 16. I'm always willing to admit it when I make a mistake. | T | F |
| 17. I always try to practice what I preach. | T | F |
| 18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people. | T | F |
| 19. I sometimes try to get even, rather than forgive and forget. | T | F |
| 20. When I don't know something I don't at all mind admitting it. | T | F |
| 21. I am always courteous, even to people who are disagreeable. | T | F |
| 22. At times I have really insisted on having things my own way. | T | F |
| 23. There have been occasions when I felt like smashing things. | T | F |
| 24. I would never think of letting someone else be punished for my wrongdoings. | T | F |
| 25. I never resent being asked to return a favor. | T | F |
| 26. I have never been irked when people expressed ideas very different from my own. | T | F |
| 27. I never make a long trip without checking the safety of my car. | T | F |
| 28. There have been times when I was quite jealous of the good fortune of others. | T | F |
| 29. I have almost never felt the urge to tell someone off. | T | F |
| 30. I am sometimes irritated by people who ask favors of me. | T | F |
| 31. I have never felt that I was punished without cause. | T | F |
| 32. I sometimes think when people have a misfortune they only got what they deserved. | T | F |
| 33. I have never deliberately said something that hurt someone's feelings. | T | F |

APPENDIX E

MOTHER CHILD INTERACTION PROJECT

Project Supervisor:

Hal Arkowitz, Ph.D.
Associate Professor
Department of Psychology
University of Arizona
Phone: 626-2921

Research Director:

Fred Schindler, M.A.
Advanced Clinical Psychology
Graduate Student
Department of Psychology
University of Arizona
Phone: 626-2386

Project Description:

The Mother-Child Interaction Project is the title given to a research study taking place at the University of Arizona, Child Psychology Laboratory that is investigating the parenting skills of abusive mothers. This study in particular seeks to identify specific problems that characterize the interactions between abusive parents and their children. It is hoped that this research will reveal parenting skill difficulties that differentiate abusive from non-abusive parents. Thus, for instance, while it is readily apparent that abusive parents use excessive physical force on their children, little is known about how frequently they engage in other common parenting practices (both desirable and undesirable) such as threatening, praising, asking questions, giving clear commands, etc.

Previous research has focussed on the personality attributes and attitudes of abusers and children, at the expense of investigating observable interactions. In other words attention needs to be paid

to learning more about what abusive parents and children actually do when together. This is a crucial problem. For treatment and prevention programs to be maximally effective, analysis of the deficits and excesses in parenting abilities is needed. In this project, abusive mothers and one of their children will be observed and coded while they play a number of specially designed games that promote interaction.

Method:

Abusive mothers and children will be asked to come into our playroom at a conveniently scheduled time. A control group, consisting of mothers of similar background and family size, who have not abused their children, will also participate in order to provide a comparison for experimental analysis. In addition to having the mothers complete two questionnaires (copies included in the appendix), the focus of the hour long session will involve having the mothers play with their child while trained observers code the interactions. Three games will be played. First the child will choose the toy he/she wants to play with, and the mother will be instructed to play along. Then roles will be reversed and the parent will choose the game and be given responsibility to have the child play along. In the last phase, the task will be one that creates mild frustration for mother and child. The mother will be asked to pretend that they are on a TV game show, and that her job is to see how many beans she can persuade her child to put in a jar.

After this the mothers will be debriefed, paid ten dollars for their participation, and given a certificate of participation.

The child will also select a toy to take home. Any questions of the project will be fully answered, however, no specific feedback will be given, as the results cannot be analyzed immediately. Throughout the playroom interaction, two trained observers, seated in an observation room, will code the actions and communication of the mother and child according to behavioral categories thought to be relevant to understanding abusive interactions.

Subject Requirements:

We are looking to get at least fifteen to twenty physically abusive or exceptionally emotionally abusive mothers to participate. In order to insure that there is useful interaction and communication we are also limiting the ages of the child to between three and ten. Any pair meeting these two requirements are eligible. Transportation will be provided if a willing participant needs it. The entire project takes about an hour. Further information, including a more complete description of the study is available on request.

APPENDIX F

MOTHER-CHILD INTERACTION PROJECT

Report of Findings

Dear Participant:

It has now been anywhere from a few weeks to six months since you took part in our research project, and I wanted to write you a letter of thanks, as well as explain a little about the results of the study. As you were probably told when you heard about this project, the purpose was to learn more about the conflicts and problems that mothers have with their children. Specifically we were interested in understanding what differences, if any, there are between mothers who have been identified as being abusive, neglectful (or in some way come to the attention of agencies such as DES, Parent's Anonymous, or mental health centers), and mothers who have not had such problems.

Thus what we set up was a comparison study between "abusive" mothers and "comparison" mothers. Our goal was to see if specific behavioral differences exist between mothers in the two groups. Other psychologists, social workers and researchers have studied the problem by looking at how parents answer questionnaires about their beliefs, attitudes and backgrounds. These studies have learned important things about child abuse such as the fact that many abusive parents had unhappy childhoods themselves, or that abusive mothers are often quite isolated and lonely.

What was different about the project you took part in, was that we were looking at what mothers and children did (that is why we watched between in the mirror) rather than what they say they feel or do. While you played with your child we were marking down every time any of twelve behaviors happened. These were twelve common behaviors that happen between mothers and children. Our goal was to see how the two groups differed on each of these behaviors.

Here are the behaviors we coded: Parent Questions - whenever the mother asked the child a question, Parent Command - whenever the mother told the child to do something, Parent Praise - mother rewarded or approved of the child's behavior, Parent Disapproval - criticism or put-downs, Parent Threats - saying something bad will happen if the child doesn't obey, Parent Non-Comply - mother doesn't do what the child tells her to do, Child Command - child tells mother to do something, Child Question - child asked mother a question, Child Praise - child praised or approved or something mother did, Child Disapproval - criticisms, Child Comply - child did what mother said to do, and Child Non-Comply - child did not listen.

The most important finding was that overall, mothers in the "Comparison" group did much more interacting and talking with their children. They gave their children a few more commands, asked many, many, more questions, and gave many more approving statements, praise, and affection. On the other behaviors, there was little difference. Both mothers did very little disapproving, threatening, or not doing what their children wanted them to do. Both groups of mothers gave less approval to their children right after they had done something

they were asked to do -- which is the most important time to give praise! For instance, "comparison" mothers praised their children about one in every ten times while "abusive" mothers just one in every twenty times. Both groups need to praise their children more after they do what they are told.

As far as the children were concerned, overall there were few differences between children of the two groups of mothers. Children asked about one question per minute, gave about one command every two minutes (on the average) and hardly gave any approval, disapproval, or non-complying (not doing what they were told) behaviors at all.

One area where it seems that there are differences is in complying (obeying). "Comparison" group children obey about six times out of every ten commands, while abusive group children only obey about four and a half times out of ten. I think this may be due to the fact that the "abusive" group mothers used less praise since we know that people do things that they are praised or rewarded for.

A few other findings seem worth mentioning. Mothers in the "Abusive" group ended up having about three children in their families (on the average), while the "comparison" group mothers had about two. This leads me to guess that the pressures of having more children may lead mothers to become frustrated more easily. Secondly, the results were put into a computer in order to see if the computer, knowing only how each mother and child behaved on the twelve behaviors described above, could tell which group a particular pair came from. The computer was able to correctly pick out ten out of eleven abuse

group mothers and ten out of twelve comparison group mothers. We feel that this is an important finding.

You may be wondering of what use is any of this information. To me it suggests that one way to help mothers who have gotten into trouble with their children is to encourage them to interact and play together more often. I would recommend mothers play with their children in the Child's Game and Parent's game style that you learned. "Abusive" group mothers should try to give more praise and approval and ask more questions of their children. Also, mothers should consider planning their families very carefully. It seems as if having too large a family might lead to problems, if the parents are not really ready and prepared.

One question is still in my mind. How much like home and day today life was the way mothers behaved in the playroom. We are sure that all mothers were on their best behavior. Ater all, everyone wants to look good when they are being watched!

Once again, thank you for taking the time to help us out, and contribute more knowledge to understanding the problem of abuse, neglect, and conflicts between mothers and children. As a final piece of information, I would encourage all mothers to show as much interest as they can with their children. Don't let yourself become bored or impatient; give your child the time he or she deserves.

Sincerely,

Fred Schindler, M.A.

P.S. If you want to ask any more questions, or talk about the project, feel free to call me at 795-5050 (home phone) or write a letter.

REFERENCES

- Adelson, L. Slaughter of the innocents: A study of forty-six homicides in which the victims were children. New England Journal of Medicine, 1961, 264, 1345-1349.
- Alvy, K.T. Preventing child abuse. American Psychologist, 1975, 30, 921-928.
- Aragona, J.A., Eyberg, S.M. Neglected children: Mother's report of child behavior problems and observed verbal behavior. Child Development, 1981, 52, 596-602.
- Arnold, J., Levine A. and Patterson G. Changes in sibling behavior following family intervention. Journal of Consulting and Clinical Psychology, 1975, 43, 683-688.
- Bennie, E. and Sclare, A. The battered child syndrome. American Journal of Psychiatry, 1969, 125, 975-979.
- Berkowitz, L. Frustrations, comparisons, and other sources of emotion as contributors to social unrest. Journal of Social Issues, 1972, 28, 72-91.
- Bleiberg, N. The neglected child and the child health conference. New York State Journal of Medicine, 1965, 65, 1880-1885.
- Blumberg, M.L. Psychopathology of the abusing parent. American Journal of Psychotherapy, 1974, 28, 21-29.
- Boisvert, R.L. Child abuse: A behavioral analysis. In B.B. Lahey and A.E. Kazdin (Eds.) Advances In Clinical Child Psychology. New York: Plenum, 1978.
- Burgess, R.L., and Conger, R.D. Family interaction in abusive, neglectful and normal families. Child Development, 1978, 49, 1163-1173.
- Cicchetti, R., Taraldson, B., and Egeland, P. Review of research on child abuse. In A.P. Goldstein (Ed.) Prescriptions for Child Mental Health and Education, New York: Pergamon, 1978.
- Crowne, D. and Marlow, D. The Approval Motive. New York: John Wiley and Sons, Inc. 1964.

- Crozier, J., and Katz, R.C. Social learning treatment of child abuse. Journal of Behavior Therapy and Experimental Psychiatry, 1979, 10, 213-220.
- Denicola, J. and Sandler, J. Training abusive parents in child management and self-control skills. Behavior Therapy, 1980, 11, 263-270.
- DeLissovoy, V. Child care by adolescent parents. Children Today, 1973, 4, 22-25.
- Delsordo, J.D. Protective casework for abused children. Children, 1963, 10, 213-218.
- Ellis, R.H., and Milner, J.S. Child abuse and loss of control. Psychological Reports, 1981, 48, 507-510.
- Elmer, E. Children in Jeopardy: A Study of Abused Minors and Their Families. Pittsburgh: University of Pittsburgh Press, 1967.
- Elmer, E. A social workers' assessment of medico-social stress in child abuse cases. In National Symposium on Child Abuse (4th), Collected Papers. Denver: The American Humane Association, Children's Division, 1978.
- Fanaroff, A., Kennell, J.H., and Klaus M.H. Followup of low birth weight infants - the predictive value of maternal visiting patterns. Pediatrics, 1972, 49, 287-290.
- Fomufud, A.K. Low birth weight and early neonatal separation as factors in child abuse. Journal of the National Medical Association, 1976, 68, 106-109.
- Fontana, V.J., Further reflections on maltreatment of children. New York State Journal of Medicine, 1968, 68, 2214-2215.
- Fraser, B. Child abuse in American: A defacto legislative system. Child Abuse and Neglect, 1979, 3, 809-817.
- Friedrich, W.N. and Borishkin, J.A. Ill health and child abuse: Letter to editor. Lancet, 1976, 1, 648-650.
- Frodi, A.M. and Lamb, M.E. Child abusers responses to infant smiles. Child Development, 1980, 51, 238-241.
- Galdston, R. Preventing the abuse of little children: The parent's center project for the study and prevention of child abuse. American Journal of Orthopsychiatry, 1975, 45, 372-381.
- Gelles, R.J. Violence towards children in the United States. American Journal of Orthopsychiatry, 1978, 48, 580.

- Gelles, R.J., and Straus, M. National survey on child abuse results. Journal of Social Issues, 1979, 2, 14-39.
- Gil, D.G. Violence Against Children. Cambridge, MA: Harvard University Press, 1970.
- Gil, D.G. Unraveling child abuse. American Journal of Orthopsychiatry, 1975, 8, 346-356.
- Glaser, D. and Bentovim, A. Abuse and risk to handicapped and chronically ill children. Child Abuse and Neglect, 1979, 3, 565-576.
- Gordon, T. What Every Parent Should Know. Chicago: National Committee for Prevention of Child Abuse, 1975.
- Gray, J.D., Cutler, C.A., Dean, J., and Kempe, C.H. Prediction and prevention of child abuse. Child Abuse and Neglect, 1977, 1, 45-58.
- Gregg, G.S. and Elmer, E. Infant injuries: Accident or abuse. Pediatrics, 1969, 44, 434-439.
- Hanf, C.A. Two-stage program for modifying controlling during mother-child (M-C) interaction. Paper presented at the meeting of the Western Psychological Association, Vancouver, B.C., 1969.
- Helfer, R.E. The etiology of child abuse. Pediatrics, 1973, 51, 777-779.
- Helfer, R.E. and Pollock, C.B. The battered child syndrome. Advances in Pediatrics, 1967, 14, 1-4.
- Jacob, T. Family interaction in the home: Issues to be considered. Paper presented at the meeting of the American Psychological Association, Los Angeles, August, 1981.
- Johnson, C. and Katz, R. Using parents as change agents for their children: A review. Journal of Child Psychology and Psychiatry, 1973, 14, 181-200.
- Johnson, S. and Bolstad, O. Reactivity to home observation: A comparison of audio recorded behavior with observer present or absent. Journal of Applied Behavior Analysis, 1975, 8, 181-185.
- Justice, B. and Duncan, D.F. Life crisis as a precursor to child abuse. Public Health Reports, 1976, 91, 110-115.
- Kempe, C.H. Silverman, F.N., Steele, B.F., Droegemueller, W., and Silver, H.K. The battered child syndrome. Journal of the American Medical Association, 1962, 181, 105-112.
- Klaus, M.H. and Kennell, J.H. Mothers separated from their newborn infants. Pediatric Clinics of North America, 1970, 17, 1015-1037.

- Klein, M. and Stern, L. Low birth weight and the battered child syndrome. American Journal of Diseases of Children, 1971, 122, 15-18.
- Kruger, W.S., Marland, S.P. and Rosoff S.R. Education for Parenthood. Children Today, 1973, 2, inside cover - 7.
- Light, R.J. Abused and neglected children in America: A study of alternative policies. Harvard Educational Review, 1973, 43, 556-598.
- Lynch, A. Child abuse in the school age population. Journal of School Health, 1975, 45, 141-148.
- Melnick B. and Hurley, J.R. Distinctive personality attributes of child-abusing mothers. Journal of Consulting and Clinical Psychology, 1969, 33, 746-749.
- Merrill, E. Physical abuse of children: An agency study. In V. Defrancis (Ed.), Protecting the Battered Child. Denver: American Humane Association, 1962.
- Milner, J.S. and Ayoub, C. Evaluation of "at risk" parents using the Child Abuse Potential Inventory. Journal of Clinical Psychology, 1980, 36, 945-948.
- Milner, J.S. and Wimberly, R.C. An inventory for the identification of child abusers. Journal of Clinical Psychology, 1979, 35, 95-100.
- Milner, J.S. and Wimberly, R.C. Prediction and explanation of child abuse. Journal of Clinical Psychology, 1980, 36, 875-884.
- Nagi, S.Z. Child abuse and neglect programs: A national overview. Child Today, 1975, 4, 13-17.
- Nurse, S.M. Familial patterns of parents who abuse their children. Smith College Studies in Social Work, 1964, 35, 11-25.
- Oliver J.E. and Dewhurst, K.E. Six generations of ill-used children in a Huntington's Pedigree. Postgraduate Medical Journal, 1969, 45, 759-760.
- Oliver, J.E. and Taylor, A. Five generations of ill-treated children in a one family pedigree. British Journal of Psychiatry, 1971, 119, 473-480.
- Passman, R.H. and Mulhern, R.K. Maternal punitiveness as affected by situational stress: An experimental analogue of child abuse. Journal of Abnormal Psychology, 1977, 86, 565-569.

- Patterson, G. and Gullion, W. Living with Children. Champaign: Research Press, 1969.
- Patterson, G., Ray, R., Shaw, D. and Cobb, J. Manual for coding family interactions. Unpublished manuscript, Oregon Research Institute, 1969.
- Patterson, J. Format for the Bean Game, Personal communication. February, 1980.
- Paulson, M.J., Afifi, A.A., Chaleff, A., Liu, V.Y., and Thomason, M.L. A discriminant function procedure for identifying abusive parents. Suicide, 1975, 5, 104-114.
- Paulson, M.J., Afifi, A.A., Thomason, M.L. and Chaleff, A. The MMPI: A descriptive measure of psychopathology in abusive parents. Journal of Clinical Psychology, 1974, 30, 387-390.
- Paulson, M.J., Schuwemer, G.T., and Bendel, R.B. Clinical application of the Pd, Ma and (OH) experimental MMPI scales to further understanding of abusive parents. Journal of Clinical Psychology, 1976, 32, 558-564.
- Polansky, N.A., Borgman, R.D. and Desaix, C. The Faces Of Poverty For Appalachian Children. Athens, GA: Georgia University School of Social Work, 1971.
- Polansky, N.A., Borgman, R.D. and DeSaix, C. Roots of Futility. San Francisco: Jossey-Bass, 1972.
- Sandler, J., VanDercar, C. and Milhoan, M. Training child abusers in the use of positive reinforcement techniques. Behavior Research and Therapy, 1978, 16, 169-175.
- Schneider, C., Hoffmeister, J. and Helfer, R.E. A predictive screening questionnaire for potential problems in mother-child interaction. In R.E. Helfer, C.H. Kempe, and W.F. Mondale (Eds.) Child Abuse and Neglect: The Family and the Community. Cambridge: Ballinger, 1976.
- Smith, S.M., Hanson, R. and Nobel, S. Social aspects of the battered baby syndrome. British Journal of Psychiatry, 1974, 125, 568-582.
- Spinetta, J.J. Parental personality factors in child abuse. Journal of Consulting and Clinical Psychology, 1978, 46, 1409-1414.
- Spinetta, J.J. and Rigler, D. The child-abusing parent: A psychological review. Psychological Bulletin, 1972, 77, 296-304.
- Starr, R.H. Child abuse. American Psychologist, 1979, 34, 872-878.

- Steele, B.F. Working with abusive parents from a psychiatric point of view. Child Abuse and Neglect, 1975, Washington, D.C., U.S. DHEW Pub No. (OHD) 75-70.
- Steele, B.F. and Pollock, C.B. A psychiatric study of parents who abuse infants and small children. In R. Helfer and D. Kempe (Eds.) The Battered Child, Chicago: University of Chicago Press, 1968.
- Taylor, C. The "battered child": Individual victim of family brutality. In Bryant, C.D. and Wells, J.G. (Eds.). Deviancy and the Family, Philadelphia: F.A. Davis, 1973.
- Wasserman, S. The abused parent of the abused child. Children, 1967, 14, 175-179.
- Williams, D.L. Perspective on the prevention of child abuse: Can it be done? In M.L. Lauderdale, R.N. Anderson, and S.E. Cramer (Eds.), Proceedings of the Second National Conference on Child Abuse and Neglect, Austin, Texas, 1977.
- Young, L.R. The behavior syndromes of parents who neglect and abuse their children. Dissertations Abstract International, February, 1964, 24 (8): 3456.
- Zalba, S.R. The abused child: A survey of the problem. Social Work, 1966, 11, 3-16.
- Zalba, S.R. The abused child- II: A typology for classification and treatment. Social Work, 1967, 12, 70-79.