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IMPACT OF PARENT AIDES ON CHILD NEGLECT:
AN ECOLOGICALLY-ORIENTED INTERVENTION APPROACH

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IMPACT OF PARENT AIDES ON CHILD NEGLECT: AN ECOLOGICALLY-ORIENTED INTERVENTION APPROACH

By

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ABSTRACT

IMPACT OF PARENT AIDES ON CHILD NEGLECT:
AN ECOLOGICALLY-ORIENTED INTERVENTION APPROACH

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This study was conducted to describe the effect of a parent aide model of intervention upon child neglectful families over a twelve month period of time. The preliminary objectives were to determine if changes occurred in parenting behavior, relationships with other systems and social isolation.

An intensive, time-series methodology was utilized involving three indepth home interviews and observations. The sample consisted of 24 families determined to be neglectful by the Michigan Department of Social Services' Protective Services workers and who were assigned a parent aide as the major intervention system. Data were analyzed utilizing non-parametric analysis of variance as well as descriptive information.

Significant overall positive change occurred in parenting behavior particularly within the first six months of the study with the second half demonstrating fewer changes. No significant differences occurred in the areas of families' physical environment and household maintenance.

Relationships with other systems also improved. More relationships became stronger, fewer were described as stressful and relationships became more reciprocal in terms of the energy utilized.

The social isolation of families was also significantly reduced. Informal and formal resource systems became significantly stronger. The importance of relationships did not significantly change. Demographic factors, in general, were not associated with change. The number of children of the participants and the amount of education did not relate significantly to changes in parenting or social isolation. The age of the mother did not influence social isolation, however, her age did influence change in parenting behavior and attitudes. Mothers thirty years of age and over improved significantly more than younger mothers.

The results of this study should not be broadly generalized. The sample was small, although it was generally characteristic of Michigan Protective Services families. Replication would be desirable over a longer time frame to determine if the decrease in change over the last phase of the study was a trend or a temporary plateau. Additional work should also be done to determine the validity and reliability of the modified instrumentation and the applicability of the findings to more rural areas. A more extensive case study would be a highly desirable supplement to this type of research.

Dedication: To Bill

with Love

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CHAPTER I

INTRODUCTION

Statement of the Societal Problem

Child neglect is becoming an increasingly recognized social problem with families today. The lack of appropriate physical care of children has been the problem predominantly identified within the socio-legal system and is prevalent particularly in families with few financial resources. Emotional neglect, the failure to provide necessary affection and warmth, and an enviornment to encourage healthy relationships, can be found within all socio-economic groups. Families considered neglectful due to physical neglect are usually emotionally negligent as well. Many families who have deprived their children emotionally are not identified as readily by the system, but are reason for concern nevertheless. The ramifications of child neglect affect all levels of society by creating members who are unable to participate fully and usually require special societal supports such as health care, education and public assistance programs.

In Michigan, there are currently 6,208 families who are active Protective Services cases due to child neglect. An additional 2,391 families are identified as abusive; two to three times as many families are actually referred to the program. Most experts, notably Polansky, Helfer, Visser and Kempe, emphasize that these families are only a small

part of the actual population of neglectful families. A consensus estimates that 14 per 1,000 families neglect their children. In Michigan alone, this would constitute 21,234 neglectful families. Utilizing a mean number of 2.51 children per neglectful family, this would indicate that there are approximately 54,000 neglected children within the State of Michigan. A dearth of research exists today on the etiology of neglect and no single theory has been developed. Polansky, Billingsley and Giovanni are almost the exclusive pioneers in this area. Conversely, the areas of child abuse, and child maltreatment, the combination of abusive and neglectful families, have received considerable recent attention (Helfer, Kempe, Garbarino).

Although, identified cases of child neglect constitute twice as many families as abusive ones, insufficient information about the families, their problems, and methods of intervention is available to create change. It is known, however, that child neglect may have serious consequences. One of the results of child neglect has been termed the "failure to thrive syndrome" (Klein). This debilitating syndrome impacts primarily on infants who do not grow nor develop normally and, for some, may result in death. Malnutrition, a phenomenon, closely associated with neglect, can cause severe mental retardation (Vore, 1973). Other physical problems also result. Psychological damage as a result of neglect is cited in the literature related to maternal deprivation (Spitz, 1945; Bowby, 1954; Harlow, 1971). Strong evidence correlates this behavior with physical and/or emotional neglect.

Recent research has discovered that this type of child deprivation is pervasive and frequently the patterns are inter-generational; in

effect the behavior becomes an accepted way of life by the participants (Young, 1964; Minuchin, 1967; Polansky, 1972; Geismer, 1973). Particular types of emotional problems have also been associated with child neglect: the apathy/futility syndrome, (Polansky), which has been described as a sense of emptiness, coupled with an inability to form relationships; the neurotic, characterized by anxiety; and the character disorder, where the moral code and conduct are predominantly self-centered. Additionally, a study by Steele (1977) has demonstrated a strong relationship between neglect, abuse and delinquency rates. Fontana (1973) described the lives of notorious 'killers' who had been maltreated as children.

Some information does exist regarding the nature of child neglect (Young, 1964; Kaduschin, 1974; Nagi, 1979). Early work has demonstrated that economic deprivation is a significant contributing factor. Stress, social disorganization, and cultural values are also seen as contributing factors. Social isolation has also been discovered to be a crucial ingredient (Giovannoni, 1970; Polansky, 1976).

Complex social problems such as child neglect are not easily understood nor changed. Bronfenbrenner (1977) was once told "If you want to understand something, try to change it." Thus, research into a specific intervention technique should help us to understand better the dynamics of child neglect.

According to Weber and Polansky (1979) no thorough qualitative study of the treatment of neglect exists. Nevertheless, a variety of treatment approaches are being utilized. Among them are: social casework, family therapy, group techniques, child placement, parent-child

community programs, mental health clinics, day care, and the use of volunteers. It is the last of these which is the focus of this research. During a time of accentuated awareness of the increased incidence and implications of child neglect, coupled with a reduction of social services and intervention monies, the utilization of volunteers is increasing. Termed "Parent Aides", these individuals are recruited, trained and matched to families, and supervised by sponsoring agencies. Their function is to be a friend to the parents and to provide an appropriate role model. It is the expectation that the impact of this one new relationship within the family will be sufficient to create enough change in the family, considered neglectful, to warrant the closure of the Protective Services case within a six to twelve month time period. No current research exists which studies the effect on family functioning, over time, of a parent aide as the primary treatment modality. Information relating to whether or not parent aides can create change, and if so, with what types of people, and in what areas, is vital data needed by policy makers attempting to maximize their scarce financial resources and develop an effective method of helping families.

Statement of the Research Problem

This study focuses on providing more knowledge in the utilization of a particular technique, parent aide impact, on neglectful families. A small sample study was implemented to observe changes in neglectful families assigned a parent aide over a twelve month period of time. Five aspects of neglectful families over time are investigated: (1) change in parenting behavior, (2) change in family relationships with other

systems, (3) change in social isolation, (4) the relationship of a mother's score on a predictive maltreatment instrument, the Michigan Screening Profile of Parenting, and (5) the relationship of demographic characteristics and change.

The phenomenon of neglect has been chosen to study as distinct from abuse. Neglect can be characterized as acts of "omission" in which physical and/or emotional care are not given children. Abuse is one of "commission" in which overt acts are directed toward children physically and/or emotionally. Although some families may be both neglectful and abusive, so little prior research has been directed toward solely neglectful families that this population was chosen to emphasize the need for more understanding of this behavior.

Both a qualitative and quantitative methodology were utilized for the study. Families' behaviors, attitudes and relationships were described from the perspective of the mothers of the families and also from the view of trained interviewers. A combination of statistical analysis and descriptive information was developed to provide an intensive understanding of the families' lives and the influence of the parent aide. This approach potentially can offer a contribution to the field by suggesting a more comprehensive view of neglectful families.

Significance of the Study

The current utilization of parent aides as a treatment technique is a very small part of the actual overall approach. Approximately one percent of Protective Services' families in Michigan have a parent aide. If it can be documented that parent aides do, indeed, create change

in the functioning of neglectful families, the implication for a changed emphasis in treatment modalities would exist. Such documentation would also assist case workers in determining what types of families would be most amenable to the support of a parent aide and most appropriate for referral. Further amplification on the types of families served could also lend itself to a consideration of the use of this intervention technique in a preventative function as well.

The utilization of the Michigan Screening Profile of Parenting with exclusively neglecting families, as compared to both abusing and neglecting, will assist in a determination of its validity as a predictive instrument with this population. A meaningful predictive instrument for both groups could be extremely important. Other adapted instruments, to measure change in families, may also be potentially useful for case workers in their planning of appropriate treatment.

Additionally, the fiscal significance of the study is an important consideration. Currently, the Michigan Department of Social Services, Protective Services Division, spends approximately $280,000 for the administration of statewide parent aide programs. This money is utilized to purchase agency supports to parent aides including: recruitment, training, supervision, and reimbursement for expenses. The parent aide portion is approximately 1.5 percent of its total budget. A substantial monetary savings could be accrued if it can be proven that parent aides' services were maximized and increased with a concurrent reduction in other less effective functions. The utilization of more parent aides, in a more preventative service, could also potentially decrease the number of families actually referred to Protective Services, resulting in a cost savings.

Norman Polansky (1978) stated that what neglectful families need is a "parental prosthesis", i.e. someone who can form a relationship with the parent and teach by example. There has been no study to test this assertion. The parent aide concept could be considered one concrete example and the results might help to confirm their use as a viable, effective treatment.

Conceptual Framework

It is strongly felt that only an ecological approach has the ability to view the problematic parent-child malfunctioning in a manner sufficient to integrate adequately the many diverse components. The phenomenon of child neglect is a highly complex one. In fact, standards by which parents are determined to be neglectful are highly qualitative in nature and are existent along a continuum of societal tolerance as epitomized by cross-culture studies (Korbin, 1979). An ecological approach views child neglect as a result of the parent and child in interaction with each other and their environment, both affecting and being affected. It has the perspective of viewing the delicate balance of human beings in their environment and their interdependence.

Garbarino (1977) is a strong advocate of the ecological approach as a method of studying child maltreatment. He cites the following rationale:

1. An ecological approach focuses on the progressive, mutual adaptation of organism and environment.

2. It conceives of the environment topically as an interactive set of systems "nested" within each other, and sees the interdependent interaction of systems as the prime dynamic shaping the context in which the organism directly experiences social reality.

3. It focuses on the issue of "social habitability" - the question of environment "quality" and the means for achieving it.

4. It asserts the need to consider political, economic and demographic factors in shaping the quality of life for children and families. It is the study of the dynamic multiplicity of factors, not one single influence, which alleviates the tendency for reductionistic solutions.

Bubolz, Eicher and Sontag (1977) and Hook and Paolucci (1970) further elaborate on the family eco-system approach to understanding human behavior. This perspective includes human beings existing in interaction with the total environment including the natural, human constructed, and human behavioral. It is organized around three major concepts: the human environed unit, the environment, and their interactions and transactions between and within each other. A useful part of the model is that of energy flow which enables one to view families as both consumers and converters of energy. The establishment of familiy boundaries in distinguishing itself from other systems is a critical aspect in an intervention model.

Watzlawick (1978) has described the resistance of family eco-systems to change. He has developed a theoretical model utilizing a system's framework to assess and understand change. He suggests that the most effective approach to change is one termed "second order". This type allows one to move temporarily outside the family system to achieve a different frame of reference. The utilization of a parent aide as a facilitator of second order change in parents who neglect their children would be theoretically plausible.

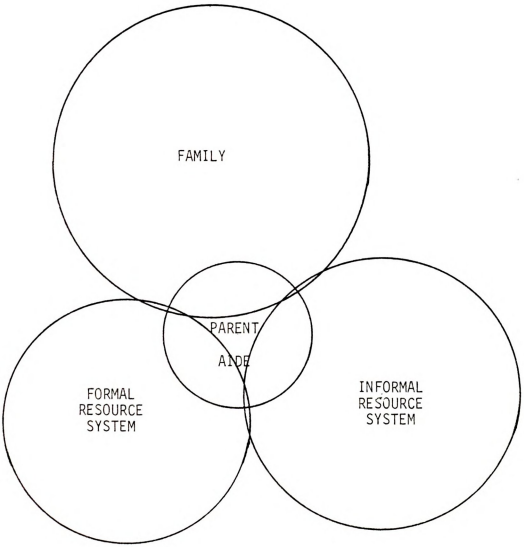
Other researchers have also endorsed an eco-systems approach. Hartman (1978) warns of the danger of not having an understanding of eco-systems:

> We have learned that all living things are dependent for survival or nurturing and sustaining environments and are interdependent upon each other. We have learned that the unforseen consequences of "progress" have too often been the disruption of these important relationships and we now know that even the most well-intentional intervention may lead to further destruction. The science of ecology studies the sensitive balance which exists between living things and their environments and the ways in which this mutuality can be enhanced and maintained. (p. 1)

Bronfenbrenner (1977) has stated:

> Research on the ecology of human development should include experiments involving the innovative restructuring of prevailing ecological systems in ways that depart from existing institutional ideologies and structures by redefining goals, roles, and activities, and providing interconnections between systems previously isolated from one another. (p. 528)

It would thus appear that research which occurs on the change of a family eco-system via the addition of a new component, i.e., the parent aide, would be ecologically sound. Figure 1 represents the ecological model utilized for this study. The family's relationship and interactions with the parent aide and formal and informal resource systems are described



Ecological view of the study's approach to the Impact of the Parent Aide Intervention Model.

Figure 1

and analyzed. This approach takes into account the complexity of interactions which may occur with the addition of one new system, the parent aide.

Goal of the Study

The overall purpose of this study is to determine the effect of parent aides on neglectful families.

Objectives of the Study

The primary objectives of this study are:

1. To determine if neglectful families, with whom a parent aide is working, change and improve in their parenting behavior among Phases I, II, and III of this study.

2. To determine if neglectful families, with whom a parent aide is working, have a different, more positive, type of relationship with other people in their family eco-system than they had prior to their involvement with a parent aide.

3. To determine if neglectful families, with whom a parent aide is working, change and improve in their degree of social isolation.

4. To determine if there is a relationship between the predictive scores of the Michigan Screening Profile for neglectful families and their change in parenting behavior and attitudes between Phases I and II, I and III, and II and III of this study.

5. To determine if there is a relationship between demographic characteristics and improvements in social and parental functioning during the course of the study.

Definition of Terms

Concepts which assume an important role in the study and general discussion are defined below. It is recognized that some of the terms may be found in the literature with other definitions. It is not the intent to offer an exhaustive meaning for the term, but rather to clarify the utilization within this study's general context.

Child Abuse:

"Harm or threatened harm to a child's health or welfare by a person responsible for the child's health or welfare which occurs through non-accidental physical or mental injury, sexual abuse or maltreatment" to such a degree that the family is active in a Protective Services Division caseload (Michigan Department of Social Services Manual B210, 1977).

Child Neglect:

"Harm to a child's health or welfare by a person, responsible for the child's health or welfare which occurs through negligent treatment, including the failure to provide adequate food, clothing, shelter or medical care" to such a degree that the family is active in a Protective Services Division caseload (Michigan Department of Social Services Manual, B210, 1977).

Child Maltreatment:

The culturally defined labeling of behavior which does not meet societal expectations, be it excessive use of force or inadequate provision of essential nurturance.

Ecological Approach:

The examination of the interdependent nature of human beings with other organisms, and their environment, including support systems, energy flows and communication.

Intervention Approach:

Actions taken with the intention of bringing about a change in the calibre of child care and a reduction in behavior and attitudes considered to be "neglectful", by utilizing parent aides as the primary treatment modality.

Parent Aide:

An individual who has volunteered to become a supportive friend to a parent, who is neglecting his/her children. Services provided include emotional support, parent modeling, communication skills and occasional concrete help such as transportation to doctors, recreational activities or other services.

Protective Services:

"Social Services designed to protect children from conditions which threaten their health and safety due to the actions or inactions of those responsible for their care. These services include investigation of a report; determination of the facts of danger to the child and immediate steps to remove the danger; providing or arranging for needed services for the family and child; and when appropriate, initiation of legal action to protect the child" (Michigan Department of Social Services Manual, 8210, 1977).

Resource:

"Any commodity, material or symbolic, which is transmitted through interpersonal behavior" (Foa and Foa, 1974, p. 26).

System:

A set of units (or human beings) together with the relationships between the units and the properties of the units. The units are interdependent and have interrelationships with other systems.

Operational Definition of Terms

The following operational terms were utilized with the hypotheses being analyzed:

Eco-Map:

The diagram of a family's ecological system at a point in time describing relationships among systems. Variables include:

Energy Flow: A measurement of the degree of effort and time required to maintain a relationship which can be characterized by: receiving more than giving, giving more than receiving, or by giving and receiving approximately the same as measured by the direction of arrows.

Importance of Relationships: A measurement of the significance of a systematic relationship as measured by the size of the system in the Eco-Map.

Type of Relationship: A measurement of the nature of interaction with others described as strong, tenuous, or stressful and measured by the line differentiations on the Eco-Map.

Formal Resource System:

Structured helping services offered by the community to assist individuals or families including public assistance programs, court, protective services, and mental health programs as measured by the Family Support Index and the Eco-Map. These are designated as: welfare, work, housing, Protective Services worker, court and related others.

Informal Resource System:

A helping source which is particularistic and voluntary in nature without formal organization or funding: including friends, extended family, and parent aide as measured by the Family Support Index and Eco-Map. These are designated as: friends, extended family, parent aide, recreation and neighbors.

Parenting Behavior:

Those acts needed to be performed or those conditions provided by the parents for their children to assist them in the growth toward adulthood including: supervision, control and discipline of children; emotional and physical interaction; child development activities; nutrition and health, promotion and maintenance of the physical and household environment as measured by the Childhood Level of Living.

Participants:

Mothers who have been identified as neglectful by the Michigan Department of Social Services and have been given a parent aide to facilitate change.

Social Isolation:

That behavior which results in an individual's or family's lack of contact with people outside of their own immediate family, except for the Formal Resource System as measured by the Family Support Index and the Eco-Map.

Time Phases:

Includes Phase I during the first month of the study; Phase II which is four to five months from the initiation of the study; and Phase III which is eleven months from the beginning of the study.

Hypotheses

The following five hypotheses were formulated for this study. Several sub-hypotheses specific to the individual variables were also developed.

Hypothesis 1. There is no difference in the participants' total parenting behavior over the three phases of the study.

1.1. The participants will not change in the area of supervision, control, or discipline of their children.

1.2. The participants will not change in the area of family interaction.

1.3. The participants will not change in the area of child development activities.

1.4. The participants will not change in the area of nutrition and health.

1.5. The participants will not change in the areas of physical environment and household maintenance.

Hypothesis 2. There is no difference in the mean and frequency of the type and importance of the participants' relationship with other systems over the three phases of the study on the direction of energy flow utilized.

2.1. The participants will not change in the frequency and mean of relationships described as important.

2.2. The participants will not change in the frequency and mean of strong relationships.

2.3. The participants will not change in the frequency of stressful relationships.

2.4. The participants will not change in the direction of energy flow involved with their relationships.

Hypothesis 4. There is no relationship between the participants' High or Low Risk Score on the Michigan Screening Profile of Parenting and their change in parenting abilities and social isolation characteristics.

4.1. There is no relationship between the participants' High or Low Risk Score on the Emotional Needs Met (ENM) and their change in parenting and social isolation.

4.2. There is no relationship between the participants' High or Low Risk Score on the Relationship with Parents (RWP) and their change in parenting and social isolation.

4.3. There is no relationship between the participants' High or Low Risk Score on the Expectations of Children (EOC) and their change in parenting and social isolation.

4.4. There is no relationship between the participants' High or Low Risk Score on Coping (COP) and their change in parenting and social isolation.

Hypothesis 5. There is no relationship between the demographic characteristics of the participants' age, education and number of children and the improvement in parenting behavior and social isolation.

5.1. There is no relationship between age of the participant and improvement in parenting behavior and decrease in social isolation.

5.2. There is no relationship between the number of children in the family and improvement in parenting behavior and decrease in social isolation.

5.3. There is no relationship between the number of years of education of the participant and improvement in parenting behavior and decrease in social isolation.

Assumptions

The following assumptions were made with respect to this study:

1. The observation and interviewing of families within their own home provide data for an accurate assessment of parenting behavior.

2. Family relationships, both within the family, and with others outside the family system, are measurable and quantifiable.

3. Mothers' responses are reflective of actual parental and social attitudes and behaviors.

Limitations of the Study

This study had the following limitations:

1. Generalization: A study with a small nonrandom sample and which is intensive in nature, cannot be generalized to other individuals. In order to assure the representative nature of the group, a random sample whould have to

be studied or a series of replications of this study be made to validate the conclusions drawn.

2. Non-Representative Sites: Three large counties in Michigan; Kent, Oakland and Genesee were selected as the research sites. The counties contained both urban and rural populations as well as having varied ethnic and social compositions. These areas would not be characteristic of some all-rural or urban communities which may have distinctive types of values and unique child neglect problems.

3. Instrumentation: Two of the major instruments, the Family Eco-Map and the Childhood Level of Living, were revised and adapted for the study. Therefore, no reliability nor validity measures are available.

CHAPTER II

REVIEW OF LITERATURE

The literature related to this study is divided into three areas. The first section reviews work exclusively on the nature of child neglect; the second deals with studies which do not differentiate between child abuse and neglect, but rather generic child maltreatment; and the third pertains to intervention and treatment of child maltreatment by parent aides.

Child Neglect

The first researcher to look specifically at child neglect was Leontine Young (1964). In a classic and seminal study, she drew a profile of 180 neglecting families. She found that over 95 percent of the families failed to feed or clothe their children adequately or keep them clean; they also did not provide needed medical care. Sixty-five percent frequently left their children unsupervised. The parents were more likely to cooperate and secure help if it were devoted toward them rather than focused on their children. She found that "unless help offered by someone outside the family...and maintained by outside responsibility, these parents tended to remain indifferent to the behavior and problems of their children" (p. 29). The families were also characterized by their lack

of routine, a pervasive sense of loneliness, and the failure to seek out other people; they did not have even informal social relationships.

Norman Polansky, subsequent to Young's work, has done extensive research on the nature of child neglect. He began his work in the mountains of North Carolina and Georgia where he did a series of studies regarding the phenomenon of child neglect and the personality types of neglectful mothers. From this research he determined that although poverty is almost a universal characteristic of neglect, all families living below the poverty line do not neglect their children, in fact, there are striking differences in child rearing. There is not an intrinsic "culture of poverty" which causes child neglect, but rather contributes to it. He developed a psychodiagnostic tool, the Maternal Characteristics Scale, which enabled him to discover prevalent personality types. The most pervasive was the apathetic-futile mother. She can be described as: having an aura that nothing is worth doing, an emotional numbness, an absence of intense personal relationships, a passive aggressive anger particularly toward authority, a low competence in most areas coupled with an unwillingness to invest energy to acquire skills, a noncommitment to positive stands and low self-confidence, an almost "uncanny" ability to infect those trying to help her with the same feeling of futility and a verbal inaccessibility. Other, less frequent, but related types are: the Impulse-Ridden mother, the Mentally Retarded mother, the mother in a Reactive Depression, and the Psychotic mother. Isolation and the feeling of powerlessness were universal themes throughout the subjects.

In order to ascertain whether his findings were generalizable, Polansky replicated his study in an urban area, Philadelphia. He studied 125 families which included control families in similar circumstances, but not known to be neglectful, and achieved similar results. He also looked more extensively at the variable of isolation. Significant differences were discovered in comparing the two groups. Neglectful families had much stronger feelings of alienation and futility, had much less accessibility to a supportive helping network; participated less in formal organizations, and socialized less informally. The researcher found this true of the fathers, if present, as well as the mothers, although in a slightly less severe degree.

A study by Billingsley and Giovanni (1970) sought to determine if they could differentiate characteristics of low income neglectful families and potentially neglectful families from non-neglectful, low income families. Ethnicity was held constant: white, black, and Spanish speaking families were studied. One hundred and thirty-six mothers were assessed on the following factors: family and social background, current situational features including age, family structure and stability, income, material resources, social functioning, informal and formal social systems and child rearing practices. No differences were discovered in the mothers' childhood history; however, significant differences occurred in the current situations. Neglectful mothers were found to have a higher number of children, more frequently single-parent households, fewer material resources, a higher degree of poverty, fewer positive relationships within the kinship system and less ability to accept their children's dependency needs as well as provide them with general emotional nurturing activities.

Camille Jeffers (1967) conducted a participant-observation study in a low income housing project. Child neglect was a fairly frequent occurrence and her description of the mothers' lives is consistent with other research findings. Faced with chronic lack of money, many of the children were improperly fed and clothed. Marital relationships were highly unstable and there were few friends or relatives to offer support. Children were left unsupervised and health problems were frequent. The women did not perceive the world as a positive place and fear of the outside was evidenced in their reluctance to allow their children to play in an adjacent park. Their reluctance to form relationships was also apparent in that it took Jeffers considerable time to secure their trust. However, once this was achieved, some became very dependent on her.

Child Maltreatment

The term "battered child syndrome" was coined in 1962 by Kempe highlighting of a national problem. Much research has been conducted since that time specific to child abuse; some work has examined both neglect and abuse since they are both deviant child rearing phenomena. Several conceptual models have also been developed which would appear relevant to child neglect.

Helfer has done considerable research in the area of child abuse and neglect. He has developed a model termed W.A.R. "World of Abnormal Rearing Cycle" to epitomize the cyclical nature of child maltreatment as being transmitted from one generation to another (See Figure 2). His approach is primarily one of individual psychopathy based on early

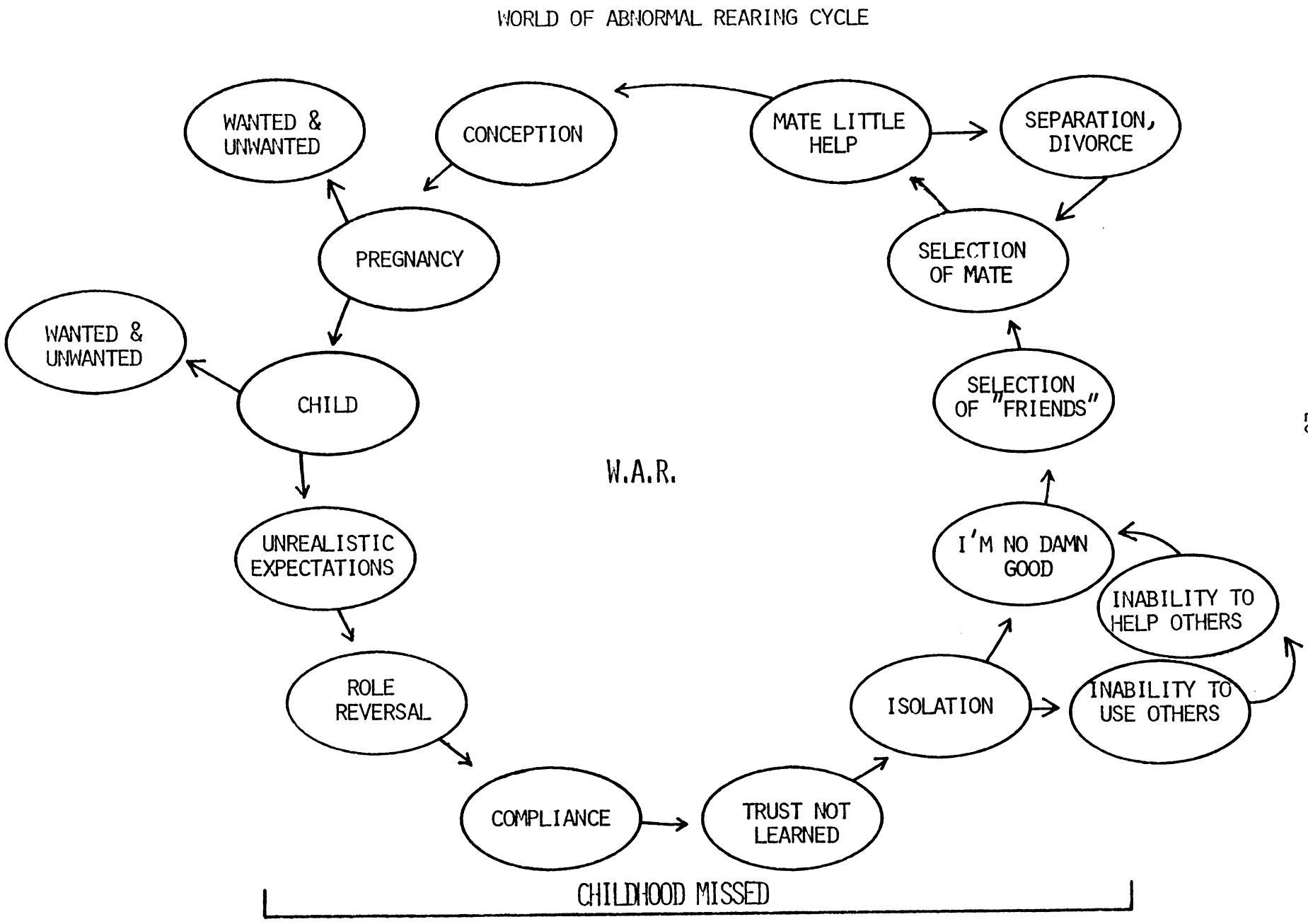


Figure 2

Helfer, R., Kempe, C. Child Abuse and Neglect, the Family & the

childhood experiences. He conceives of the problem as related to five general areas:

1. Conception-Pregnancy-Child
2. Unrealistic Expectations-Role Reversal-Compliance
3. Lack of Trust-Isolation-"I'm No Damn Good"
4. Selection of Friends and Mate
5. Childhood Missed

The first section, conception-pregnancy-child relates to the phenomenon of many girls seeking conception, pregnancy and a child as a means of meeting their own needs. Family planning methods and abortion are rarely utilized by the W.A.R. mothers.

The second area, unrealistic expectations-role reversal-compliance is another behavior which frequently occurs. The mother who has had the baby to meet her own needs, now expects her infant to meet them, i.e., to "parent" her - provide her love, comfort and understanding. The children, themselves, are generally highly compliant and indeed attempt to fill this highly demanding expectation.

Lack of trust, isolation, and "I'm No Damn Good" epitomizes the result of role reversal in which the parent not only fails to meet the child's needs but reverses the role and expects the child to meet hers. The children learn not to trust that anyone will be there to help and, in fact, learn not to look toward anyone else either, resulting in isolation and a feeling of worthlessness.

The selection of a mate and friends also contributes to the cycle. W.A.R. children do not have the skills needed to form significant relationships and frequently marry as an avenue to escape their home. Those mates

chosen are unsupportive and the girl then may turn to pregnancy as the manner of meeting her needs, thus perpetuating the cycle.

The childhood missed notation in the Figure refers to the lack of normal childhood experiences necessary for full emotional maturation and preparation for parenthood.

Helfer estimates that 10 percent of the abusive parents are psychotics and another 10-15 percent cannot be reached nor treated after one year of effort. He does, however, feel that the other 75-80 percent of the mothers can be helped. He has also recently been active in establishing several pilot projects in early prevention techniques with the use of his predictive instrument, The Michigan Screening Parenting Profile.

Other researchers who also endorse the individual psychological, clinical approach to child maltreatment are Steele and Pollock (1974). They studied 60 families in which significant abuse of children had occurred during a period of five and one-half years. The most predominant contributing factors included: "role reversal" in which the parent expects the child to meet his dependency needs and a misperception of the infants' abilities: a history of having been raised in a similar manner by their parents, i.e. a deprivation of basic mothering, asocial or isolated relationship, and severe emotional problems.

They point to a striking difference between abuse and neglect within the caretaker-infant interaction. "The neglecting parent responds to distressing disappointment by giving up and abandoning efforts to even mechanically care for the child, the abusing parent. . .moves in to punish it for its failure and make it shape up, and perform better" (p. 99).

Steele and Pollock firmly believe that psychotherapy with the abusive parents is successful in changing parent-child interactions, improvement in the quality of relationships and in daily routines.

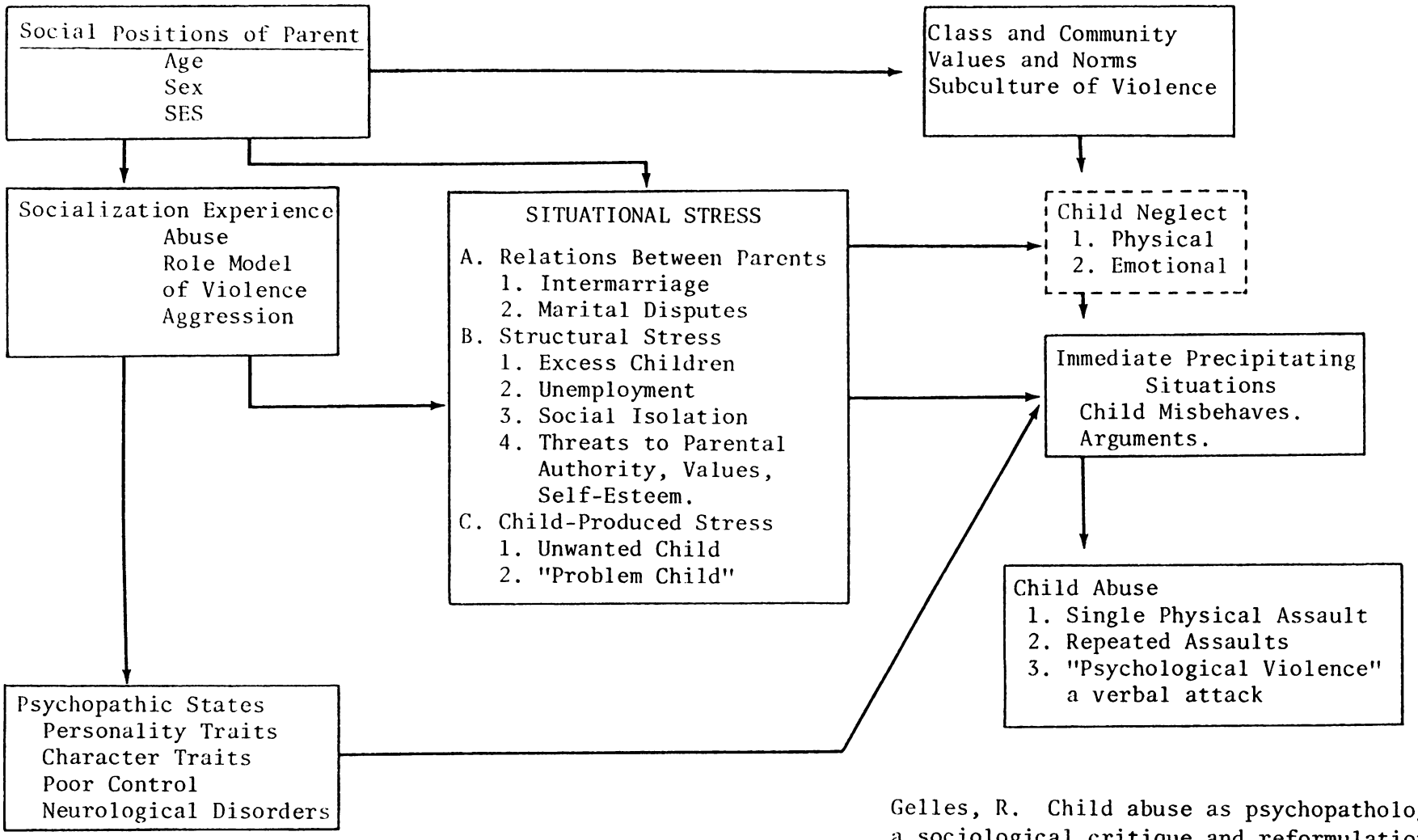
Gelles (1973) suggests a child maltreatment model which contains not only the psychological propensities, but also contributing social factors (See Figure 3).

This approach incorporates other important variables which must also be considered: community and class values and norms which offer an atmosphere conducive to maltreatment, such as where the parent-child relationship is sacrosanct and the public is reluctant to interfere, and where certain types of violences are accepted. The individual or family's social positions are also relevant, where the age of the parent, economic conditions and sex all contribute to the type of parenting. These components, added to those of socialization experience and psychopathic states, developed by Helfer and Polansky, do not present the entire picture. Situational stress, for example, unemployment, excess children, social isolation or threats to the parent; and child produced stress are also factors. Given these elements coupled with a precipitating situation, child abuse occurs.

A modification to this model is suggested to differentiate child neglect. The dotted line box has been added to Figure 3 to indicate where child neglect would occur. An immediate precipitating situation is usually not a factor in neglect.

A recent Child Welfare League of America study (1980) also supports a multi-causal etiology. One hundred and seventy-one families identified as active Protective Services cases, due to abuse or neglect, were assessed.

Gelles Social - Psychological Model of Causes of Child Abuse



---Indicates Adaptation to Include Neglect

Gelles, R. Child abuse as psychopathology- a sociological critique and reformulation. American Journal of Orthopsychiatry, 1973, 43 (4), 617.

Figure 3

Characteristics were the same as described in other studies: predominantly single parent; living at poverty level, and experiencing stress, isolated with health and relationship problems. They discovered that the most significant variables, related to discontinuation of abusive or neglectful behavior were the mother's age and the length of the period of services.

Nagi, in a national study (1979) attempted to differentiate parental characteristics of those who abuse their children as compared to those who neglect. The neglecting parents were much more likely to be of lower educational attainment and economic levels; the abusive parents were higher in the areas of unhappy childhood and under more emotional pressure. Both groups had a high frequency of parents who were emotionally disturbed.

Several authors have discussed child maltreatment as a result of stress. Ten Have (1965) and Elmer (1977) have described abuse as a culmination of a long period of tension. Elmer's comparative study of abused and non-abused children, who had received accidental injuries, found that abusive mothers perceived a great amount of stress as contrasted to other parents. Nagi has modified Reuben Hill's crisis model to reflect its relevance to child maltreatment (See Figure 4).

Letters a, b, c and d represent occurrences which may contribute to abuse:

- (a) and (b) are fluctuations in family relations which remain within the limits of acceptable behavior.

- (b) represents a critical incident; a crisis or an incidence of abuse (Gelles' term precipitating situation).

- (c) actual crisis - a report of abuse, investigation and level of disorganization.

- d^1, d^2, d^3 - a redirection and adjustment to a higher level of performance.

The angle of recovery indicates the amount of time to increase their level of functioning. The narrower the angle, the shorter the time in which the family can achieve higher functioning.

(a)...(e) represents the situation in neglect or insidious, non-manifest abuse, which has a slow, steady, progressive decline in performance.

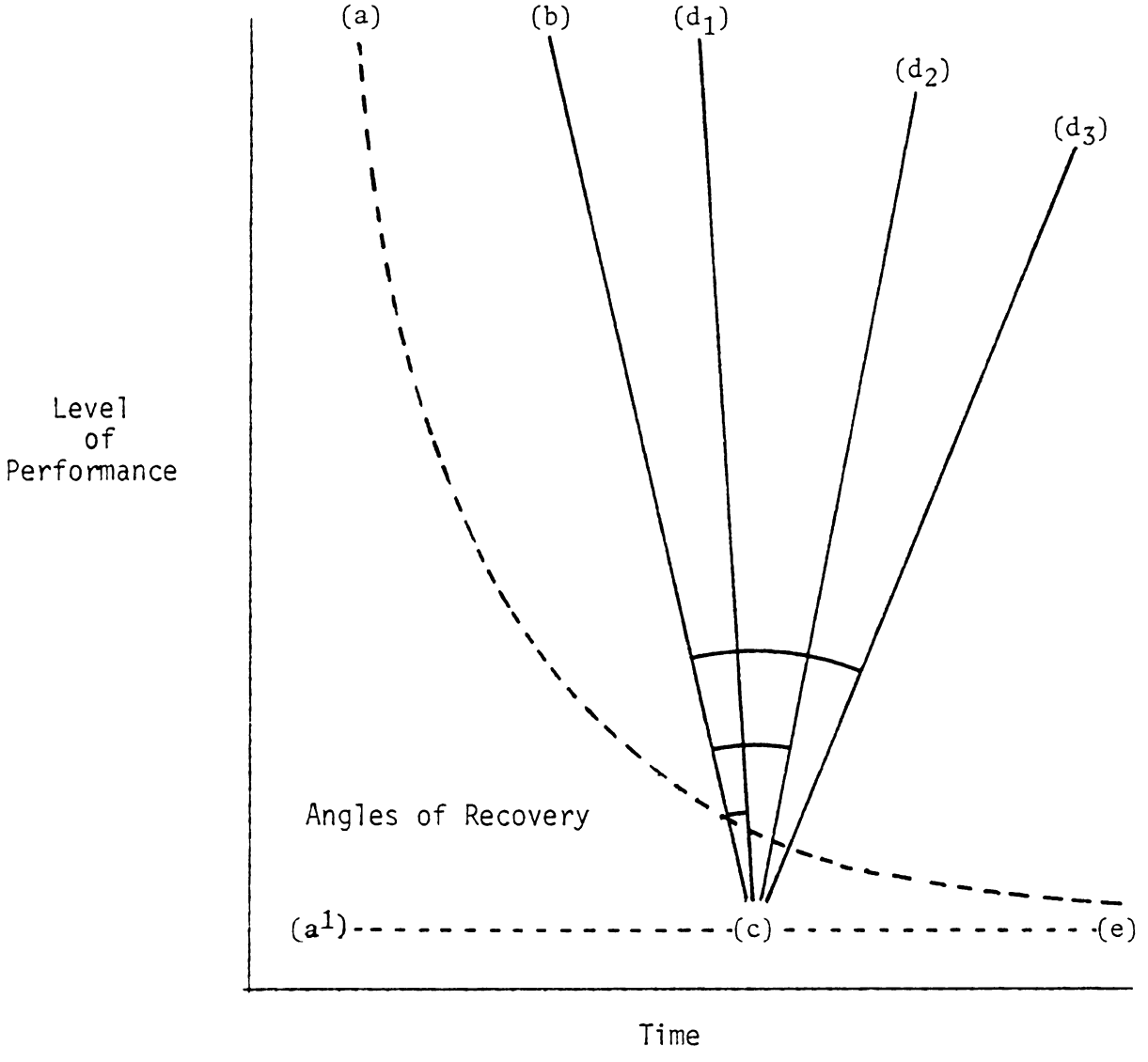
(a)...(e) reflects the type of neglect stemming from poverty, in which the family never achieves an adequate level of performance.

Garbarino (1978) has also described a multi-causal ecological model for viewing child maltreatment. He considers four factors as necessary to create a pattern conducive to abuse: isolation, social and/or economic stress, parenting "style", and the child as a stimulus. He is particularly concerned with the element of isolation. He hypothesizes that:

> as the value and opportunity for privacy increases, the danger of isolation increases correspondingly, and with it the possibility of child abuse due to some combination of personal and social stress, depression and inconsistent parental behavior (p. 569).

He endorses a "kinship intrusive" system as a more desirable value to be used to supplant the one for privacy, which, in its extreme form, leads to isolation. He suggests a surrogate support network to be developed and offered to families in order to create change.

STRESS CURVE AND FAMILY PERFORMANCE



Nagi, S. Child Maltreatment in the United States, New York, Columbia University Press, 1977.

Figure 4

Intervention and Treatment of Child Neglect by Parent Aides

There is a dearth of information regarding evaluation and effectiveness of treatment techniques to change child neglect. Nagi's national survey sought to describe the status of the current intervention system in child maltreatment. One of the issues that he identified was that related to the state of knowledge and technology in the field. Medicine appears to be considerably advanced, with great sophistication in the diagnosis and physical treatment of children. The legal profession has also added substantially to legislations permitting the public to intrude in family relationships when abuse or neglect occurs. However, the state of technology in the remediation of emotional damage and change in the behavior of families was considered seriously underdeveloped. Practitioners demonstrated a wide variance in their assessments of effective treatment - more than a third of the respondents agreed that "treatment for parents who mistreat their children is largely ineffectual", and "we just don't know enough to deal effectively with problems of child mistreatment".

The concept of parent aides was first introduced in 1969 by Kempe at the National Center for the Treatment of Child Abuse and Neglect in Denver. He conceived of them as paraprofessionals whose primary task was to be a non-judgmental friend. At the Center, and many other places, parent aides have been utilized primarily for abusive families. Vincent Francis also developed the concept of social service assistants who would serve as surrogate mothers or as "life-lines" to abusive mothers under stress.

Young suggests that the casework/psychological change approach is not the most feasible one to create change in these families. She advocates focus on external change, with clearly identifiable standards of behavior, for example, the establishment of routines such as meal preparation. This has the function of building the external life structure and the consequential stabilization and integration of families. For abusive families, she suggests the utilization of foster homes for child placement. Van Stalk (1978) also supports this approach for abuse, and cites cases of child mortality as a result of leaving the abused child within the home. She is encouraging of the the concept of parent aides as a means to "drain off the hostility, loneliness, anger, and rejection that the parents might very well take out on the child" (p. 87).

A study conducted by Sherman, Phillips et al, (1973) on the topic of services to children in their own homes, did not address the use of parent aides as a service modality. It did indicate that "support" and "practical help" constituted 44 percent of all agencies' predominant casework techniques. No comparison was given to the effectiveness of the seven approaches utilized. Minimal changes were noted in the mother's specific behavior at the end of one year - although a total overall score of parental functioning did improve for 42 percent of the subjects.

Within a handbook for protective services workers (Breezby, 1978), a brief chapter is devoted to intervention techniques. No research or evaluation of the approaches is made, simply a description offered. Parent aides are described under the category "Lay Therapy". Their primary role is to provide "long-term nurturing". This method is considered useful,

because it provides "a supportive relationship that the parents have never before experienced" as well as having the advantages of being economical and saving time for professional staff.

Ray Helfer (1978) advocates the use of parent aides as an intervention technique to change the W.A.R. cycle of lack of trust, isolation and "I'm No Damn Good". He feels that parent aides not only break down isolation, but also provide a good model of parenting behavior. Parent aides also facilitate the family's development of positive relationships with others. Helfer notes, "Parent aides are, of course, adjuncts to other forms of therapy". Research at the National Center for the Treatment of Child Abuse and Neglect has indicated, via subjective assessments, that positive growth is experienced by parents with parent aides and that no serious re-injuries to the abused child occur.

Perhaps the strongest research available to demonstrate the effectiveness of parent aides was not done with humans, but with gorillas by Rock (1978). The zoo to which the gorillas had been brought at a very early age encountered enormous problems once the female gorillas had grown, been mated, and had babies. The mother gorillas ignored their children, refused to nurse them, or supervise them, and were frequently abusive. This behavior was abnormal compared to gorilla maternal behavior in the wild. The scientists then captured mother gorillas and their young who had experienced a normal, natural, developmental period and placed them with the abusive and neglectful mother gorillas. In a very short time, the appropriate mothering behavior demonstrated by the gorilla "parent aides" was adopted by the deviant gorillas. Along with

an improvement in parenting behavior, a distinct social support group was established which, in general, provided additional modeling experiences.

Carrol and Reich (1978) have conducted a descriptive study of ten abusive parents who had parent aides as the primary treatment approach. They studied the families for two years to determine the behavioral impact of the program and attitudinal changes. Eighty-five percent of the parents did not abuse their child after contact with their parent aide began. The researchers also found a trend toward more positive interaction and relationships. No significant change in social isolation was discovered. A description was also offered of the parent aides themselves; the selection, training, maturing and program structure of such an approach was described.

Wanda Downer (1977) has also presented two case studies in which a neglecting mother and an abusing mother who had parent aides reported the significance of the relationship to them. For both mothers, their parent aides represented a friend who could be counted on, a parent that they had never had and the one resource on whom they could depend. Downer also conducted an evaluation of the program via an attitude survey. Ten parents responded (approximately one-third of the agency's population). They indicated at 80 percent or above, that they strongly agreed that "the parent aide understands me and my situation"; "the parent aide is able to provide what I need"; "I am gaining benefits from knowing the parent aide that I did not expect"; and the "service I am receiving makes a difference in my life".

CHAPTER III

METHODOLOGY

Overview

The data for this study are part of the data collected for a larger study which was a descriptive comparative parent aide study of three Michigan agencies: the Genesee County Department of Social Services, the Grand Rapids Child Guidance Clinic and the Oakland County Cooperative Extension. The primary focus of the parent project was to compare and describe the activities of the parent aides, the supervising agencies and their effect on the families with whom they worked (Andrews and Swanson, 1979). This study utilized data collected on families which had not been previously analyzed and therefore supplements the master project. This researcher was the larger study's project co-ordinator and was responsible for: assisting with the project design, hiring, training and supervising interviewers, evaluating participating agencies' programs, data analysis, the final report and recommendations. Information from the three sites was combined to provide a statewide perspective and different focus for this research.

A time series, small sample descriptive study methodology was used. Families were interviewed and observed within their own homes over 12 months. A variety of instrumentation was utilized including: non-directive and directed interviews, open-ended questions and

self-administered questionnaires. The approach combined a qualitative and quantitative analysis to facilitate a better understanding of the lives and changes in the lives of neglectful families.

Population

The population from which the participants were selected was that of families who were 1978 clientele of the Michigan Department of Social Services, Protective Services Division, due to child neglect, and had been assigned a parent aide as a method of intervention. All families had been investigated by Protective Services case managers and had been found to be unable to provide minimal parental care for their children. The Protective Services case managers accordingly made a determination of services needs. Families within the population were those for whom a case manager had decided that a parent aide would be an appropriate service provider. Regular re-determination of family functions was made as to the advisability of continued action: maintain the case open with the same or different intervention; close the case due to improved family/parenting functioning; or remove the children and consider subsequent termination of parental rights.

The auspices of the provision of parent aide services varies throughout the State. The Michigan Department of Social Services may contract with local, private or public agencies who agree to recruit, train, supervise and support parent aides. Within their service domain, some parent aides may also work with abusive parents, or those whose parenting problems are not severe enough to constitute sufficient cause to be open Protective Services cases.

Sample

A meeting was held with the Central Office, Department of Social Services Administration to consider potential research sites among parent aide sponsoring agencies. Subsequent meetings were held with the identified agencies to explain the primary purpose of the research and to secure their participation. An advisory task force was established consisting of the participating agencies to review procedures and findings. Its approval was secured prior to initiating the study. Clearance was also received from the University Committee on Research Involving Human Subjects.

A total sample of 24 family/parent aide combinations was chosen from the three sponsoring agencies from similar large urban counties, eight from each site. Due to the limited number of new family/parent aide matches made within each sponsoring agency, and in order to acquire an adequate number of subjects, three sites were chosen. Preliminary study indicated the time of year in which most families and parent aides were first matched. This time period was consequently chosen to initiate the study. August 1978 through August 1979 constituted the study period.

The following criteria were utilized for inclusion of a family:

1. The family must be an open Protective Services case primarily due to neglect. Families who were exclusively abusive would not be included.

2. Only families who were receiving a parent aide for the first time would be involved. Replacements of a parent aide were not considered appropriate.

3. The family and parent aide must consent to participation in the study.

Once sponsoring agencies agreed to participate in the study, and an initial date determined, every referral to the parent aide program was considered a possible study participant if they met the criteria. The sampling process consisted of the following:

1. The family was identified by the Department of Social Services case managers as a neglectful family.

2. The family was a new referral to the parent aide program.

3. Following the initial match of the first family/parent aide combination, every subsequent match was included in the study until the sample size of eight families at each site was achieved. Two additional families were included to allow for potential attrition.

A representative from the sponsoring agency explained the project to the selected families and consent was received. The consent form was also signed by the parent during the first interview. The researcher met with all the parent aides within each sponsoring agency to explain the study and secure written consent. Individual letters of consent were also received during the first interview.

The sample consisted of a cross section of families and parent aides at each site although this was not intentionally sought in the sampling technique. Wide variation in the types of families and conditions were evidenced within the group. In order to judge how typical or atypical these families and aides were, a random sample of the Protective Services families and parent aides was identified and basic demographic characteristics compared.

Research Design

In this time series analysis, an intensive, longitudinal design was chosen. Specific behavior and attitudinal variables were studied within the families' eco-systems over three phases of observation. Treatment effects were contrasted over the independent variable of time (Phases I, II, and III):

Phase I - When the parent aide was first assigned to the Protective Services family, an initial interview and series of measures were administered to document baseline or entry level behavior of families and initial characteristics of parent aides.

Phase II - After four to six months of program contact, measures were again administered.

Phase III - After ten to twelve months of program contact, the final administration of instruments was conducted.

The following variables were studied:

1. Participants' perceived amount of social isolation.

2. Participants' relationships with the following systems:
   Formal - Court; School; Work; Protective Services case manager; Social Agencies (public assistance, mental health, other related agencies); and Housing.

Informal - Friends; Neighbors; Family; Extended Family, and Parent Aide.

3. Participants' parenting skills and attitudes.

Descriptive information, not utilizing a time series approach, also examined the following variables:

1. The participants' early childhood experience contrasted to their level of isolation and improvement in parenting.

2. The participants' age, education, and number of children as related to improvement in parenting and isolation.

3. The participants' change in interaction with formal and informal systems constrasted with age, education and number of children.

Data Collection Procedures

Pretest

A pretest at a site not included in the research was employed with a family which had had a parent aide for three months. The in-depth family interview lasted approximately four hours which was equivalent to two interviews during the actual research project. The physical environmental conditions of the home, interactions of mother and children, and the involvement of the mother with the researcher were helpful in the final development of the instrumentation. The methodology of the interview, its length, ordering of instruments, and reception by the participant were all useful in the determination of the final procedures. Information

learned from the pretest was particularly useful in assisting in the subsequent interviewer training sessions.

Interviewers

One interviewer was hired in each of the three sites to conduct the in-home, family and parent aide interviews. Adjacent universities at each site were contacted in order to solicit referrals of individuals who had appropriate education and training, as well as experience, in conducting family interviews. Great care was taken in the selection process to hire those individuals who would be sensitive to the needs and problems of the families whom they would be interviewing. All of the interviewers employed had a minimum of a Bachelor's degree in a human services related field and two of the interviewers had Master's degrees.

Some of the data to be collected involved an ethnographic or case-study approach. This necessitated great attention to the training of the interviewers in an effort to achieve a degree of standardization of their observations. The researcher planned and conducted an all-day training session which included utilization of the interview schedules and the questionnaires, role playing, and an item-by-item discussion of observable behavior. Each of the interviewers also pretested the questionnaires with their own family to become more accustomed to it. There was an attrition rate of two interviewers, at one site, during the study. Each of the new interviewers was individually trained. Although one site did have interviewer change, the other two sites maintained a stable staff which allowed for a more personal, positive relationship to develop, thus

encouraging the continuation of families within the study and their willingness to share very intimate details of their lives.

Interviewers also were in constant contact with the investigator who offered uniform clarification of uncertain ratings. Of the five interviewers employed, four were female, four were white, one black; the mean age was 35, and the mean education was 17 years. The interviewers were instructed to make every effort to make the interview situation comfortable for the participants, and that in no case, should they pressure the participants to respond to particular question items if they showed some resistance. This was required since many of the families did evidence emotional problems, the subject matter was potentially painful, and possible harm might occur if some topics were actively pursued. Interviewers were not informed of any history of the participants and were not aware that they were Protective Services families. They were told that the families were to be considered as team members and consultants regarding the parent aide program in which they were participating.

Interview

Families were paid a ten dollar ($10) consulting fee for each interview phase and were paid at the conclusion of each session. Interviews were conducted at the convenience of the participant, a majority of the interviews were held in the afternoon or evening. The interviews lasted approximately two hours each, for a total data collection time of six hours per participant. The home interview, besides offering an opportunity to make observations of the family's interactions in a

naturalistic setting, as opposed to more artificial experimental settings, is "ecologically sound"; the family is more comfortable on familiar ground (Eubank, 1976, Kerlinger, 1967).

In all interviews, the mother was the primary participant. The parent aide-mother relationship was the major element in the attempt to create change in the overall family system. Few families actually had a husband/stable boyfriend present consistently over the time of the study. The unit of analysis, however, was the family, and the mother was asked to describe the total family interactions and relationships. Although the children were not interviewed, their appearance and behavior, as individuals, and with their mother were observed and included in the study.

Instrumentation

A variety of instruments and data collection techniques were utilized for this study. These may be found in Appendix A. The primary method was an interview conducted within the participants' homes in order to facilitate observation. Interviews consisted of questionnaires and observations. Case files were also read by the researcher in order to collect demographic data. The following instruments were utilized:

Childhood Level of Living - One of the primary instruments utilized was a modification of Norman Polansky's Childhood Level of Living Scale (C.L.L.) the intent of which is to indicate the conditions of care under which children are reared (Polansky, 1976). Based upon the Sears, et al, approach to evaluating parenting patterns (Sears, 1957), it utilizes the families' Protective Services workers to rank basic areas of

physical, emotional and cognitive care. The instrument response format was modified for use by interviewers, separating those questions into topics which could be observed and scored immediately following the interviews and those items which could be elicited in open, non-directive interviews. It was felt to be crucial that some topics, such as discipline, which are highly "loaded" questions to ask a family already in jeopardy of losing their parental rights, must be dealt with sensitively. Consequently, a majority of the information was elicited in an unstructured manner. Lead questions were also formulated by this researcher to assist the interviewers in soliciting the information in a non-threatening manner. The original response format required "yes-no" answers. The response format was modified to read "yes"; "no" and "unable to elicit" response. The scale was scored so that a low score indicated problematic/low level of living. The original C.L.L. has construct validity, high internal consistency and "robustness" (Polansky, Chalmers, Butterwieser and Williams, 1979). However, due to the modifications in response format the reliability and validity of the modified instrument is unknown. It is felt that the modifications are an improvement and would, therefore, strengthen the instrument. Scores were clustered around specific areas of care:

1. Family Interaction and Characteristics
2. Supervision, Control and Discipline
3. Child Development Activities
4. Nutrition and Health
5. Physical Environment/Household Maintenance.

The Family Interaction and Characteristics grouping included areas such as recreational activities, use of television, relationships with spouse and other family members, activities outside the home, and the mother's style of communication with others.

Supervision, Control and Discipline contained questions relating to daily routines, methods of supervision and discipline and tolerance and understanding of children's behavior.

Child Development Activities' items were such things as involvement of parents and opportunities for play, school activities, and nurturing experiences.

Nutrition and Health included knowledge and use of basic medical facilities, provision of adequate meals and knowledge of medical emergency resources.

Physical Environment and Household Maintenance dealt with the condition of the house relative to safety and cleanliness.

Three scores were developed at the end of each phase: Interview Items, Observational Items, and Total Score. Scores were reported as percentages: Number of Positive Responses over Total Possible Positive Scores. Items on the C.L.L. reflected minimal expectations for an adequate standard of family living. Scores ranging from ninety (90) to one hundred (100) would indicate a high degree of meeting minimal level; scores from eighty (80) to ninety (90) demonstrated a moderate compliance; scores below eighty (80) generally represented some areas of serious lack of meeting minimal levels of child care.

Eco-Map - Another instrument utilized was a modification of the eco-map, Hartman (1978). Based on the concept of viewing the family ecologically, i.e., in interaction with its environment, it has been primarily utilized as a diagnostic and therapeutic tool with multi-problem families. Although no statistical analysis has been done relating to its validity and reliability, the eco-map has been utilized extensively by personnel in the Michigan Department of Social Services temporary foster care projects and by a crisis walk-in center. Both attest to its accuracy in evaluating outcome and measuring change, albeit in a qualitative manner. The eco-map consists of diagramming the family and its relationship, both internally and externally, with other systems. The interviewer acts as a facilitator enabling the family to map their perceived relationship with others. The original instrument has pre-established circles, already labeled with the system of interest. To prevent this bias, and maximize the descriptive opportunities, interviewers named the system and the parent determined its size and location as well as the nature of its relationship to the family. The original map was drawn during Phase I, distinctive colors were utilized to denote family members. Data in respect to individual family members were not fully analyzed within this study. During Phase II and Phase III, transparencies were placed on top of the baseline eco-map to describe changes that had occurred. The following systems were described within the eco-map:

1. Family - Interactions Between Members

2. Friends

3. Extended Family

4. Work

5. Parent Aide

6. Court

7. Welfare

8. Housing

9. Recreation

10. Protective Services Worker

11. Other Informal and Formal Systems

Each of the above variables were described by the following dimensions:

1. Type of Relationship:

	Score Assignment
Stressful +++++++	1
Tenuous ----------	2
Strong _____	3

2. Energy Flow:

More Out Than In 

More In Than Out

Reciprocal

(measured by direction of arrows)

3. Importance of Relationship:		Score Assignment
Of Little Importance		1
Quite Important		2
Very Important		3

(measured by size of circles)

A three point score was utilized for type and importance of relationships with three being the most positive - "strong relationship" and one being the least positive - "stressful relationship". These were scored for every Phase to determine change. The number and types of energy flow were collected during Phase I and Phase III. A total score was derived for each family based on the frequency and value for each variable. Three groupings were also developed which included:

Intra-Family: Parent-Child and Parent-Parent/Significant Other to include boyfriends living in the home as well as husbands.

Formal Resource System: including Protective Services, Court, Housing, Welfare, Health, and Work.

Informal Resource System: including Friends, Extended Families, Recreation, and Parent Aides.

Michigan Screening Profile of Parenting - The Michigan Screening Profile of Parenting (M.S.P.P.) questionnaire was utilized in Phase II to establish a developmental risk score (See Appendix A). This standardized

scale was developed by Helfer, Schneider and Hoffmeister (1978) to predict potential child neglect or abuse. A 50 item open-ended and forced choice questionnaire measured the following categories:

Emotional Needs Met (ENM)
Relationship with Parents (RWP)
Expectations of Children (EOC)
Coping (COP)

The Emotional Needs Met cluster defines a type of relationship between self and others. Negative perceptions resulting in a high score would include feelings of being unloved and frequently criticized, having to meet high expectations from parents and a general climate in which the person's own needs and wants were ignored by the parents. The person feels unloved and misunderstood in present relationships as well as childhood.

Relationship with Parents cluster defines feelings about love and affection between the respondent and his/her parents, particularly, the mother. Negative perceptions indicate certain problems in getting along with, loving, and being close to parents.

Expectations of Children deals with the feelings that very young children should be well behaved and sensitive to what their parents want from them. Negative perceptions are that children should know the parents' wishes and needs and meet them at a very young age.

Coping reflects a feeling of being able or unable to cope with crises by handling the situations in appropriate ways. Feelings of wanting to run away, helplessness and frustrations occur. The high scorer has feelings of being unable to cope in crisis situations.

Based upon prior research indicating the importance of past childhood experience (Helfer, 1976), the M.S.P.P.'s main focus is on describing past parent-child relationships. Helfer, et al, have indicated in their utilization of this instrument, including cross-cultural comparisons, that it has high (85 percent) sensitivity (the ability to identify accurately mothers with known problems in interacting with their children), and high (79.8 percent) specificity (ability to identify accurately parents with no apparent problems in interacting with their children), particularly in the Emotional Needs Met cluster. The other three clusters are not as discriminating (Helfer, Schneider, Hoffmeister, 1978). Reliability measures for the Emotional Needs Met were also high (85 percent), with the other clusters more marginal (62 percent). The scores on each of the variables were compared to other dependent variables to determine the predictive value of each variable for exclusively neglectful families.

Family Support Index - Another measurement utilized dealt with social isolation. Inasmuch as this variable is of primary concern within prior child neglect research, it is addressed in several items within the total instrumentation through the formulation of questions relating to the types and amount of relationships of the participants. In addition, Polansky's instrument, Family Support Index (1978) was replicated in part. Mothers were asked to respond to two open-ended questions:

1. Within the last year, have you needed any help?

2. If yes, from whom have you requested help?

Responses to the questions were categorized into six types: A Six-Point Ordinal Scale was utilized. The Family Support Index (FSI) points and types follow:

Points	Types
1	Completely Isolated: No one helps, or mother stated that the only person to be counted on was a social worker or similar professional helper.
2	Family Dyad: One parent or one sibling can be counted on to help.
3	Friend Dependent: No family member can be counted on; only one friend can be called on.
4	Family Bound: Two or more immediate family members; parent(s) or sibling(s).
5	Family and Friend Related: At least one member of the immediate family and one friend or more distant relative can be called upon for help.
6	Supported: At least one immediate family member and at least two friends or more distant relatives can be called upon for help.

Normative data from Polansky's research are available for comparison. The instrument was utilized twice during Phases I and III. Two groupings were also developed from the initial Family Support Index Score: Mothers with a score of one (1) - Formal Support System Reliant; mothers with

scores of two (2) to six (6) - Informal Support System reliant. This clustering enabled a comparison of families with this grouping to be correlated with their score on the eco-map groupings of informal and formal system change.

Data Analyses

The five major hypotheses, testing whether or not there were differences in the variables over time, were analyzed using primarily non-parametric procedures. Non-parametric techniques have been judged preferable due to their qualitative nature. Instruments which measure psychological properties may actually be valid only at an ordinal level, and numerical values should be viewed as relative magnitudes of the underlying property (Hays, 1973). Descriptive statistics and observations were also used to provide more information about the participants than would normally be available if statistical tests were exclusively applied. The chi-square test was utilized to determine whether there was a relationship between the variables of age, race, educational attainment, number of children and types of identifiable problems leading to neglect.

The Friedman Repeated Measures One-Way Analysis of Variance Test was employed to determine if there were changes in variables over time. This test provides a method of deciding whether dependent samples represent genuine change or whether they represent merely chance variations which would be expected from the same population. It determines whether there is any consistent relational pattern among the variables. The variables measured by the Childhood Level of Living, Family Eco-Map, and the Family Support Index over Phases I, II and III were deemed appropriate

for this type of analysis. The Friedman Test was the primary statistical test utilized. However, for the Childhood Level of Living, a supplemental test was also employed. The C.L.L. was analyzed with a dependent T test data. This served to provide an additional dimension to the data. The Pearson Correlation Coefficient was also used to analyze the relationship among the variables of the C.L.L.

The Phi Coefficient Test for concordance was utilized to determine if there was a relationship between the developmental risk scores on the Michigan Screening Profile of Parenting and the scores and change scores on the variables of the Childhood Level of Living. It was also utilized to determine if there were relationships among basic demographic data, age, number of children and education with change scores in the Childhood Level of Living. This test is useful for small samples, ten or more, since the sampling distribution is approximated relatively well by the normal distribution.

The Kruskal-Wallis One-Way Anova corrected for ties was employed with new independent variables, created based on change scores in the Childhood Level of Living, to determine if there were relationships among demographic factors, the Michigan Screening Profile scores and change. This test examines the difference in medians to determine whether the groups vary significantly in rank deviation from normality. Scoring and analysis for the Michigan Screening Profile for Parenting was done by its original source in Denver, Colorado.

An alpha level of .05 was used in determining the probability of a type one error. The null hypothesis was rejected if the significant

level was .05 or lower. If the alpha level was between .05 and .10, this was considered as approaching significance and the entire cluster of tests and observations were assessed in determining whether to reject the null hypothesis.

CHAPTER IV

RESULTS: PHASE I ANALYSIS

Demographic Characteristics

During Phase I, demographic data were collected for each participant. The Protective Services workers completed the National Standard Form of the National Clearinghouse on Child Neglect and Abuse for each family. A random sample was also chosen from each site from the entire Protective Services county population in order to compare how representative the research group was at each location. The results are summarized in Table 1. On a site by site basis, several significant distinctions can be noted: In two sites, the research group is lower in the area of married participants. In one site the percentage of white participants is higher than the random sample. This same site also had a significantly higher percent of broken families in the research group.

Family discord was higher in site two for the random group. Insufficient income was true of a significantly greater number of research families than random ones. Significant differences also occurred in continuous child care responsibility and physical abuse of spouse and fighting. Inadequate housing was significantly more of a problem for the research group in two sites, and less in one site. Social isolation was a significant factor in all sites for the research groups. Loss of

control during discipline, lack of tolerance due to the child's disobedience and normal authoritarian method of discipline were higher for the random group than the research one. One site had a significantly higher research group with alcohol dependence. Two of the three sites' research groups were significantly higher in the area of lack of parenting skills.

Although this analysis demonstrates that the research group cannot be generalized to the entire county population, in almost every significantly different characteristic, the research group demonstrates more problematic behavior with the exceptions of those characteristics most typical of abuse - loss of control during discipline, lack of tolerance for disobedience and authoritarian methods.

Further analysis was done to compare the research group with similar statistics from the statewide population of Protective Services cases (See Table 2). Within the 29 characteristics compared, only three emerge as significantly different between the research group and the total population. The study contained more participants with parental history of abuse as a child (26.9% to 13.5%) and with physical abuse of spouse and fighting (23% to 12.3%) and fewer black families (12.5% to 23.9%). Therefore, with the exception of these non-representation factors, the sample can be viewed as fairly similar to the statewide population of Protective Services families. No national data are available to offer a broader comparison.

TABLE 1

Comparison of Research Group with Random Group
By Site and Characteristic

	Characteristic	Site 1 Research N=9	Site 1 Random N=7	Site 1 x^2	Site 2 Research N=9	Site 2 Random N=8	Site 2 x^2	Site 3 Research N=8	Site 3 Random N=9	Site 3 x^2
1.	Age	27.5	31.4	.48	30.6	31.5	.03	25.1	30	.80
2.	Number of Children	2.8	2.7	.0004	3.3	3.3	N.D.	2.4	3.8	.52
3.	Highest Education	10	10.4	.02	9.5	10.1	N.D.	11.3	9.7	.26
4.	Marital Status Divorced	33%	33%	N.D.	33%	25%	2.56	37.5%	0%	¢
5.	Single	44%	44%	N.D.	22%	12.5%	7.22*	25%	33%	1.94
6.	Married	11%	22%	5.5*	44%	50%	.72	37.5%	66%	12.31*
7.	Other	11%	0	¢	0	12.5%	¢	0	0	N.D.
8.	Race White	66%	66%	N.D.	77%	87%	1.15	100%	66%	17.52*
9.	Black	33%	33%	N.D.	0	12.5%	¢	0	22%	¢

TABLE 1 (cont'd.)

	Characteristic	Site 1 Research N=9	Site 1 Random N=7	Site 1 x^2	Site 2 Research N=9	Site 2 Random N=8	Site 2 x^2	Site 3 Research N=8	Site 3 Random N=9	Site 3 x^2
10.	Other	0	0	N.D.	23%	0	¢	0	11%	¢
11.	Number of Factors Contributing to Situation	6.4	5.7	.09	2.6	4.4	.74	4.3	3.1	.46
12.	Broken Family	33%	33%	N.D.	33%	38%	.42	44%	13%	73.9*
13.	Family Discord	56%	56%	N.D.	22%	63%	26.68*	56%	63%	.78
14.	Insufficient Income/Misuse	33%	44%	2.75	22%	13%	6.23*	22%	13%	6.23*
15.	New Baby/Pregnancy	33%	0	¢	0	13%	¢	11%	0	¢
16.	Heavy Continuous Child Care Responsibility	33%	22%	5.5*	11%	25%	7.84*	11%	0	¢
17.	Physical Abuse of Spouse/Fighting	44%	11%	99*	0	50%	¢	22%	0	¢

TABLE 1 (cont'd.)

Characteristic	Site 1			Site 2			Site 3		
	Research N=9	Random N=7	x^2	Research N=9	Random N=8	x^2	Research N=8	Random N=9	x^2
18. Parental History of Abuse as a Child	56%	22%	52.55%	22%	25%	.36	0	25%	¢
19. Recent Relocation	44%	33%	3.67	11%	38%	19.18*	11%	0	¢
20. Inadequate Housing	22%	11%	11*	22%	13%	6.23*	22%	38%	6.74*
21. Social Isolation	33%	22%	5.5*	33%	13%	30.7*	44%	25%	14.44*
22. Loss of Control During Discipline	11%	33%	14.67*	11%	38%	19.18*	11%	25%	3.45
23. Lack of Tolerance Due to Child's Disobedience and Provocation	33%	66%	16.5*	11%	25%	7.84*	22%	13%	3.45
24. Incapacity Due to Physical Handicap/ Chronic Illness	11%	0	¢	0	0	N.D.	0	0	N.D.

TABLE 1 (cont'd.)

	Characteristic	Site 1 Research N=9	Site 1 Random N=9	Site 1 x^2	Site 2 Research	Site 2 Random	Site 2 x^2	Site 3 Research	Site 3 Random	Site 3 x^2
25.	Alcohol Dependence	11%	0	¢	11%	13%	.31	22%	13%	6.23*
26.	Drug Dependence	11%	11%	N.D.	0	0	N.D.	0	0	N.D.
27.	Mental Retardation	0	11%	¢	11%	13%	.31	0	13%	¢
28.	Mental Health Problem	22%	33%	3.67	0	25%	¢	33%	0	¢
29.	Police/Court Record (excluding traffic)	0	11%	¢	0	0	N.D.	0	0	N.D.
30.	Normal Authoritarian Method of Discipline	11%	33%	14.67*	0	0	N.D.	22%	0	¢
31.	Lack of Parenting Skills	78%	78%	N.D.	100%	38%	101.16*	56%	88%	11.64*

* x^2 Score significant at .05 level or below
N.D. No difference in score exists
¢ 0 score, unable to compute x^2

TABLE 2

Comparison of Total Research Group With Statewide Protective Services Population By Characteristic

CHARACTERISTIC	RESEARCH GROUP	STATE POPULATION	x^2
1. Age	27.8	31.58	.51
2. No. of Children	2.85	2.51	.04
3. Highest Education	10.26	10.38	.003
MARITAL STATUS			
4. Divorced	34.6%	36.8%	.14
5. Single	30.7%	20.5%	3.29
6. Married	30.7%	40.4%	3.06
7. Other	3.8%	2.3%	.59
RACE			
8. White	87.5%	71.4%	2.96
9. Black	12.5%	23.9%	10.4*
10. Other	7.6%	4.7%	1.11
FAMILY FACTORS PRESENT			
11. Broken Family	38.4%	45.1%	1.17

* = x^2 Score significant at .05 level or lower

TABLE 2 (cont'd.)

CHARACTERISTIC	RESEARCH GROUP	STATE POPULATION	x^2
12. Family Discord	46%	38.4%	1.26
13. Insufficient Income/Misuse of Adequate Income	26.9%	31%	.62
14. New Baby in Home/Pregnancy	15.3%	12.3%	.59
15. Heavy Continuous Child Care	19.2%	23.8%	1.1
16. Physical Abuse of Spouse/Fighting	23%	12.3%	4.98*
17. Parental History of Abuse as a Child	26.9%	13.5%	6.68*
Environmental/Social			
18. Recent Relocation	23%	15.8%	2.25
19. Inadequate Housing	23%	21%	.17
20. Social Isolation	26.9%	17.2%	3.5

TABLE 2 (cont'd.)

CHARACTERISTIC	RESEARCH GROUP	STATE POPULATION	x^2
Parental Capacity			
21. Loss of Control During Discipline	11.5%	17.8%	3.45
22. Lack of Tolerance Due to Child's Disobedience and Provacation	23%	24.2%	.06
23. Incapacity Due to Physical Handicap/ Chronic Illness	3.8%	4.9%	.32
24. Alcohol Dependence	11.5%	13.4%	.31
25. Drug Dependence	3.8%	4.9%	.32
26. Mental Retardation	3.8%	3.6%	.01
27. Mental Health Problem	19.2%	19.3%	.0005
28. Police/Court Record (excluding traffic)	4%	8.3%	4.62
29. Normal Authoritarian Method of Discipline	7.7%	10.8%	1.25

* = x^2 Score significant at .05 level or lower

The mean age of the participants was 27.8 years. The average number of children was 2.85 and the average education of the mother was 10th grade. Slightly less than one-third were married, another one-third divorced or single. The most frequent family factors present were: insufficient income, parental history of abuse as a child, social isolation, family discord and broken family.

Michigan Screening Profile of Parenting

Results of the Michigan Screening Profile of Parenting are reported in Table 3. The participants demonstrated the most risk, i.e., Parenting Problem Likely, in the areas of Emotional Needs Met and Coping. These two areas would seem particularly appropriate since they are related to current and past relationships with people and a feeling of helplessness, and are primary components of parenting problems. The areas of problems with Expectations of Children and Relationship with Parents are not as characteristic of the research group as the random group.

A correlational analysis, utilizing Phi Coefficient was done by separating the sample into two risk groups: those demonstrating "Parenting Problem Likely", labeled high risk and those who scored "Probably No Risk" or "No Apparent Risk" as low risk. These groups were compared with other demographic characteristics which were also grouped: age was divided into under thirty and thirty and over; education was divided into less than twelve years and twelve years and over and Number of Children was divided into one and two children and three or more children. Tables 4 and 5 summarize the findings.

TABLE 3

Michigan Screening Profile of Parenting
Frequency By Category

	PARENTING PROBLEM LIKELY		PROBABLY NO RISK		NO APPARENT RISK	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Emotional Needs Met	17	68	0	0	8	32
Relationship with Parents	7	28	2	8	16	64
Expectations of Children	8	32	5	20	12	48
Coping	12	48	4	16	9	36

TABLE 4

Emotional Needs Met and Relationship with Parents
Compared with Age, Education and Number of Children

Variables		Emotional Need Met		Relationship With Parents	
		High Risk	Low Risk	High Risk	Low Risk
Age -30	Frequency	7	5	4	8
	Percent	31.8	22.7	18.2	36.4
30+	Frequency	7	3	1	9
	Percent	31.8	13.6	4.5	40.9
	PHI	.12		.28	
	Significance		.29		.10
Education -12	Frequency	13	3	6	10
	Percent	54.2	12.5	25	41.7
12+	Frequency	3	5	0	0
	Percent	12.5	20.8	0	33.3
	PHI	.44		.41	
	Significance		.018*		.025*
Children 1-2	Frequency	5	3	2	6
	Percent	20.8	12.5	8.2	25
3+	Frequency	11	5	4	12
	Percent	45.8	20.8	16.7	50
	PHI	.06		0	
	Significance		.38		.5

*Significant at .05 level or lower

TABLE 5

Expectation of Children and Coping
Compared with Age, Education and Number of Children

Variables		Expectation of Children		Coping	
		High Risk	Low Risk	High Risk	Low Risk
Age -30	Frequency	4	8	4	8
	Percent	18.2	36.4	18.2	36.4
30+	Frequency	3	7	7	3
	Percent	13.6	31.8	31.8	13.6
	PHI	.035		.365	
	Significance		.435		.047
Education -12	Frequency	4	12	9	7
	Percent	16.7	50	37.5	29.2
12+	Frequency	3	5	3	5
	Percent	12.5	20.8	12.5	20.8
	PHI	.13		.18	
	Significance		.27		.198
Children 1-2	Frequency	3	5	2	6
	Percent	12.5	20.8	8.3	25
3+	Frequency	4	12	10	6
	Percent	16.7	50	41.7	25
	PHI	.13		.35	
	Significance		.27		.045

The same significant correlations were discovered:

Emotional Needs Met demonstrated a significant correlation with Education. More high risk mothers had a lower educational attainment.

Relationship with Parents also correlated with Education with all high risk mothers having less than twelve years of education. A majority of mothers, however, scored in the low risk category regardless of education.

Expectation of Children demonstrated no significant correlations. Coping had two significant discriminators in which twice as many older mothers were high risk, with the reverse for younger mothers - half of the under thirty mothers were considered high risk. A similar grouping can be discovered in this category for the number of children. Those with three or more children were more likely to be high risk, whereas, mothers with one or two were three times as likely to be low risk.

No single characteristic, age, education, or number of children, however, appears consistently across all four variables of the Michigan Screening Profile of Parenting as a significant correlation with risk.

Childhood Level of Living

A summary of Phase I C.L.L. scores can be seen in Table 6.

TABLE 6

Initial Scores on Childhood Level of Living
By Means and Characteristic

CHARACTERISTIC	MEAN	STANDARD DEVIATION	RANGE
Supervision, Control & Discipline	68.44	14.85	23 - 93
Family Interaction & Characteristics	60.48	12.63	37 - 80
Child Development Activities	73.28	17.39	42 - 100
Nutritional Health	77.24	14.27	43 - 93
Physical Environment/ Household Maintenance	77.68	25.1	11 - 100
Total Observation Score	69.2	12.08	30 - 84
Total Interview Score	72.78	10.36	52 - 88
Total Combined Score	70.92	9.85	45 - 86

The total combined score mean was 70.92 with a standard deviation of 9.85. This score, compared to Polansky's non-adapted instrument would place the families in the area of "neglectful" to "marginal child care" categories. In general, a large range of scores was seen across all variables. The area of Physical Environment and Household Maintenance demonstrated the highest standard deviation, 25.1, and the largest range from 11 to 100. Some mothers were living in condemned housing with roaches and garbage prevalent whereas others were immaculate housekeepers. The variable of Child Development Activities also had a large standard deviation of 17.39 with some mothers uninvolved with their children and a few fully participating.

Interviewers made several types of general observations regarding the families they visited. Many of the mothers they visited were still sleeping late in the morning, two were wearing pajamas in mid-afternoon. Older children were often still asleep or in bed during afternoons. Approximately one-fourth of the mothers were described as open, friendly, and cooperative. The majority of the mothers appeared to be fearful, apathetic and depressed. Several mentioned being afraid to go out without their parent aide or spouse. Husbands or boyfriends were generally described as demanding and constantly angry. Discipline varied considerably with some mothers warmly interacting with their children and others oblivious or physically punitive. Interviewers were confident of their family ratings with almost all scores being rated at a "4" or "5" degree of certainty with "5" being very adequate evidence or "1" being "Pure Guessing".

Eco-Map

An analysis of the initial eco-map of the families is summarized in Tables 7 and 8. Table 7 describes the frequency of the importance of relationships as described by the mothers for their families. The variables of Parent-Child, Parent/Parent or Significant Other, Extended Family, Parent Aide, and Welfare are considered very important by the majority of participants. The type of relationship with these important variables is rarely considered strong; only the parent aide relationship is described by 72 percent of the participants as "strong", the parent-child relationship is described by 56 percent strong, and welfare is described by 48 percent as strong. Only 24 percent of the mothers describe a strong relationship with a friend.

The frequency of stressful relationships as pictured by the eco-map is also noteworthy. Housing, Protective Services, Extended Family and Parent/Parent, Significant Other are those systems presented as most stressful, while at the same time they are also considered quite important.

The energy flow of the family eco-map was also analyzed (See Table 9). Approximately three of the relationships were described as reciprocal, followed by those relationships where more energy was consumed rather than received. This was particularly true of the Housing System which was often pictured as highly stressful and energy demanding. The last energy flow, receiving more than giving, was frequently used to describe the Welfare System and Parent Aide.

TABLE 7

Initial Eco-Map Descriptions By
Importance of Relationships

	Very Important		Somewhat Important		Of Little Importance	
Relationship	Frequency	Percent	Frequency	Percent	Frequency	Percent
Parent-Child	24	96	1	4	0	0
Parent/Parent Significant Other	18	72	2	8	0	0
School	10	40	8	32	1	4
Court	2	8	6	24	2	8
Protective Services	8	32	16	64	1	4
Welfare	13	52	7	28	0	0
Extended Family	16	64	6	24	2	8
Parent Aide	13	52	12	48	0	0
Housing	9	36	13	52	0	0
Work	4	16	10	40	0	0
Friends	5	20	6	24	3	12
Health Care	2	8	5	20	0	0
Recreation	3	12	4	16	1	4

TABLE 8

Initial Eco-Map Descriptions By
Type of Relationship

Relationship	STRONG		TENUOUS		STRESSFUL	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Parent-Child	14	56	5	20	6	24
Parent/Parent Significant Other	10	40	1	4	9	36
School	9	36	4	16	6	24
Court	2	8	3	12	5	20
Protective Services	6	24	9	36	10	40
Welfare	12	48	4	16	4	16
Extended Family	7	28	8	32	9	36
Parent Aide	18	72	7	28	-	0
Housing	2	8	5	20	15	60
Work	4	16	2	8	8	32
Friends	6	24	8	32	0	0
Health Care	1	4	2	8	4	16
Recreation	4	16	4	16	0	0

TABLE 9

Initial Scores on Energy:
Means By Direction of Flow

ENERGY FLOW	MEAN NO. OF RELATIONSHIPS	STANDARD DEVIATION	RANGE
More Energy Out Than In	2.64	1.56	1 - 6
More Energy In Than Out	2.09	1.06	1 - 5
Reciprocal - Same Amount In and Out	3.08	1.72	1 - 5

TABLE 10

Initial Scores on Family Support Index:
Frequency By Degree of Isolation

DEGREE OF ISOLATION	FREQUENCY	PERCENT
Completely Isolated	18	72
Family Dyad	3	12
Friend Dependent	3	12
Family Bound	0	0
Family and Friend Related	0	0
Supported	1	4

Family Support Index

The initial scores on the Family Support Index showed a large majority (72 percent) of the families to be completely isolated (Table 10). In response to the question from whom they had requested help in the last year, the mothers' most frequent response was from the formal resource system: welfare, Protective Services, Mental Health and other similar agencies. Polansky's established norms for this instrument indicate that only 28 percent of the mothers were at this low a score and 50 percent falling at "Friend Dependent" or lower, compared to this study, with 96 percent at that level (Polansky, Chalmers, Buttenwiesner, Williams, 1978). It would appear that the research sample of mothers for whom a parent aide has been assigned is considerably more socially isolated than other neglecting families. This difference becomes even more extreme when compared to Polansky's control families with similar economic levels. Only four percent of the control families were Completely Isolated, and nine percent were at the "Friend Dependent or lower".

Parent Aide Role

Both parent aides and mothers were asked to name the five most important activities of a parent aide. In analyzing the top three of the five activities, there was considerable agreement between the mothers and parent aides with friendship and help with the children seen by both as the most important, followed by assistance with transportation, support, and advice (Table 11). Social activities and gifts for children were mentioned by mothers but not parent aides. Being a good listener, a

TABLE 11

Parent Aide Role as Perceived By Mothers & Parent Aides: Response By Activity

PARENT AIDE ROLE	RESPONSE				
	MOTHERS'		PARENT AIDES'		
	Frequency	Percent	Frequency	Percent	x^2
Friendship	22	84.6	19	73	1.59
Assist with Transportation	11	42.3	12	46	.32
Helper with Children and Personal Development of Parent	16	61.5	19	73	2.15
Support	6	23	8	30	2.13
Advisor	11	42	8	30.7	3.04
Social Activities	7	26.9	#	#	
Gifts for Children	4	15.3	#	#	
Be Available	2	7	10	38	137.29*
A Good Listener	#	#	12	46	
Resource Person	#	#	9	34.6	
Role Model	#	#	7	26.9	

* = x^2 Score significant at .05 level or below

No direct equivalent

resource person and role model were listed by parent aides but not mothers. Parent aides also noted a significantly higher amount of times "being available".

CHAPTER V

RESULTS: PHASES I, II AND III

The results of the data analysis are reported in this chapter based on each hypothesis and the statistical test utilized.

Hypothesis 1: There is no difference in the participants' parenting behavior over the three phases of the study.

The Pearson Correlation Coefficient was employed to determine the extent of the relationships among individual variables in the Childhood Level of Living instrument. Over 50 percent correlated at a significance level of .05 or lower (see Appendix B for more details). There appears to be internal consistency throughout the tool; the two scores which correlated significantly with the others most frequently were the Observation, and Total Phase I variables with an 83 percent significant correlation of .05 or lower. The Childhood Level of Living instrument was employed to test Hypothesis 1 and its sub-hypotheses.

Three variables of the Childhood Level of Living were used to measure this hypothesis: Observation, Interview, and Total Scores. Two statistical tests were also utilized: the Friedman Repeated Measures One-Way Analysis of Variance and the Dependent T Test. Results are summarized in Tables 12, 13, 14, 15, 16, and 17. The Friedman Test

also examined whether there were significant differences between the change scores for these variables (Table 18).

Neither the Friedman nor the T Test analysis demonstrates significant changes in the Observation Scores. The mean ranks show a slight increase but not one sufficient to indicate real change. Phases II to III also indicated a small decline.

The Interview and Total Scores, however, do demonstrate significant changes for Phase I to Phase II and Phase I to Phase III. No significant change is evidenced for Phase II to Phase III, although there is an increase within the mean ranks.

The Friedman Test which analyzed change between the phases also confirmed this pattern. This test, as contrasted with the others, examined the amount of change between phases, rather than comparing actual scores. There is a significant difference in the amount of change occurring between Phase I to II as contrasted to change between Phase II and Phase III. Most of the improvement in change scores occurred between Phase I and II. There is no significant difference in change evidenced between the time frame Phase I and Phase II, and the time period of Phase I and III. Both of these time periods demonstrate considerable improvement and change.

General observations by the interviewers also offer indications of improvement in parenting behavior. Less fear and distrust were expressed toward the interviewer and out-of-home environment than previously. There were fewer incidents of sleeping late in the morning and general conversation in respect to others was more positive in nature.

TABLE 12

Change in Observation Score By Phase: Friedman Test

Phase Interval	Observation Mean Ranks#		x^2	Significance
Phase I to II N=24	1.37	1.62	1.5	.220
Phase II to III N=23	1.5	1.5	0	1.00
Phase I to III N=23	1.41	1.58	.6957	.404

TABLE 13

Change in Observation Score By Phase: T Test

Phace Interval	Observation Means#					
	Mean	S.D.	Mean	S.D.	T Value	Significance
Phase I to II N=22	70.06	9.014	71.50	11.70	.75	.46
Phase II to III N=21	71.21	11.07	70.60	13.39	.36	.71
Phase I to III N=20	70.11	8.67	71.25	13.39	.47	.64

S.D. = Standard Deviation
*Significant at .05 or lower
#Note: In Column Heading Mean Ranks or Means, the first figure refers to the first Phase denoted in the Phase Interval Column, the second figure refers to the second Phase denoted in the Phase Interval Column.

TABLE 14

Change in Interview Score By Phase: Friedman Test

Phase Interval	Interview Mean Ranks#		x^2	Significance
Phase I to II N=25	1.28	1.71	4.34	.037*
Phase II to III N=23	1.57	1.43	.39	.532
Phase I to III N=21	1.19	1.81	8.04	.004*

TABLE 15

Change in Interview Score By Phase: T Test

Phase Interval	Observation Means#					
	Means	S.D.	Mean	S.D.	T Value	Significance
Phase I to II N=22	73.60	10.11	77.59	11.47	1.77	.09
Phase II to III N=21	77.30	11.59	80.14	11.12	1.07	.29
Phase I to III N=20	73.11	10.47	80.43	11.12	2.62	.01*

S.D. = Standard Deviation
*Significant at .05 or lower
#See notation page 83

TABLE 16

Change in Total Score By Phase: Friedman Test

Phase Interval	Observation Mean Ranks#		x^2	Significance
Phase I to II N=25	1.24	1.76	6.76	.009
Phase II to III N=23	1.48	1.52	.04	.83
Phase I to III N=23	1.21	1.78	7.34	.006*

TABLE 17

Change in Total Score By Phase: T Test

Phase Interval	Total Means # Mean	S.D.	Mean	S.D.	T Value	Significance
Phase I to II N=22	71.89	7.72	75.15	9.80	1.99	.06
Phase II to III N=20	74.77	10.13	75.87	9.92	.63	.53
Phase I to III N=21	71.66	7.92	76.38	9.80	2.50	.02*

S.D. = Standard Deviation
*Significant at .05 or lower
#See notation page 83

TABLE 18

Comparison of Total CLL Change Scores By Phase:
Friedman Test

Phase Interval Change Scores	Mean Ranks#	x^2	Significance
Change Score I to II to Change Score II to III N=22	1.77 1.22	6.54	.01*
Change Score I to II to Change Score I to III N=21	1.47 1.52	.04	.82

*Significant at .05 or lower
#See notation on page 83

Hypothesis 1 was rejected. Participants did change and improve in their parenting behavior during the study. Specific components of parenting behavior are analyzed within the sub-hypotheses.

Hypothesis 1.1: The participants will not change in the area of supervision, control, and discipline of their children.

The Friedman Repeated Measures One-Way Analysis of Variance and the T Test were used to determine if there were changes in supervision, control and discipline of children. A summary of the results is presented in Table 19 and Table 20.

TABLE 19

Change in Supervision, Control, and Discipline
By Phase: Friedman Test

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.22	1.78	7.84	.005*
Phase II to III N=23	1.52	1.48	.043	.83
Phase I to III N=23	1.39	1.60	1.08	.29

TABLE 20

Change in Supervision, Control and Discipline
By Phase: T Test

Phase Interval	Mean#	S.D.#	Mean	S.D.	T Value	Significance
Phase I to II N=22	69.76	11.85	75.3	10.84	2.25	.036*
Phase II to III N=21	73.46	11.94	73.73	11.85	.09	.930
Phase I to III N=20	68.51	11.68	74.09	12.04	1.75	.097

*Significant at .05 or lower
#See notation on page 83
S.D. = Standard Deviation

Both the Friedman and T Test show a significant change from Phase I to Phase II. No change occurred between Phases II and III although a slight increase in mean ranks can be noted. Change between Phase I to Phase III is not significant, however, it approaches significance in the T Test.

Hypothesis 1.1 was rejected. Participants did change in the area of supervision, control and discipline between Phases I and II. They also slightly improved during Phases II and III.

Hypothesis 1.2: The participants will not change in the area of family interaction.

Changes in family interaction during the study were analyzed by the Friedman One-Way Analysis of Variance and the T Test. Tables 21 and 22 exhibit the findings.

TABLE 21

Change in Family Interaction
By Phase: Friedman Test

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.22 1.78	7.84	.005*
Phase II to III N=23	1.46 1.54	.17	.67
Phase I to III N=23	1.34 1.65	2.13	.14

*Significant at .05 or lower
#Note: In Column Heading Mean Ranks or Means, the first figure refers to the first Phase denoted in the Phase Interval Column, the second figure refers to the second Phase denoted in the Phase Interval Column.

TABLE 22

Change in Family Interaction
By Phase: T Test

Phase Interval	Mean#	S.D.#	Mean	S.D.	T Value	Significance
Phase I to II N=22	59.34	12.71	63.14	14.17	1.02	.32
Phase II to III N=21	63.91	14.92	65.34	12.40	.56	.58
Phase I to III N=20	59.44	13.35	65.71	12.60	1.63	.12

S.D. = Standard Deviation
#See notation on page 88

For this variable, there is a difference in agreement as to significance between the two tests. The Friedman indicates a significant change between Phases I and II, with the change between I and III approaching significance. The T Test does not find any significant change at any Phase, although it does agree with the Friedman in determining Phase II to Phase III not significant and Phase I to Phase III as approaching significance. Since the Friedman indicates an increased score based on the individual's ranking as compared to group means, as tested by the T Test, it would appear to be more useful of the two. Based on its conclusions, Hypothesis 1.2 was rejected. Participants improved significantly in their family interaction between Phases I and II and approached significant change between Phases I and III.

Hypothesis 1.3: The participants will not change in the area of child development activities.

This hypothesis was rejected. The results of the Friedman Repeated Measures One-Way Analysis of Variance and T Test are reported in Tables 23 and 24.

TABLE 23

Change in Child Development Activities
By Phase: Friedman Test

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.30	1.70	4	.04*
Phase II to III N=23	11.63	1.37	1.56	.21
Phase I to III N=23	1.37	1.63	1.56	.21

*Significant at the .05 level or lower
#See notation on page 88

TABLE 24

Change in Child Development Activities
By Phase: T Test

Phase Interval	Means # Mean	S.D.	Mean	S.D.	T Value	Significance
Phase I to II N=22	74.94	14.83	82.55	12.85	2.04	.05*
Phase II to III N=21	83.82	12.74	79.15	14.96	1.26	.22
Phase I to III N=20	74.86	15.44	79.67	15.15	.96	.35

S.D. = Standard Deviation
*Significant at the .05 level or lower
#See notation on page 88

Both tests indicate a significant difference between Phase I and II. Phase II to Phase III, however, notes a definite decrease although not at a significant level. Overall general improvement from the beginning to the end is indicated by the increase in numbers but not significantly. The significant change is sufficient enough, however, to reject the hypothesis. The participants did change and improve in their child development activities between Phases I and II, some of this gain was lost during the next phase.

Hypothesis 1.4: The participants will not change in the area of nutrition and health.

Significant changes from Phase I to Phase II and Phase I to Phase III provide sufficient evidence to reject this hypothesis. A

summary of the data analyses using both the Friedman One-Way Analysis of Variance and the T Test are in Tables 25 and 26.

TABLE 25

Change in Nutrition and Health
By Phase: Friedman Test

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.3 1.7	4	.0455*
Phase II to III N=23	1.46 1.54	.174	.6777
Phase I to III N=23	1.196 1.804	8.5217	.0035*

TABLE 26

Change in Nutrition and Health
By Phase: T Test

Phase Interval	Means # Mean	S.D.	Mean	S.D.	T Value	Significance
Phase I to II N=22	78.87	11.60	84.04	11.09	1.74	.09
Phase II to III N=21	82.08	10.19	85.37	11.35	1.34	.19
Phase I to III N=20	78.93	11.32	85.30	11.54	1.93	.06

S.D. = Standard Deviation
*Significant at the .05 level or lower
#See notation on page 88

Although the T Test does not show as significant a change between Phases as the Friedman, the T Values are very close to significance. A steady increase in improvement throughout the study can be observed within the mean ranks. Participants did improve in the areas of nutrition and health, particularly from the beginning to the end of the study.

Hypothesis 1.5: The participants will not change in the areas of physical environment and household maintenance.

Evidence from the analysis of this data is insufficient to reject it. Results from the Friedman Repeated Measures One-Way Analysis of Variance and the T Test are presented in Tables 27 and 28.

TABLE 27

Change in Physical Environment and Household Maintenance By Phase: Friedman Test

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=21	1.35 1.64	1.71	.19
Phase II to III N=23	1.61 1.39	.84	.35
Phase I to III N=22	1.43 1.56	.40	.52

#Note: In Column Heading Mean Ranks or Means, the first figure refers to the first Phase denoted in the Phase Interval Column, the second figure refers to the second Phase denoted in the Phase Interval Column.

TABLE 28

Change in Physical Environment and Household Maintenance
By Phase: T Test

Phase Interval	Means # Mean	S.D.	Mean	S.D.	x^2	Significance
Phase I to II N=22	82.26	18.98	71.92	33.21	1.52	.14
Phase II to III N=21	70.40	33.55	73.46	30.75	.49	.62
Phase I to III N=20	82.58	18.74	74.85	30.85	1.40	.17

S.D. = Standard Deviation
#See notation on page 93

The Friedman and T Test provide distinctively different information, although both agree there were no significant changes during the study for this variable. The Friedman Test indicates an improvement in mean ranks from Phase I to II, a decline from Phase II to Phase III but a general overall improvement for individual rankings. The T Test, which utilizes group means, shows a general decline in scores with some improvement by Phase III but still considerably below the initial score. Therefore, as a group there was a general decline in physical environment and household maintenance, but for individual rankings, a general trend in a positive direction can be seen.

Hypothesis 2: There is no difference in the mean and frequency of the type and importance of the participants' relationship with other systems over the three phases of the study or the direction of energy utilized.

The purpose of this general hypothesis was to test the change in relationships of the family with other systems in the environment as represented by the Eco-Map. The Friedman Repeated Measures One-Way Analysis of Variance was used to examine the change in types of relationships and importance of relationships. Both strong and stressful types of relationships were assessed. Results are summarized in Tables 29 through Table 33. Table 34 depicts the general change in direction of energy flow. Each sub-hypothesis represents a specific type of relationship and will be examined separately.

Hypothesis 2.1: The participants will not change in the frequency and mean of relationships described as important.

The overall frequency of important relationships was computed for each phase. The Friedman Repeated Measures One-Way Analysis of Variance was utilized to determine if any significant differences between phases occurred. The results are summarized in Table 29.

TABLE 29

Change in Frequency of Important Relationships
By Phase

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.42 1.58	.64	.42
Phase II to III N=	1.37 1.63	1.56	.21
Phase I to III N=	1.39 1.61	1.08	.29

#See notation on page 93

Although there is a general increase in the number of important relationships, the difference in frequency is not sufficient to reach a significant level.

The value of important relationships was also determined for each phase as to whether significant differences were evidenced. The results are summarized in Table 30.

TABLE 30

Change in Value of Important Relationships
By Phase

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.45	1.54	.17	.67
Phase II to III N=23	1.41	1.58	.59	.40
Phase I to III N=23	1.39	1.60	1.08	.29

#See notation on page 93

The trend for an increase in the value of important relationships is similar to that of the frequency. Although the value increased, it did not change enough to become statistically significant. Therefore, there is insufficient evidence to reject Hypothesis 2.1.

Hypothesis 2.2: The participants will not change in the frequency of strong relationships.

The overall frequency of strong relationships was calculated at each phase to determine if significant change had occurred. The Friedman One-Way Analysis of Variance was the statistical test employed. Table 31 summarizes the data.

TABLE 31

Change in Frequency of Strong Relationships
By Phase

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.34	1.66	2.56	.11
Phase II to III N=23	1.41	1.59	.69	.40
Phase I to III N=23	1.35	1.65	2.13	.14

#See notation on page 93

Changes approaching significance can be seen for scores from Phase I to Phase II and from Phase I to Phase III. There is no significant change from Phase II to Phase III although a general increase can be observed. An analysis of the value of strong relationships also demonstrates a similar pattern as shown in Table 32.

TABLE 32

Change in Value of Strong Relationships
By Phase

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.22	1.78	7.84	.005*
Phase II to III N=23	1.36	1.64	1.96	.16
Phase I to III N=23	1.20	1.80	9	.002*

*Significant at .05 or lower
#See notation on page 93

Significant changes are achieved for Phases I to II and Phases I to III. The amount of change for Phases II to III also approaches significance. Therefore, sufficient differences exist to reject Hypothesis 2.2. Participants did change in the frequency of strong relationshps; both the frequency and value increased.

Hypothesis 2.3: The participants will not change in the frequency of stressful relationships.

A summary of the Friedman One-Way Analysis of Variance for change in the frequency of stressful relationships is shown in Table 33.

TABLE 33

Change in Frequency of Stressful Relationships
By Phase

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.72 1.28	4.84	.02*
Phase II to III N=23	1.63 1.37	1.56	.21
Phase I to III N=23	1.87 1.13	12.56	.000*

*Significant at .05 or lower
#See notation on page 93

A significant decrease in stressful relationships can be observed between Phases I and II and Phases I and III. Although a reduction also occurs between Phases II and III, it is not significant. The overall change is highly significant, .000, therefore Hypothesis 2.3 was rejected. Participants did change in the frequency of stressful relationships; these types of relationships decreased.

Hypothesis 2.4: The participants will not change in the direction of energy flow involved with their relationships.

The direction of energy flow utilization characteristic of the participants' relationships was described during Phase I and Phase III. The Friedman One-Way Analysis of Variance was used to determine if significant change occurred. Table 34 summarizes the data.

TABLE 34

Change in Frequency of Energy Utilization
By Type of Energy

Energy Direction	Mean Ranks Phase I	Phase III	x^2	Significance
More Energy Out Than In N=24	1.79	1.20	8.16	.004*
More Energy In Than Out N=24	1.72	1.27	5.04	.02*
Reciprocal Energy N=24	1.10	1.89	15.04	.0001*

*Significant at .05 or lower

Significant changes in the direction of energy utilized happened for all three variables. During Phase I, more relationships were described as requiring more energy than received. Reciprocal relationships constituted the most infrequent category. During Phase III, the reverse was true. Reciprocal relationships became the most commonly described ones with concomitant significant decreases in the relationships described as requiring more energy or receiving more energy. Hypothesis 2.4 was therefore rejected. The participants did change in the direction of energy flow involved with their relationships, with reciprocal energy flow becoming most typical.

Hypothesis 3: There is no difference in the participants' degree of social isolation over the length of the study.

Two major instruments were utilized to examine social isolation in neglectful families: the Family Support Index and the Family Eco-Map. The Friedman Two-Way Analysis of Variance was used for both instruments as well as the Chi-Square Test to determine differences in frequency on the Family Support Index.

An analysis of the number of response changes on the Family Support Index is summarized on Table 35.

TABLE 35

Frequency of Change from Phase I to Phase III
By the Family Support Index Score

Index Score	Phase I N=25		Phase III N=23		x^2
	Frequency	Percent	Frequency	Percent	
1. Completely Isolated	18	72	7	30.4	24.04*
2. Family Dyad	3	12	0	0	¢
3. Friend Dependent	3	12	6	25.8	15.87*
4. Family Bound	0	0	3	13	¢
5. Family and Friend Related	0	0	5	21.5	¢
6. Supported	1	4	2	8.6	5.29*

*Significant at .05 or lower
¢Unable to calculate x^2

A considerable number of changes occurred. The 72 percent of the participants who had been completely isolated and formal system reliant

at the beginning of the study was reduced to 30 percent; whereas of the 96 percent who had been at Friend Dependent or below previously, only 56 percent were at this point at the end. Fourty-four percent had new family resources among the top three ranks of the scale compared to an original four percent.

The Friedman Test confirmed this significant change from Phase I to Phase III.

TABLE 36

Family Support Index Change

Mean Ranks	Phase I	Phase III	x^2	Significance
N=24	1.20	1.79	8.16	.004*

*Significant at .05 or lower

Thus, it can be seen that a great deal of change occurred in the resources the families called upon for assistance.

The Eco-Map findings were also useful in testing the sub-hypotheses.

Hypothesis 3.1: The participants will not change in their relationship and reliance on a formal resource system.

A new variable, the Formal Resource System was developed by combining several variables in the Eco-Map. The Friedman Test was utilized to determine whether changes occurred between phases in the areas of importance and strength of the Formal Resource Systems. The results are summarized in Tables 37 and 38.

TABLE 37

Change in Frequency of Important Formal Resource Systems
By Phase

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.6 1.4	1	.31
Phase II to III N=23	1.48 1.52	.04	.83
Phase I to III N=23	1.54 1.46	.17	.67

TABLE 38

Change in Frequency of Strong Formal Resource Systems
By Phase

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.32 1.68	3.24	.07
Phase II to III N=23	1.37 1.63	1.56	.21
Phase I to III N=23	1.24 1.76	6.26	.02*

*Significant at .05 or lower
#Note: In Column Heading Mean Ranks or Means, the first figure refers to the first Phase denoted in the Phase Interval Column, the second figure refers to the second Phase denoted in the Phase Interval Column.

No significant differences appear within the importance of formal system although a general decrease in importance can be discerned.

Conversely, an increase in the strength of formal systems can be observed with significant differences occurring between Phase I and II and Phase I and III. This improvement in the strength of formal systems, together with a significant decrease on the reliance on a formal support system as described in Table 38, provide sufficient evidence to reject Hypothesis 3.1. The participants did change their relationship and reliance on a formal resource system. They reduced their reliance and improved their relationship.

Hypothesis 3.2: The participants will not change their relationship and reliance on an informal resource system.

The variable, the Informal Resource System, was derived from appropriate systems within the Eco-Map. It was also any resource assistance level beyond Completely Isolated on the Family Support Index. The strength and importance of the Informal Resource System was analyzed as to change between phases by the Friedman Repeated Measures One-Way Analysis of Variance. Tables 39 and 40 depict the results.

TABLE 39

Change in Frequency of Important Informal Resource Systems By Phase

Phase Interval	Mean Ranks#		x^2	Significance
Phase I to II N=25	1.34	1.66	2.56	.110
Phase II to III N=23	1.46	1.54	.174	.667
Phase I to III N=23	1.37	1.63	1.565	.211

#See notation on page 103

TABLE 40

Change in Frequency of Strong Informal Resource Systems By Phase

Phase Interval	Mean Ranks#	x^2	Significance
Phase I to II N=25	1.25 1.72	4.84	.028*
Phase II to III N=23	1.48 1.52	.043	.835
Phase I to III N=23	1.33 1.67	2.783	.007*

*Significant at .05 or lower
#See notation on page 103

Although, similar to changes in the Formal Resource System, no significant change in the Importance is observed, a trend in increase in the Informal Resource System occurs. The change from Phase I to Phase II approaches significance. This is not the situation, however, with the Strength of the Informal System. Two phases, Phase I to Phase II and Phase I to Phase III, are definitely of a significant change nature. This is consistent with the movement in the Family Support Index, in which there is a 43 percent increase in reliance on the Informal Resource System between Phase I and Phase III. Therefore, Hypothesis 3.2 was rejected. The participants changed their relationship and reliance on an Informal Resource System. They perceived that they had developed stronger and more helpful relationships.

Hypothesis 4: There is no relationship between the participants' High or

Low Risk Score on the Michigan Screening Profile of Parenting Score and their change in parenting abilities, social isolation and relationship characteristics.

The intent of this general hypothesis was to test the predictive ability of the Michigan Screening Profile of Parenting with change scores on the CLL and Eco-Map relationships over the time frames of the study. Each sub-hypothesis represents a variable of the instrument, grouped into participants who were ranked as likely to have a parenting problem (High Risk) versus those with no or little risk of a parenting problem (Low Risk). The Phi Coefficient was utilized to correlate the Michigan Screening Profile of Parenting individual variables with each corresponding change group divided into those who improved in the total score of the Childhood Level of Living with those who either remained the same or decreased in score. The results are summarized in Table 41.

Table 42 represents an analysis using the Kruskal-Wallis One-Way Analysis of Variance corrected for ties. Change scores for the Childhood Level of Living and Eco-Map Important Relationships for Phases I and II were analyzed for participants grouped into High and Low Risk categories based on their Michigan Screening Profile Variable Scores. The sub-hypotheses will be discussed individually.

Hypothesis 4.1: There is no relationship between the participants' High or Low Risk Score on the Emotional Needs Met (ENM) and their change in parenting and social isolation.

TABLE 41

Change in Total CLL Scores by Michigan Screening Profile of Parenting

Michigan Screening Profile Scores			Total CLL Change Phases I to II				Total CLL Change Phase II to III				Total CLL Change Phase I to III			
			Down	Up	PHI	Sig.	Down	Up	PHI	Sig.	Down	Up	PHI	Sig.
ENM N=24	Risk	Freq.	5	11			8	8			3	13		
		Percent	20.8	45.8	.20	.16	33.3	33.3	0	.5	12.5	54.2	.07	.36
	No Risk	Freq.	1	7			4	4			2	6		
		Percent	4.2	29.2			16.7	16.7			8.3	25.0		
RWP N=24	Risk	Freq.	2	4			3	3			2	4		
		Percent	8.3	16.4	.11	.29	12.5	12.5	0	.5	8.3	16.7	.17	.19
	No Risk	Freq.	4	14			9	9			3	15		
		Percent	16.7	58.3			37.5	37.5			12.5	62.5		
EDC N=24	Risk	Freq.	3	4			5	2			2	5		
		Percent	12.5	16.7	.26	.10	20.8	8.3	.27	.09	8.3	20.8	.12	.27
	No Risk	Freq.	3	14			7	10			3	14		
		Percent	12.5	58.3			29.2	41.7			12.5	58.3		
COP N=24	Risk	Freq.	4	8			7	5			3	9		
		Percent	16.7	33.3	.19	.17	29.2	20.8	.16	.21	12.5	37.5	.10	.31
	No Risk	Freq.	2	10			5	7			2	10		
		Percent	8.3	41.7			20.8	29.2			8.3	41.7		

PHI = Phi Coefficient
Sig. = Significance

TABLE 42

Michigan Screening Profile of Parenting
By
CLL, Eco-Map and Family Support, Phase I to II Change Scores

	ENM		RWP		COP		EOC	
	High Risk	Low Risk	High Risk	Low Risk	High Risk	Low Risk	High Risk	Low Risk
CLL Mean Ranks Change I to II	10.77	14.31	11.75	12.09	11.25	12.82	12.29	11.88
x^2	1.43		.01		.30		.01	
Significance N=23	.231		.91		.57		.89	
Eco-Map Mean Ranks Change Importance I - II	13.22	11.06	11.17	12.94	13.79	11.21	11.71	12.82
x^2	.54		.30		.84		.12	
Significance N=24	.47		.58		.35		.72	
Family Support Mean Ranks Change	12.53	11.00	12.5	11.82	8.58	15.73	8.21	13.66
x^2	.26		.04		6.49		3.19	
Significance N=23	.60		.83		.01*		.07	

*Significant at .05 level or lower

Neither the Phi Coefficient test nor the Kruskal-Wallis test provide sufficient evidence to support the rejection of this hypothesis. It does not appear that there is a relationship between the participants' score on the ENM and their change during the study.

Hypothesis 4.2: There is no relationship between the participants' High or Low Risk Score on the Relationship with Parents (RWP) and their change in parenting and social isolation.

Tables 41 and 42 summarize the analysis of the Relationship with Parents as it relates to change in parenting and social isolation using the Phi Coefficient and Kruskal-Wallis tests. No significant relationship among the variables can be discerned. Therefore, the null hypothesis was supported.

Hypothesis 4.3: There is no relationship between the participants' High or Low Risk Score on the Expectations of Children (EOC) and their change in parenting and social isolation.

Two of the Phi Coefficient Scores for the Expectations of Children, compared to change between phases on the Childhood Level of Living approach significance. For both changes from Phase I to Phase II and Phase II to III, the no risk group improved in their score on the CLL more than any other group. The risk group was more evenly divided for change between I and II, but decreased in score for Phase II to Phase III.

The Kruskal-Wallis Score compared to change in the Family Support Index was very close to significance at .07. However, neither test reached a significance level of .05 or below, consequently the null hypothesis was supported.

Hypothesis 4.4: There is no relationship between the participants' High or Low Risk Score on Coping (COP) and their change in parenting and social isolation.

The Phi Coefficient Test does not demonstrate any significant relationship between the coping score and change on the CLL across time (Table 41). One score, change over Phase I to II, does approach significance. The no risk group demonstrated the most improvement of the group with 83 percent of the no risk group changing positively, as compared to 66 percent of the risk group.

The Kruskal-Wallis comparison does indicate one significant relationship between the Coping Score and the Family Support Index. The low risk group changes significantly more than the high risk group as summarized in Table 44.

Inasmuch as there is significant change in social isolation and change closely related to parenting change, Hypothesis 4.4 was rejected. Participants with a Low Risk Score changed more in parenting and social isolation than those with High Risk Scores.

Hypothesis 5: There is no relationship between the demographic characteristics of the participants' age, education and number of children and the improvement in parenting behavior and social isolation.

The hypothesis and its sub-hypotheses looked at the factors of age, number of children, and education as possible determinants of change. Two statistical tests were employed for this purpose. The Phi Coefficient correlated change scores for each phase of the CLL with each characteristic.

TABLE 43

Change in Total CLL Score by Demographic Characteristics

Demographic Characteristics		Total CLL Change Phases I to II				Total CLL Change Phases II to III				Total CLL Change Phases I to III			
		Down	Up	PHI	Sig.	Down	Up	PHI	Sig.	Down	Up	PHI	Sig.
AGE													
-30	Freq.	6	6			5	7			5	7		
	Percent	26.1	26.1			21.7	30.4			21.7	30.4		
				.569	.0038*			.2197	.1514			.5046	.009*
+30	Freq.	0	11			7	4			0	11		
	Percent	0	47.8			30.4	17.4			0	47.8		
N=23													
NUMBER OF CHILDREN													
1 or 2	Freq.	3	5			3	5			1	7		
	Percent	12.0	20.0			12.0	20.0			4.0	28.0		
				.2168	.144			.1442	.24			.1286	.2643
3+	Freq.	3	14			9	8			4	13		
	Percent	12.0	56.0			36.0	32.0			16.0	52.0		
N=25													
EDUCATION													
-12	Freq.	4	13			8	9			3	14		
	Percent	16.0	52.0			32.0	36.0			12.0	56.0		
				.0160	.4685			.0275	.4465			.0858	.3372
+12	Freq.	2	6			4	4			2	6		
	Percent	8.0	24.0			16	16			8.0	24.0		
N=25													

PHI = Phi Coefficient Sig. = Significance

*Significant at .05 or lower

TABLE 44

Change in CLL, Eco-Map and Family Support Index
by
Demographic Characteristics
Kruskal-Wallis - Phase I to Phase II

Demographic Characteristics		CLL Change I to II			Eco-Map Importance I to II			Family Support Index I to II		
		Mean Ranks	x^2	Significance	Mean Ranks	x^2	Significance	Mean Ranks	x^2	Significance
Age N=23	-30	9.13	3.548	.060	11.17	.402	.526	13.71	1.623	.203
	+30	14.35			12.91			10.14		
Number of Children N=24	1 or 2	12.25	.015	.902	10.63	1.303	.254	15	1.262	.261
	3 or more	12.63			14.12			11.47		
Education N=24	-12 years	12.72	.192	.661	13.94	.924	.336	11.06	2.027	.155
	+12 years	12.06			11			15.37		

The results are shown in Table 43. The Kruskal-Wallis was also used to determine if change was related to the scores on the CLL and Eco-Map Important Relationships and each individual variable. The total change score for the Family Support Index was also compared to each characteristic. Table 44 presents the findings. Each sub-hypothesis was reported separately.

Hypothesis 5.1: There is no relationship between age and improvement in parenting behavior and social isolation.

The Phi Coefficient Test exhibited in Table 43 demonstrates significant correlation between age and change in parenting behavior on the CLL. Both Phase I to II and Phase I to III have a significant difference for mothers 30 years of age or over. All of the mothers in this group improved in these time periods. The younger group was fairly evenly divided in improvement and decline across all time periods.

Table 44 depicts the results of the Kruskal-Wallis analysis. This, also, supports the significant change in parenting behavior on the CLL for mothers 30 years of age or over but does not indicate significant change in relationships on the Eco-Map or Family Support Index. Older mothers do have a higher mean rank on the Eco-Map change but this is reversed on the Family Support Index in which mothers under age 30 change more.

Hypothesis 5.1 was partially rejected. Participants age 30 or more improve more in parenting behavior but not in social isolation.

Hypothesis 5.2: There is no relationship between the number of children in the family and improvement in parenting behavior and social isolation.

Both the Phi Coefficient and the Kruskal-Wallis Tests, as shown in Tables 44 and 45, concur that the number of children in the family is not a determinant of change in parenting or social isolation. No significant differences emerge. The null hypotheses is therefore supported.

Hypothesis 5.3: There is no relationship between the number of years of education of the participant and improvement in parenting behavior and social isolation.

Similar to Hypothesis 5.2, the number of years of education does not correlate significantly with change in neither the Phi Coefficient nor Kruskal-Wallis Tests summarized in Tables 43 and 44. It does approach significance in the Family Support Index change with participants with 12 or more years of education having a higher mean ranking. Evidence is not sufficient, however, to reject the hypothesis.

Summary of the Results

The summary of the results of the analyses of the data with respect to each instrument and its corresponding analysis follows:

1. Childhood Level of Living change in Parenting Behavior over the three phases of the study:
    a. The total overall score and interview scores changed significantly with improved parenting occurring between Phases I and II and Phases I to III.
    b. The observational score for parenting behavior did not improve significantly.

c. The area of supervision, control and discipline of children positively changed between Phases I and II.

d. Significant change occurred in family interaction from Phases I to II.

e. The time interval between Phases I and II showed a significant difference and improved child development activities.

f. Participants demonstrated a positive significant change in nutrition and health behaviors for Phases between I and II, and I and III.

g. There eas no significant change in the families' physical environment and household maintenance.

2. The Eco-Map change in Relationships of the Family with other Systems over Time:

   a. There was no difference in the frequency and value of the relationships which the participants described as important over the length of the study.

   b. The frequency of strong relationships did not change over time.

   c. Strong relationships significantly changed and became more positive for Phases between I and II and I and III.

   d. Stressful relationships were significantly reduced for Phases I to II and I to III.

   e. The type of energy characteristic of relationships demonstrated considerable change. Reciprocal energy increased significantly with a corresponding reduction in relationships described as more energy out or more energy in.

3. The Family Support Index and Eco-Map change in Social Isolation over Time:

   a. Participants changed considerably over time in human resources to whom they could look for help.

   b. A significant change occurred between the number who had been completely isolated in the beginning and at the end of the study.

   c. There was no change in formal resource relationships deemed important by the participants.

d. Formal resource system relationships showed a significant increase in strength for Phases I to III and positive increases in the other time periods.

e. Informal resource systems did not increase significantly in importance.

f. Strong relationships increased significantly for participants for informal resource systems from Phases I to II and I to III.

4. Michigan Screening Profile of Parenting related to change:

a. There was no relationship between the participants' risk score on Emotional Needs Met and changes in parenting or social isolation

b. There was no relationship between the participants' risk score on Relationship with Parents and changes in parenting or social isolation.

c. There was a positive trend on the Expectations of Children risk score with no risk parents improving more in parenting and social isolation but not to a significant extent.

d. The no risk participants improved significantly in change in social isolation and approached significant improvement in parenting behavior.

5. Relationships between Demographic Characteristics and Change over Time:

a. There was a relationship between the participants' age and improvement in parenting. Older mothers, 30 and over, improved more significantly in parenting than younger ones.

b. No significant difference in the age of participants appeared related to change in social isolation.

c. There was no relationship between the number of children in the family and change in parenting or isolation.

d. There was no relationship between the number of years of education and change in parenting or isolation.

CHAPTER VI

DISCUSSION AND CONCLUSIONS

The purpose of this study was to determine whether the utilization of parent aides with neglectful families would provide a mechanism for creating change in the family system and serve to alter those factors contributing to neglect. This chapter will discuss the results of the data analyses in light of the study's goal. It will include the general areas of exploration, the concept of parent aides as an intervention model, limitations of the study and offer some general conclusions.

Change in Parenting Attitudes and Behavior

The data analyses demonstrated significant changes in the total and interview scores of the Childhood Level of Living with less change in evidence for the observational score. The total score represented a composite of both observation and interview components. Although the observation score, since it focused on specific behavioral evidence, may be considered a more valid indication of change than the interview score, which consisted of the participants' verbal reports of behavior, in this study it probably is not as strong an indicator as the total score. The observation score was heavily weighted with items regarding the physical condition of the home. General observations of the other areas of parenting were less frequent in number compared to the interview items. Interview

questions consisted of both attitudinal concerns regarding child-parent interaction as well as verbal reports of daily living. It is felt that both behavior and attitudes are crucial elements in the actual practice of parenting. Behavior itself may be more difficult to change but a positive re-direction of parenting attitudes may well be a precursor of new behavior. Therefore, a combination of both, i.e., the Total Score should be the best indicator of change.

A persistent pattern throughout the study was that the most significant changes occurred during the first six months, between Phase I and Phase II, with less positive gain during the last six months, between Phase II and III, and usually an overall gain from the beginning to the end of the study, between Phase I and III. It is possible that the rapid change seen during the initial period was essentially a "Honeymoon Period" or a general Hawthorne Effect in which the actual intervention approach did not cause the improvement, but rather the aura of being part of a special study created an environment in which the participants responded more positively initially. As study continued, and excitement and novelty decreased, attitudes and behavior became more closely related to the original condition. Although, this is possible, it is probably not true in this study. Although there is a much higher gain during the first phase interval, the overall pattern is one of continual improvement and change, as indicated by the Rank Means, even though the increased means may not have been sufficient statistically to become significant. Furthermore, human growth and development is rarely one of a constantly high rate of acceleration but rather, one of intermittent growth. It is highly likely that the decreased amount of change exhibited

from Phase II to III represents a plateau pending another spurt of improvement. The study ended before ascertaining whether this was indeed the situation.

The areas of supervision, control and discipline, family interaction, child development activities and nutrition and health all were rather consistent with each other in terms of change and degree of change. A general increase of from five to seven percent over the length of the study appeared. The close similarity in progress would seem logical in that all of these family functions are generally overlapping and related to each other.

The aspect of nutrition and health was both initially and subsequently the one of highest functioning and also slightly outdistanced the others in improvement. This may be due to the fact that this particular characteristic has more specific and accessible societal supports than the others. Medicaid and Food Stamps offer concrete methods of meeting this minimal level of care, compared with the other areas where assistance is not readily available.

Physical environment and household maintenance was the one area of parental functioning which did not improve, in fact, it declined. This one aspect also had the widest range of behavior, varying from the highest possible score to the lowest. Housing was the area of most perceived stress by participants and one in which they probably had the least control. Beset with very limited financial resources, and reluctant landlords, participants were faced often with monumental housing problems such as lack of adequate plumbing, insufficient heat in winter, and a feeling of powerlessness to do anything about it. Many families attempted to

resolve the problem by frequently moving from one place to another and simply exchanging one type of housing problem for another. One mother with an infant son was interviewed in the car in which she was living, parked in the yard of an acquaintance, in the middle of January. The transitory nature of the participant's physical environment helps to explain why this particular level of living did not improve. This of all areas, probably requires considerably more financial and community intervention.

Change in Family Relationships with other Systems

The family eco-map graphically described the lives of the families who participated in the study. Although statistically it was not feasible to examine each individual system represented the way in which participants perceived their relationships as to their importance and type was one manner in which this instrument was analyzed. The overall importance of the system to the family was determined for each phase both in the number of total important relationships and the total mean value of all relationships. No significant changes appeared during the study. The importance of a relationship is related to the value placed upon it. Some relationships were initially described as of great importance to the family such as the parent-child, welfare, and parent aide systems. These did not change. In some families, new important relationships emerged during the study (e.g. a friend) or increased (e.g. more positive importance placed on the extended family). Although this one newly important relationship could have real meaning in the overall family system, numerically it represented only one change in the total

number of systems collectively analyzed and would not be statistically significant. Additionally, since importance of a system is a value, and values tend to be fairly stable and resistant to change, a longer period of time would probably have been necessary in order to detect a change.

The type of relationship the family has with other systems is probably a better determinant of change than importance of other systems. Families were asked to classify the nature of their relationships as strong, tenuous, and stressful. There was not a significant change as to the frequency of strong relationships, although this approached significance, but a significant change occurred in the mean value of increased strong relationships. During the same period of time, stressful relationships decreased significantly. The frequency of strong relationships involved a determination of the total number of relationships termed "strong". The mean value of relationships considered the total value of all relationships and therefore was more sensitive to, and included, relationships that changed from stressful to tenuous as well as those which changed from tenuous to strong. Therefore, the strength of relationship was a better indicator of improvement in the quality of the relationship than simply the frequency of the relationship.

Probably the most vital change to the families involved was the actual decrease in stressful relationships. Bombarded by actual and/or perceived negative relationships from numerous systems affecting the family, it is not difficult to understand why many families would become isolated. If the outside world is perceived as dangerous, hostile or overburdening, a very logical defense is to have as little contact as

possible with other people. However, if one is able to form a link, a friendship, with an outsider, the parent aide, and learn that a positive, trusting, strong, rewarding relationship may occur, one may be encouraged to relate in different ways to those people previously considered negative. This is what appeared to happen with many families. There was a general increase in the number of strong relationships and an overall improvement in ones considered stressful.

Another element of interest in the study was how the families rated their systemic relationship in terms of energy. Significant changes occurred in all three energy directions. One-way directional energy decreased and reciprocal energy increased. This pattern appears consistant with other systemic changes. A reduction in types of systems which require more energy given than received can be equated with a reduction in the number of stressful relations. These types of associations were perceived as very demanding in requiring time and energy to resolve, but also causing very little positive reinforcement for the effort. As stressful relationships decreased, more energy out than in also decreased. The other energy directional decrease was in the number of relationships classified as receiving more in than was necessary to give out. A frequent example of this type was the parent aide. Initially this relationship was described as primarily being one in which the parent aide gave more than she received. By the end of the study, this relationship was described as reciprocal, in which there was a mutual give and take. This latter one-way relationship, although more positive than the former, has some disadvantages. It can be characterized as encouraging passivity on the part of the recipients. For some, this may also impact on the individual's self-esteem, feelings of

guilt, or anger with systems in which they feel they do not contribute and have no equality. Therefore, the significant increase in the number of reciprocal energy relationships is considered a most important one in the overall improvement in the quality of the family's environment.

Change in the Family's Social Isolation

The change in the degree of social isolation is considered to be probably the most important finding of this study. In light of previous research by Polansky (1978), Young (1964), and Jeffers (1967), together with the initial findings of this study, in which over seventy (70) percent of the families were completely isolated, social isolation appears to be a primary contributor to neglect. Considerable change and improvement can be seen in this area.

The world indeed must be considered a very frightening environment, when as indicated by responses to the Family Support Index, there was no one to rely on for help except for formal agencies. The new relationship with the parent aide, as a trusted friend, and a model of how to cope in difficult situations requiring assistance, offered an opportunity for families to expand their resources and begin the process of decreasing their isolation. Although having support and resources in times of need and crisis is a more extreme situation in which people are more highly motivated to reach out to others than in having everyday support, it is a beginning in developing a resource system. Change in the Family Support Index does not imply that daily living patterns substantially change but times of needed help are rather frequent with many neglectful families and as a repertoire of resources is built, a gradual increase in social, routine contacts may be enhanced as well.

No significant changes in the importance of formal or informal systems occurred in the study. A general trend, however, can be noted in the mean ranks, with formal relationships becoming slightly less important, and informal ones more important. As previously discussed, important relationships are likely to remain more stable and demonstrate less rapid change compared to attitudes or types of relationships. A general slight shift occurred, as positive experiences emerged, to elevate informal groups and reduce the formal ones.

A better picture of changes in the formal and informal resource groups can be seen by analyzing the significant changes in the strength of the relationships. Both groups became stronger. Although the formal resource group became slightly less important, the type of relationship with it improved in quality, becoming stronger and more positive. The informal resource group also increased considerably in improved, stronger relationships. Thus, families perceived a better overall relationship with their environment.

Michigan Screening Profile of Parenting as Related to Change

With only one exception, Coping, this instrument did not appear to have a predictive ability in terms of change and improvement in parenting and relationships. The original purpose of this assessment tool was not to predict change but rather to determine the likelihood of child maltreatment. Although it does not appear able to assist in projecting which families are likely to change, this does not indicate that it is not useful for its initial intent. One of the possible difficulties with it, for this population, was that its primary focus has been abuse, which by its nature, is a more overt, flagrant action, as

compared to the complexities and subtleties of neglect. This may account for its failure to find many of the study population families as "likely" to have a parenting problem which indeed they had as documented by their behavior and status as an active Protective Services case.

The variable, Coping, did have a significant relationship to change with the "no risk" group demonstrating more change. Although the "no risk" label is a deceptive one, as previously mentioned, since the family is already having a parenting problem, perhaps this finding would better indicate that families with fewer risks in the area of coping improve more. The variable of coping is the one most concerned with current functioning and ability to deal with stress. This skill, or lack of, was an important discriminant in the Giovannoni and Billingsley (1970) study which distinguished neglectful from non-neglectful mothers. Those mothers who demonstrate more flexibility and resources to deal with crises would logically be most amenable to improvement and change. Probably the most useful and practical method of achieving an understanding of these dynamics would be an intensive case study which was not part of this design.

Demographic Factors as Related to Change

Unlike other studies, Young (1964) found that the older mother, with more children in the family and with less education was more likely to be neglectful. These factors did not, with the exception of age, appear to influence the degree of change in parenting and in social relationships. No significant differences were found. However, older

mothers, age 30 and above, changed more and improved in their parenting. This could be related to several factors. This group was more often in the "no risk" population within the Michigan Parenting Profile, thus indicating fewer problems, and therefore more able to show improvement. They were also closer in age to the parent aides whose average age was 40. This closer age similarity may have created a stronger relationship and therefore created a more positive stimulus for change. It is also possible that the younger mothers were less motivated to change having not experienced as long a time of loneliness and impoverishing conditions.

The lack of difference in significance related to education and the number of children may be due to the fact that the real differences between the two groups were not very large. Generally the educational range was approximately three years, with the median at 11 years and the mean of 10.3. The same similarity occurred with the number of children, with a mean of 2.85 and the median at 2.5. Therefore, a distinction in these variables would probably be artificial if it had occurred.

Parent Aides as an Intervention Model

Although it would have strengthened the design of the study, no criteria were established to exclude any other form of intervention with the family. It was believed to be unethical to prohibit the use of every possible resource to assist the family if deemed necessary by the Protective Services worker or family. Nevertheless, this element was recorded and followed throughout the study. With only one exception, no other intervention treatment approach was utilized during the study.

The exception was the use of a psychiatrist, due to a court order, which lasted approximately ten weeks and was terminated by the mother due to lack of satisfaction.

The role of the Protective Services worker was also viewed potentially as one of a change agent. However, once the family had received a parent aide, the involvement of the worker decreased substantially, with the workers' primary contacts made with the parent aide in reference to the family. Furthermore, over the length of the study there was more than a seventy-five (75) percent turnover of Protective Services workers, in one case, the family had four workers. Therefore, the parent aide can be legitimately considered the primary, and sole, intervention approach utilized.

From an ecological perspective, parent aides are an added system in the family's near environment. The questions as to whether this one systemic change could be successful in changing the family's normal pattern of interaction with its environment and via this change affect change within the family itself have been dealt with in this study. Some very definite improvements can be identified. The addition of one person who is there voluntarily, without pay, who desires to be a friend, can be viewed as a very powerful new input into the system. Although her influence is primarily directed toward the mother, change in the mother is able to change the entire family unit. The parent aide is able to open, to some extent, a very closed system, by providing a new model of communication, expanding the possibilities of new resources to meet the family needs and facilitating a re-direction of energy flow. The development of this new relationship can help provide a channel for

second order change, an opportunity for the mother via her relationship with the parent aide to, on occasion, step out of her current system, experience other approaches to family living, and to view her own family with more objectivity.

The parent aide is by no means a panacea for the multitude of problems contributing to neglect, but the influence can be a potent one for creating change. The effect of the parent aide's work on her own family was not part of this study but should be analyzed to understand what changes this creates within the system. To what extent burn-out is a factor and what is the optimal expected time for this continued parent aide-mother relationship are unknown, but should also be assessed.

Evaluative Commentary

The size of the sample must be considered a limitation of the study. However, the sample can be considered as fairly representative of the statewide Protective Services families. Whether Michigan's population is unique to the nation is unknown and comparative statistics are unavailable.

The lack of validity and reliability measures for the revised instrumentation must be considered in interpreting the results. The eco-map particularly should be considered at face value since it has never previously been utilized as a research measure. However, the considerable extent of consistency of findings in all instruments adds support to the usefulness and accuracy of the instrumentation.

The length of the study was another factor constraining the

findings. A special Department of Social Services extension of the assignment of parent aides, from the normal six-month limit to a twelve-month period, was given the research project. It was not possible, therefore, to continue beyond that time. It would have been highly desirable to have continued the study for at least another year to determine whether the reduction in improvement rate of families was a plateau or a real downturn and cessation of change. It is probably unrealistic to expect a very lengthy pattern of neglect, usually of several year's duration, to be significantly reduced in only one year's time. Also, families are unique, and a wide diversity of needs and strengths exist emphasizing the need for flexibility in the amount of time a parent aide needs to be involved. One of the participating agencies is convinced that the optimal time period is from two to three years. It would have been useful to test this proposition.

Finally, a very real limitation of the study was the statistical analysis itself. The nature of the statistics decrees that results be determined by anlyzing the group as a whole. With this particular group of participants, there is great diversity of change. For some individuals, progress was very substantial, in fact, one of the participants will become a parent aide herself. For others, the pathos and tragedy of their situations became very clear. One mother gave birth to twin girls who died at birth, her husband left her, her mother blamed her in their death, and her only support was the parent aide. Two other mothers had their children removed and placed in foster care but the parent aides continued their involvement for some time afterward. The

depth and intensity of their problems, their efforts to resolve them, and the resolution itself are vital concerns which were basically lost in analyzing group behavior. Ideally, case studies would have accompanied the overall group statistics. The time and financial investment prohibited this addition, however.

Conclusions and Suggestions for Future Research

The results of this study indicate that parent aides' involvement with neglectful mothers does impact on this very serious problem. It should be noted that although real change and improvement occurred, many of the families were still below minimal levels of child caring as indicated by the Childhood Level of Living. However, all of the cases were closed by the Protective Services workers indicating that improvement was such that state intervention was no longer felt necessary. Many of these families probably still need the support offered by parent aides; whether this support continued or not, was at the discretion of the individual parent aide, who no longer was officially assigned the family, and would have been given a new parent with whom to work. It should also be recognized that some of the problems faced by the neglectful families could not realistically be changed by parent aides and require more pervasive intervention. Problems stemming from poverty, lack of adequate housing and lack of transportation to existing resources are real concerns needing societal commitment and financial supports to change. Parent aides should not be considered the exclusive solution to a highly complex social problem. As found in this study, they are, however, one effective method of assistance.

The sample size was small. More research is needed to confirm the findings of this study. Replication of this research would be useful, particularly if it were coupled with an ethnographic approach. More research in respect to parent aides themselves would also be important so that understanding how to match appropriately parent aides and families, provide supports to parent aides and recognize their valuable contributions would make possible the expansion of this service. Special research attention to neglect as a problem distinct from abuse should also be continued. The insidious, devastating effects of neglect, and methods not only to intervene, but to prevent it are vitally important to understand and improve the conditions of life for children and their families.

APPENDICES

APPENDIX A

Instruments

Phase I
Site

Family ID _____

Interviewer _____

Date _____

People Present _____

FAMILY INTERVIEW

1. Begin with the statement: In order to understand and improve the parent aide program, we must also learn about you and your family. We would like to ask you some questions about your life.

2. Start with Participant's perceptions of parent aide role.

3. Do Eco-Map.

4. Family Support Index:

   a. In the last year have you needed any help? _____

   _____

   b. From whom have you asked for help? _____

   _____

5. Childhood Level of Living Scale: Begin general interview with comment that you are interested in their opinions on raising their children - ask general lead questions to solicit the information for the scale. Examples of lead questions: How do you decide what TV programs to watch? Do you let the children watch anything they want? These questions could lead into such areas as discipline practice; food utilization - e.g., Do you eat snacks when you watch TV? - etc.

6. Explain time frame for future visits. Obtain Family Consent - give copy to participant and $10. check.

Phase II
Site

Family ID _____

Interviewer _____

Date _____

People Present _____

FAMILY INTERVIEW

1. Eco-Map: Do you recall the eco-map you drew with the last interviewer? I would like to update it today to reflect any changes since we last interviewed you.

   a. For each of the systems noted on the map (check and see all required are there) ask:

      Have your relationships with _____ changed?
      If NO, do nothing. If YES, on transparency diagram:

      1) Ask - is it better, worse? - Show on line -
         green line better
         red line worse

         How would you now describe it? Strong, Tenuous, Strssful

      2) Is it now more important to you? - Show in size of circle
         larger - now more important
         smaller - less important

      3) Are there any new relationships in your life? - Add to new eco-map.

2. Do general interview Childhood Level of Living.

3. Do Michigan Screening Profile of Parenting - Our final questionnaire involves a little more description of your early life. Read questionnaire to them if they appear to be having difficulty after you have handed it to them.

4. We really appreciate all of your time and help in studying the parent aide program. Give $10. check. I will be coming back one more time at the end of July for a final evaluation of the parent aide program.

Phase III
Site

Family ID _____

Interviewer _____

Date _____

People Present _____

FAMILY INTERVIEW

Statement: This is the last interview in evaluating the parent aide program. We would like to ask you some of the same questions that we did in our first interview so that we can determine if there have been any changes.

I. Eco-Map:

Do you recall the eco-map you drew in the last interviews--we would now like to do a final update. (Check each sub-system and ask for each:)

A. Have your relationships with _____ changed? If yes,

B. Is it better, worse (show on line)

Black _____worse

Blue _____better

How would you describe the relationship?

Strong _____

Tenuous ----------

Stressful _____

C. Is it now more important to you? (show in size of circle)

larger _____now more important

smaller _____less important

D. Are there any new relationships in your life? If yes, add to new eco-map.

II. Do Childhood Level of Living Scale Interview.

III. Family Support Index

A. In the last year have you needed any help? _____

_____

B. From whom have you asked for help? _____

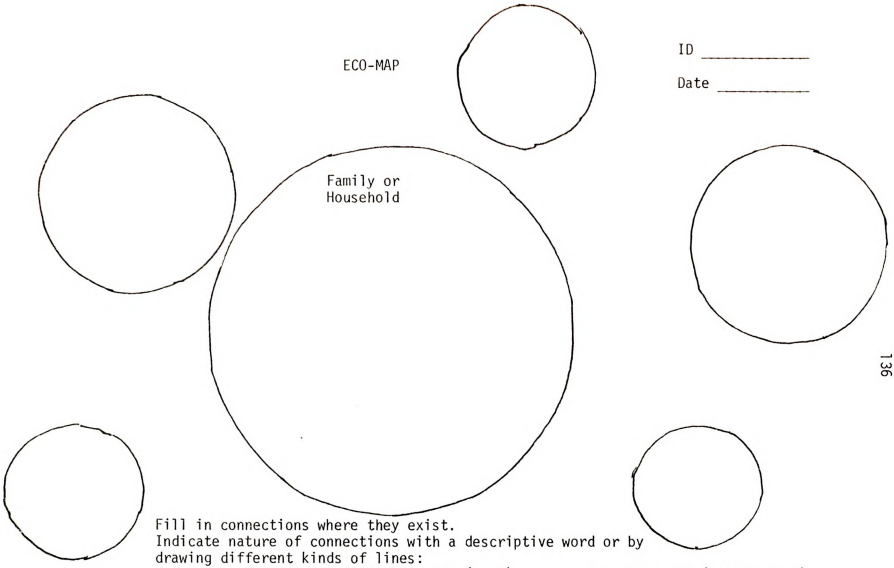
_____

Final Statement: Give $10. check. Michigan State University really appreciates the time, energy, and information you have given us regarding the parent aide program. The study will be concluded in the fall. Would you like a summary of our findings? _____

ECO-MAP

ID _____

Date _____



Fill in connections where they exist.
Indicate nature of connections with a descriptive word or by drawing different kinds of lines:
_____for strong, -------for tenuous (weak), _____for stressful (bothers you)
Draw arrows along lines to signify flow of energy, $\rightarrow\rightarrow\rightarrow\rightarrow$
Identify significant people and fill in empty circles as needed.
Color code: red = mother; blue = father; green = unrelated household member;
other colors = children.
Ask them how important the relationship is -
biggest circle = very important; medium circle = somewhat important;
small circle = of little importance.

Childhood Level of Living Scale
Observational Items

Interviewer Directions: Complete this part of CLL immediately after family interview.

	Yes	No	Unable to Observe	Certainty
I. Physical Environment/Household Maintenance				
1. There is no other place for a child to sleep except in parents' bed.				
2. House appears to have adequate heat during winter.				
3. Attempts are made to seal windows; screens are present in some windows for summer ventilation.				
4. Floors offer safety hazards with splintered wood, peeling linoleum or torn carpeting.				
5. There is an operating power sweeper or tool to clean flooring.				
6. Electrical wiring is spliced, worn, or presents safety hazards.				
7. Roof or ceiling shows signs of leaking.				
8. Furniture, appliances are in a state of disrepair.				
9. Mother is not concerned or aware that simple repairs that could be done by self are left undone.				
10. Floors and rooms appear to be cleaned, straightened regularly (no noticeable food scraps on floor).				

I. Physical Environment/Household Maintenance (cont'd)

	Yes	No	Unable to Observe	Certainty
11. Dirty dishes are present in rooms other than the kitchen.				
12. Kitchen appears not to have been cleaned; dishes washed within past 24-48 hours.				
13. Junk and debris in yard/entrance presents safety hazards.				
14. There are decorative items in house that reflect some attention to the way things look.				
15. Pictures of family members are available in the home.				

II. Family Characteristics/Interaction

16. Extreme differences in expectations (rules for behavior) exist between partners.				
17. Predominate nature of mother's conversation is complaining.				
18. Mother mentions things indicating pride or a positive (supportive) relationship with a partner or friend.				
19. Mother talks about events outside of the home.				
20. Mother attends to personal grooming (hair, make-up, dress).				
21. Mother appears to have confidence in self--does not express inadequacy in being able to do things.				
22. Mother seems only interested in herself and how she feels--ignores feelings of others.				

II. Family Characteristics/Interaction (cont'd)

	Yes	No	Unable to Observe	Certainty
23. Mother mentions being worried about money, creditors.				
24. Mother discusses plans/expectations about the future (in a positive/hopeful way).				

III. Nutrition/Health

25. Child appears healthy, free from obvious diseases.				
26. Child is expected to play in specific (safe) areas and rules are enforced.				
27. Child does not appear to have untended cuts, burns or or other mishaps.				
28. Child appears to have been bathed and hair washed at least once a week.				
29. Child's appearance reflects some adult care and attention (hair combed, face washed, clothes arranged).				
30. Child five years or older sleeps in room with parents.				
31. Clothing child wears obviously does not fit and is not altered for child.				
32. Buttons, snaps, etc. are missing from child's clothing.				

Childhood Level of Living Scale, Observational Items--page 4

	Yes	No	Unable to Observe	Certainty
IV. Involvement with Child's Development				
33. Mother mentions having played a game with child in past few days.				
34. Magazines, newspapers or printed matter are available in the home.				
35. Mother answers child's questions.				
36. Mother appears aware of child's individual interests, temperament.				
37. Child has own things and a place for them.				
38. Mother shows tolerance for behaviors typical for the child's age (giggling noise, toilet training).				
39. Child has physical playthings that encourage active manipulation (trucks, blocks, dolls).				
40. Child has physical playthings that encourage creative expression (crayons, paints, clay, playdough).				
41. Child has children's books available (owned or borrowed).				
42. Mother shows interest in child's play (listens, watches, encourages).				
43. Mother is able to show physical affection to child comfortably.				
44. Child makes frequent physical contact with mother if younger than four.				
45.				

IV. Involvement with Child's Development (cont'd)

	Yes	No	Unable to Observe	Certainty
45. Dolls, stuffed animals or other cuddlely object is available to child.				
46. Smiles, jokes or familiar talk/gestures exchanged between child and mother.				
47. Mother is aware of how child is doing in school.				

V. Control/Supervision

48. Child is ignored or pushed aside when he tries to tell mother something and she is busy.				
49. Mother frequently yells at children without giving reasons.				
50. Child is allowed to have security items (teddy bear, blanket, etc.)				
51. Child is not allowed to make a mess.				
52. Mother defers discipline to partner.				
53. Child is allowed to disagree with parents.				
54. Parents demand immediate obedience from children.				

Childhood Level of Living Scale
Interview Items

Interviewer Directions: These questions are to be answered during the family interview via an open discussion of relevant items. Use general lead questions to elicit desired response; if unsuccessful use more specific questions and finally, if necessary, use actual question itself.

I. FAMILY ACTIVITIES/CHARACTERISTICS

Lead Questions
What do you do for fun?
Do you enjoy TV?
Do you ever go to parades or movies with the kids?
Are your relatives close by so you can visit them?
Do you have someone you can really talk to?

	Yes	No	Unable to Elicit Response	Certainty
1. Child has been taken on an over-night outing with family at least once in past year.				
2. Child has been taken to a special place of interest at least once in the past year (circus, movie, parade, cultural interest).				
3. Mother mentions encouraging child to watch TV programs of educational value.				
4. Parents control TV viewing (time and/or content).				
5. Family visits or is visited by other relatives or friends at least once a month.				
6. Mother has someone to share problems/talk with of the same sex.				
7. Mother has interests/hobbies other than TV.				
8. Family does things together as a unit (watch TV, go out, talk).				

I. FAMILY ACTIVITIES/CHARACTERISTICS (cont'd)

II. SUPERVISION

Lead Questions

When you go out do you usually take the kids?

What do you do about getting someone to take care of the children?

Would you say your child was accident prone?

Does he/she get into dangerous things sometimes?

Are there special places where he/she cannot play?

Does he/she have a bed time?

How do you get him/her to bed?

Does anyone help you take care of them?

	Yes	No	Unable to Elicit Response	Certainty
9. Mother is not afraid to meet new people, go to new places.				
10. Mother appears to carry through on plans (save money, diet, do something special).				
11. Child is taken shopping or to other routine places at least once per month.				
12. Mother does not leave child alone in house for any but brief periods and when she is nearby.				
13. Child is supervised by competent sitters/relatives when mother is out.				
14. Child has regular bedtime which is observed by parents.				
15. Child receives at least 9 hours of sleep most nights.				
16. Someone puts child to bed.				
17. Child is allowed to play with matches, knives or other dangerous objects.				
18. Action is taken if child is in immediate danger.				
19. Partner shares child care responsibilities.				

III. NUTRITION/HEALTH

Lead Questions

Do you have trouble getting your family to eat properly?
Does your family get a chance to eat meals together?
Do you have trouble getting food stamps?
Does your child eat lunches at school?
Do they serve breakfast there?
Do you like to cook? What are your favorite dishes?
Has your child had a dental check-up recently?
Have you had any trouble getting a doctor?
Where do you have to go for an emergency?

		Yes	No	Unable to elicit Response	Certainty
20.	Mother provides at least one meal (with two or more courses) per day.				
21.	Child is offered food at fixed or regular times each day.				
22.	Child eats with at least one parent at least 2-3 times per week.				
23.	Mother uses a shopping list, plans for purchases.				
24.	Child has had a dental check-up if older than three years.				
25.	Mother is aware of sources of emergency help in community.				
26.	Family takes advantage of social services available to them (food stamps, clinics).				

IV. CHILD DEVELOPMENT ACTIVITIES

Lead Questions

Do you think the schools are teaching your child the way you want them to?
Do you have trouble getting child to go to school?
What kinds of things do you do with your child around the house?
Do you ever play games with him/her?
Does your child like to play with mud or water or other messy things?

27.	Children are encouraged/required to attend school regularly.				
28.	Mother is aware of how child is doing at school.				
29.	Parents point out different kinds of animals or objects in nature.				
30.	Adults control what is said in front of children.				
31.	Child is encouraged to care for her own things.				
32.	Child is taught to respect privacy--property of others.				

IV. CHILD DEVELOPMENT ACTIVITIES (cont'd)

Lead Questions

Does your child have a place to keep his own things?
Do you have trouble getting him to pick up after himself?
Does child decide what to wear him/herself or who to play with?

	Yes	No	Unable to Elicit Response	Certainty
33. Child is encouraged to make choices.				
34. Child is not allowed to make a mess.				

V. CONTROL/DISCIPLINE

Lead Questions

What to you think is the best way to get kids to mind?
Do you have to use threats of punishment?
When do you find it necessary to spank?
Do you sometimes promise your child a treat to get him to mind?

35. Mother mentions having trouble getting child to mind.				
36. Child receives positive feedback for good behavior or work.				
37. Mother uses rewards as reason rather than threats to get children to cooperate.				
38. Mother follows through on rewards or promises.				
39. Mother threatens punishment by imagined or real fright objects (God, police, daddy, etc.)				
40. Frequently no action is taken when discipline is indicated.				
41. Mother frequently uses slapping or spanking as a means of discipline.				

PLEASE NOTE:

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APPENDIX B

Childhood Level of Living

Pearson Correlation

CODE SHEET CLL PEARSON CORRELATIONS

ABBREVIATION	VARIABLE
SUP 1, SUP 2, SUP 3	Supervision, Control, and Discipline, Phases I, II, III.
FAM 1, FAM 2, FAM 3	Family Interaction, Phases I, II, III
CD 1, CD 2, CD 3	Child Development Activities, Phases I, II, III
NUT 1, NUT 2, NUT 3	Nutritional Health, Phases I, II, III
PE 1, PE 2, PE 3	Physical Environment and Household Maintenance, Phases I, II, III
IN 1, IN 2, IN 3	Interview Score, Phases I, II, III
OB 1, OB 2, OB 3	Observation Score, Phases I, II, III
TOT 1, TOT 2, TOT 3	Total Scores, Phases I, II, III

TABLE 45

CLL Pearson Correlation Scores: Variable by Variable

	IN3	TOT1	TOT2	TOT3
SUP1	.3497 (23) P= .051	.6984 (25) P= .001	.3492 (25) P= .044	.1639 (23) P= .228
SUP2	.3819 (23) P= .036	.5739 (25) P= .001	.7319 (25) P= .001	.5091 (23) P= .007
SUP3	.6508 (23) P= .001	.2839 (23) P= .095	.2247 (23) P= .151	.5763 (23) P= .002
FAM1	.3651 (23) P= .043	.4466 (25) P= .013	.2367 (25) P= .127	.2979 (23) P= .084
FAM2	.3806 (23) P= .037	.1835 (25) P= .190	.7474 (25) P= .001	.5469 (23) P= .003
FAM3	.6885 (23) P= .001	.2402 (23) P= .135	.6177 (23) P= .001	.7486 (23) P= .001
CD1	.2291 (23) P= .147	.6367 (25) P= .001	.2842 (25) P= .084	.1676 (23) P= .222
CD2	.6215 (23) P= .001	.5960 (25) P= .001	.5625 (25) P= .002	.4900 (23) P= .009
CD3	[illegible] (23) P= .057	[illegible] (23) P= .166	[illegible] (23) P= .153	.6581 (23) P= .001
NUT1	.2691 (23) P= .146	[illegible] (25) P= .001	.3134 (25) P= .064	.1349 (23) P= .269
NUT2	.4870 (23) P= .009	.5636 (25) P= .002	.4741 (25) P= .008	.3483 (23) P= .052
NUT3	.6873 (23) P= .001	.4778 (23) P= .011	.3115 (23) P= .074	.5306 (23) P= .005
PE1	.5082 (23) P= .007	.7480 (25) P= .001	.5207 (25) P= .004	.5911 (23) P= .001
PE2	.4394 (19) P= .030	.6643 (21) P= .001	.7356 (21) P= .001	.6157 (19) P= .003
PE3	.5890 (22) P= .002	.5742 (22) P= .003	.6734 (22) P= .001	.7695 (22) P= .001
OB1	.5610 (23) P= .003	.8838 (25) P= .001	.5375 (25) P= .003	.5311 (23) P= .005

	IN3	TOT1	TOT2	TOT3
OB2	.4132 (22) P= .028	.4498 (24) P= .014	.8427 (24) P= .001	.6780 (22) P= .001
OB3	.4254 (23) P= .022	.2817 (23) P= .096	.6460 (23) P= .001	.7525 (23) P= .001
IN1	.3827 (21) P= .043	.8297 (23) P= .001	.3778 (23) P= .038	.3056 (21) P= .089
IN2	.4492 (23) P= .016	.5512 (25) P= .002	.5396 (25) P= .001	.5141 (23) P= .006
IN3	1.0000 (0) P=******	.5544 (25) P= .003	.5198 (25) P= .006	.6714 (25) P= .001
TOT1	.5544 (25) P= .003	1.0000 (0) P=******	.5712 (25) P= .001	.5236 (25) P= .006
TOT2	.5198 (25) P= .006	.5712 (25) P= .001	1.0000 (0) P=******	.8669 (25) P= .001
TOT3	.6714 (25) P= .001	.5236 (25) P= .006	.8669 (25) P= .001	1.0000 (0) P=******

TABLE 45 (cont'd.)

	SUP1	SUP2	SUP3	FAM1	FAM2	FAM3	CD1	CD2	CD3	NUT1
SUP1	-1.0000 (0) P=*******	.3540 (25) P= .041	.1631 (23) P= .229	.1572 (25) P= .226	.1312 (25) P= .266	-.0111 (23) P= .480	.6012 (25) P= .001	.3546 (25) P= .041	-.0896 (23) P= .342	.4162 (25) P= .019
SUP2	.3540 (25) P= .041	1.0000 (0) P=*******	.3922 (23) P= .032	.3727 (25) P= .033	.3641 (25) P= .037	.3460 (23) P= .053	.2926 (25) P= .078	.3528 (25) P= .042	.3011 (23) P= .081	.2796 (25) P= .088
SUP3	.1631 (23) P= .229	.3922 (23) P= .032	1.0000 (0) P=*******	.2009 (23) P= .179	.0793 (23) P= .359	.3318 (23) P= .061	.1003 (23) P= .324	.2017 (23) P= .178	.2336 (23) P= .142	-.0021 (23) P= .496
FAM1	.1572 (25) P= .226	.3727 (25) P= .033	.2009 (23) P= .179	1.0000 (0) P=*******	.1758 (25) P= .200	.1349 (23) P= .270	.0628 (25) P= .383	.4399 (25) P= .014	.1613 (23) P= .231	-.0358 (25) P= .433
FAM2	.1312 (25) P= .266	.3641 (25) P= .037	.0793 (23) P= .359	.1758 (25) P= .200	1.0000 (0) P=*******	.6253 (23) P= .001	.1599 (25) P= .223	.3156 (25) P= .062	.2074 (23) P= .171	-.0681 (25) P= .373
FAM3	-.0111 (23) P= .480	.3460 (23) P= .053	.3318 (23) P= .061	.1349 (23) P= .270	.6253 (23) P= .001	1.0000 (0) P=*******	.0904 (23) P= .341	.4015 (23) P= .029	.3943 (23) P= .031	.0512 (23) P= .408
CD1	.6012 (25) P= .001	.2926 (25) P= .078	.1003 (23) P= .324	.0628 (25) P= .383	.1599 (25) P= .223	.0904 (23) P= .341	1.0000 (0) P=*******	.3602 (25) P= .038	-.0177 (23) P= .468	.4271 (25) P= .017
CD2	.3546 (25) P= .041	.3528 (25) P= .042	.2017 (23) P= .178	.4399 (25) P= .014	.3156 (25) P= .062	.4015 (23) P= .029	.3602 (25) P= .038	1.0000 (0) P=*******	.1902 (23) P= .192	.1526 (25) P= .233
CD3	-.0896 (23) P= .342	.3011 (23) P= .081	.2336 (23) P= .142	.1613 (23) P= .231	.2074 (23) P= .171	.3943 (23) P= .031	-.0177 (23) P= .468	.1902 (23) P= .192	1.0000 (0) P=*******	.1784 (23) P= .208
NUT1	.4162 (25) P= .019	.2796 (25) P= .088	-.0021 (23) P= .496	-.0358 (25) P= .433	-.0681 (25) P= .373	.0512 (23) P= .408	.4271 (25) P= .017	.1526 (25) P= .233	.1784 (23) P= .208	1.0000 (0) P=*******
NUT2	.5337 (25) P= .003	.3968 (25) P= .025	.0953 (23) P= .333	.1329 (25) P= .263	.1035 (25) P= .311	.3235 (23) P= .066	.4697 (25) P= .009	.4546 (25) P= .006	-.0341 (23) P= .439	.4933 (25) P= .006
NUT3	.3329 (23) P= .060	.4524 (23) P= .426	.2614 (23) P= .115	.3752 (23) P= .039	.2548 (23) P= .124	.3915 (23) P= .032	.4445 (23) P= .017	.5885 (23) P= .002	.1414 (23) P= .260	.1759 (23) P= .211
PE1	.2874 (25) P= .082	.4984 (25) P= .006	.2634 (23) P= .112	.1965 (25) P= .173	.0479 (25) P= .410	.3146 (23) P= .070	.1875 (25) P= .185	.5517 (25) P= .002	.3813 (23) P= .036	.6178 (25) P= .001
PE2	.1508 (21) P= .257	.6152 (21) P= .001	.3501 (19) P= .071	.2502 (21) P= .137	.2018 (21) P= .188	.4162 (19) P= .038	.0076 (21) P= .487	.3965 (21) P= .038	.3667 (19) P= .061	.4219 (21) P= .028
PE3	.2765 (22) P= .106	.5395 (22) P= .005	.3394 (22) P= .061	.2198 (22) P= .167	.4430 (22) P= .019	.4639 (22) P= .015	.0771 (22) P= .367	.4412 (22) P= .020	.3996 (22) P= .033	.5040 (22) P= .008
OB1	.6600 (25) P= .001	.4939 (25) P= .006	.2666 (23) P= .108	.2141 (25) P= .152	.1353 (25) P= .260	.2317 (23) P= .144	.6324 (25) P= .001	.4833 (25) P= .007	.2795 (23) P= .058	.7021 (25) P= .001

TABLE 45 (cont'd.)

	OUT2	OUT3	PE1	PE2	PE3	CB1	CB2	CB3	IN1	IN2
UP1	.5447 (25) P= .003	.3225 (23) P= .066	.2874 (25) P= .082	.1538 (21) P= .257	.2760 (22) P= .107	.6660 (25) P= .001	.0995 (24) P= .322	-.0423 (23) P= .424	.6481 (23) P= .001	.4543 (25) P= .011
UP2	.3968 (25) P= .025	.0524 (23) P= .406	.4964 (25) P= .006	.6152 (21) P= .001	.5396 (22) P= .005	.4939 (25) P= .006	.5479 (24) P= .003	.4629 (23) P= .013	.4623 (23) P= .013	.7244 (25) P= .001
UP3	.0953 (23) P= .333	.2634 (23) P= .115	.2634 (23) P= .112	.3591 (19) P= .071	.3104 (22) P= .081	.2686 (23) P= .108	.2596 (22) P= .125	.3322 (23) P= .061	.1595 (21) P= .245	.2231 (23) P= .153
AM1	.1329 (25) P= .263	.3752 (23) P= .039	.1965 (25) P= .173	.2562 (21) P= .137	.2158 (22) P= .167	.2141 (25) P= .152	.0663 (24) P= .379	.0218 (23) P= .461	.6309 (23) P= .001	.2533 (25) P= .111
AM2	.1055 (25) P= .311	.2558 (23) P= .124	.0479 (25) P= .419	.2818 (21) P= .108	.4430 (22) P= .019	.1353 (25) P= .260	.6252 (24) P= .001	.5550 (23) P= .003	.1746 (23) P= .213	.7043 (25) P= .001
AM3	.3035 (23) P= .066	.3915 (23) P= .032	.3046 (23) P= .079	.4162 (19) P= .038	.4639 (22) P= .015	.2317 (23) P= .144	.5602 (22) P= .003	.5504 (23) P= .003	.0714 (21) P= .379	.5223 (23) P= .005
D1	.4697 (25) P= .009	.4445 (23) P= .017	.1875 (25) P= .185	.0076 (21) P= .487	.0771 (22) P= .367	.6324 (25) P= .001	.0036 (24) P= .493	.0730 (23) P= .370	.5249 (23) P= .005	.3812 (25) P= .030
D2	.4946 (25) P= .006	.5889 (23) P= .002	.5517 (25) P= .002	.3965 (21) P= .038	.4412 (22) P= .020	.4833 (25) P= .007	.3193 (24) P= .064	.1227 (23) P= .269	.5808 (23) P= .002	.5936 (25) P= .001
D3	-.0341 (23) P= .439	.1414 (23) P= .260	.3813 (23) P= .036	.3667 (19) P= .061	.3926 (22) P= .033	.2795 (23) P= .098	.4124 (22) P= .028	.5522 (23) P= .003	.0411 (21) P= .430	-.0005 (23) P= .495
UT1	.4933 (25) P= .006	.1759 (23) P= .211	.6178 (25) P= .001	.4219 (21) P= .028	.5140 (22) P= .008	.7021 (25) P= .001	.3168 (24) P= .066	.3593 (23) P= .046	.4600 (23) P= .014	.2238 (25) P= .141
UT2	1.0000 (0) P=*******	.6285 (23) P= .001	.4029 (25) P= .023	.1955 (21) P= .198	.2556 (22) P= .125	.6308 (25) P= .001	.2744 (24) P= .097	.1209 (23) P= .291	.3740 (23) P= .039	.5253 (25) P= .004
UT3	.6285 (23) P= .001	1.0000 (0) P=*******	.2887 (23) P= .091	.2094 (19) P= .195	.2726 (22) P= .110	.4634 (25) P= .013	.0937 (22) P= .339	.1396 (23) P= .263	.4303 (21) P= .026	.3386 (23) P= .057
I1	.4029 (25) P= .023	.2887 (23) P= .091	1.0000 (0) P=*******	.8341 (21) P= .001	.7174 (22) P= .001	.7197 (25) P= .001	.6102 (24) P= .001	.4125 (23) P= .025	.4994 (23) P= .008	.3760 (25) P= .032
I2	.1955 (21) P= .198	.2094 (19) P= .195	.8341 (21) P= .001	1.0000 (0) P=*******	.8111 (19) P= .001	.6106 (21) P= .002	.8205 (21) P= .001	.6678 (19) P= .001	.4363 (19) P= .031	.5421 (21) P= .006
I3	.3956 (22) P= .129	.2726 (22) P= .111	.7174 (22) P= .001	.8101 (19) P= .001	1.0000 (0) P=*******	.4943 (22) P= .010	.7308 (21) P= .001	.7955 (22) P= .001	.4456 (20) P= .023	.5219 (22) P= .006
A1	.6378 (25) P= .001	.4634 (23) P= .013	.7157 (25) P= .001	.6146 (21) P= .002	.4945 (22) P= .010	1.0000 (0) P=*******	.6132 (24) P= .001	.3517 (23) P= .050	.4612 (23) P= .013	.4542 (25) P= .011

TABLE 45 (cont'd.)

	SUP1	SUP2	SUP3	FAM1	FAM2	FAM3	CD1	CD2	CD3	NUT1
OB2	.0995 (24) P= .322	.5479 (24) P= .003	.2556 (22) P= .125	.0663 (24) P= .379	.6252 (24) P= .001	.5682 (22) P= .003	.0036 (24) P= .493	.3193 (24) P= .064	.4124 (22) P= .028	.3168 (24) P= .066
OB3	-.0423 (23) P= .424	.4629 (23) P= .013	.3322 (23) P= .061	.0218 (23) P= .461	.5550 (23) P= .003	.5504 (23) P= .003	.0730 (23) P= .370	.1227 (23) P= .289	.5502 (23) P= .003	.3593 (23) P= .046
IN1	-.6481 (23) P= .001	.4633 (23) P= .013	.1595 (21) P= .245	.6309 (23) P= .001	.1746 (23) P= .213	.0714 (21) P= .379	.5249 (23) P= .005	.5808 (23) P= .002	.0411 (21) P= .430	.4600 (23) P= .014
IN2	.4543 (25) P= .011	.7244 (25) P= .001	.2231 (23) P= .153	.2533 (25) P= .111	.7043 (25) P= .001	.5223 (23) P= .005	.3812 (25) P= .030	.5538 (25) P= .001	-.0005 (23) P= .499	.2238 (25) P= .141
IN3	.3497 (23) P= .051	.3819 (23) P= .036	.6508 (23) P= .001	.3651 (23) P= .043	.3806 (23) P= .037	.6085 (23) P= .001	.2291 (23) P= .147	.6215 (23) P= .001	.5036 (23) P= .007	.2291 (23) P= .146
TOT1	.6984 (25) P= .001	.5739 (25) P= .001	.2839 (23) P= .095	.4466 (25) P= .013	.1835 (25) P= .190	.2462 (23) P= .135	.6367 (25) P= .001	.5960 (25) P= .001	.2120 (23) P= .166	.7006 (25) P= .001
TOT2	.3492 (25) P= .044	.7319 (25) P= .001	.2247 (23) P= .151	.2367 (25) P= .127	.7474 (25) P= .001	.6177 (23) P= .001	.2842 (25) P= .084	.5625 (25) P= .002	.2233 (23) P= .153	.3134 (25) P= .064
TOT3	.1639 (23) P= .228	.5091 (23) P= .007	.5763 (23) P= .002	.2979 (23) P= .084	.5469 (23) P= .003	.7466 (23) P= .001	.1676 (23) P= .222	.4900 (23) P= .009	.6581 (23) P= .001	.3349 (23) P= .059

TABLE 45 (cont'd.)

	TOT3	OB1	OB2	OB3	IN1	IN2	IN3	TOT1	TOT2	TOT3
OB2	.2744	.0037	.0115	.0345	.7115	.0132	1.0000	.0127	.0497	.0100
	(24)	(22)	(24)	(21)	(21)	(24)	(0)	(22)	(22)	(24)
	P= .097	P= .339	P= .001	P= .001	P= .001	P= .001	P=******	P= .001	P= .413	P= .001
OB3	.1295	.1396	.4125	.6678	.7955	.3617	.8127	1.0000	.0038	.4462
	(23)	(23)	(23)	(19)	(22)	(23)	(22)	(0)	(21)	(23)
	P= .291	P= .263	P= .025	P= .001	P= .001	P= .015	P= .001	P=******	P= .494	P= .016
IN1	.3740	.4593	.4994	.4763	.4495	.4612	.0497	.0038	1.0000	.4742
	(23)	(21)	(23)	(19)	(20)	(23)	(22)	(21)	(0)	(23)
	P= .039	P= .026	P= .008	P= .031	P= .023	P= .013	P= .413	P= .494	P=******	P= .011
IN2	.5253	.3386	.3760	.5421	.5219	.4542	.0100	.4463	.4742	1.0000
	(25)	(23)	(25)	(21)	(23)	(25)	(24)	(23)	(23)	(0)
	P= .004	P= .057	P= .032	P= .006	P= .006	P= .011	P= .001	P= .016	P= .011	P=******
IN3	.4870	.6833	.5082	.4394	.5890	.5610	.4132	.4254	.3827	.4492
	(23)	(23)	(23)	(19)	(22)	(23)	(22)	(23)	(21)	(23)
	P= .009	P= .001	P= .007	P= .030	P= .002	P= .007	P= .028	P= .022	P= .043	P= .016
TOT1	.5676	.4778	.7480	.6643	.5742	.8838	.4498	.2817	.8257	.5512
	(25)	(23)	(25)	(21)	(22)	(25)	(24)	(23)	(23)	(25)
	P= .002	P= .011	P= .001	P= .001	P= .003	P= .001	P= .014	P= .096	P= .001	P= .002
TOT2	.4741	.3115	.5207	.7356	.6734	.5375	.8437	.6460	.3778	.9306
	(25)	(23)	(25)	(21)	(22)	(25)	(24)	(23)	(23)	(25)
	P= .008	P= .074	P= .004	P= .001	P= .001	P= .003	P= .001	P= .001	P= .038	P= .001
TOT3	.3483	.5306	.5911	.6157	.7695	.5311	.6780	.7925	.3056	.5141
	(23)	(23)	(23)	(19)	(22)	(23)	(22)	(23)	(21)	(23)
	P= .052	P= .005	P= .001	P= .003	P= .001	P= .005	P= .001	P= .001	P= .089	P= .006

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