Child abuse potential of a low income population in rural southwestern Montana
by Donnie Marie Seibel

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Home Economics
Montana State University
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Abstract:
The purpose of this study was to investigate the relationships between family stressors and child abuse potential among a low income population in rural southwestern Montana. The factors of parental age, educational attainment, marital status, and family size were examined in relation to the potential for child abuse. Child abuse potential was assessed by use of the Child Abuse Potential Inventory (CAPI), a screening instrument developed by Milner and Wimberly (1979.) to identify personality traits of individuals who abuse and neglect children. The study also evaluated the validity and reliability of the Parental Expectations Questionnaire (PEQ) as an instrument for measuring parental knowledge of and expectations for child development Low income mothers (N=138) who were participants in the Women and Infant Children program (WIC) in Gallatin and Park Counties completed a questionnaire designed to measure knowledge of child development, parenting strategies, child abuse potential, and parental attitudes. Results indicated significant relationships between the factors of parental age, educational attainment, marital status, and family size, and the potential for child abuse. Higher scores on the CAPI indicated less potential for child abusive behaviors. Older mothers scored significantly higher on the CAPI than younger mothers. Mothers with at least a high school education had significantly higher CAPI scores than those mothers who had not graduated from high school. Married mothers scored significantly higher than single mothers. Further, the PEQ failed to demonstrate reliability or validity, and could not be used to measure the factor of parental knowledge in relation to the potential for child abuse.

Educational attainment appeared to be a key factor in relation to child abuse potential in this study. Maternal educational attainment may ameliorate the effects and family stressors of single parenthood, large family size, and low income as potential contributors to child abusive behaviors.

Implications of this study were relevant for educators, junior and senior high school teachers, counselors, parents, family practitioners, and communities. Implications for the WIC program were also examined.

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by

Donnie Marie Seibel

A thesis submitted in partial fulfillment
of the requirements for the degree

of

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in

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of a thesis submitted by

Donnie Marie Seibel

This thesis has been read by each member of the graduate committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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Date February 9, 1990

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TABLE OF CONTENTS

	Page
APPROVAL	ii
STATEMENT OF PERMISSION TO USE	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABSTRACT	x
CHAPTER:	
1. ORIENTATION OF THE STUDY	1
Introduction	1
Conceptual Framework	2
Purposes and Problem Statement	3
Nominal Definitions	4
2. REVIEW OF LITERATURE	7
Introduction	7
Ontogenic Development	9
Knowledge of Child Development and Parental Expectations	9
Personal History and Experiences	12
Educational Attainment	12
Parental Age	13
The Microsystem	14
Family Problems, Stress, and Stress Tolerance	14
Marital Status	15

TABLE OF CONTENTS--Continued

	Page
Family Size	16
The Exosystem	17
Poverty	17
Unemployment	17
Isolation	18
Summary and Hypotheses	19
3. METHODS	22
Procedure	22
Sample Population	24
Limitations	25
Instruments	25
Demographic Questionnaire	25
Child Abuse Potential Inventory	26
Parental Expectations Questionnaire	27
Data Analysis	29
4. RESULTS	30
Preliminary Analyses	30
Main Analyses	30
Hypothesis 1	30
Hypothesis 2	32
Hypothesis 3	33
Hypothesis 4	34
Instrument Analyses	35
Further Analyses	36
Summary of Findings	41
5. DISCUSSION	42
Findings	42
Parental Age and the Potential for Child Abuse	43
Educational Attainment and the Potential for Child Abuse	43
Marital Status and the Potential for Child Abuse	44
Family Size and the Potential for Child Abuse	45

TABLE OF CONTENTS--Continued

Page

Educational Attainment, Family Size, and the Potential for Child Abuse 45
Educational Attainment, Marital Status, and the Potential for Child Abuse 46
Implications 46
Methodological Implications 46
Implications for Further Research 47
Implications for Practitioners 49
Implications for the WIC program 49
Implications for educators 50

REFERENCES 52

APPENDICES:

A. INSTRUCTIONS AND CONSENT FORM 59
B. CONSENT POSTCARD 61
C. DEMOGRAPHIC QUESTIONNAIRE 63
D. CHILD ABUSE POTENTIAL INVENTORY 65
E. PARENTAL EXPECTATIONS QUESTIONNAIRE 68
F. RANGE OF CAPI SCORES 72

LIST OF TABLES

Table		Page
1.	Age groups and CAPI scores	31
2.	Analysis of variance of age groups and CAPI scores	31
3.	Educational attainment and CAPI scores	32
4.	Analysis of variance of educational attainment and CAPI scores	32
5.	Marital status and CAPI scores	33
6.	Analysis of variance of marital status and CAPI scores	33
7.	Family size and CAPI scores	34
8.	Analysis of variance of family size and CAPI scores	34
9.	Two-way analyses of variance	37
10.	Two-way analysis of variance: Educational attainment and marital status	37
11.	Mean CAPI scores for educational attainment and marital status groups	38
12.	Two-way analysis of variance: Educational attainment and family size	39
13.	Mean CAPI scores for educational attainment and family size groups	40
14.	Range of CAPI scores	73

LIST OF FIGURES

Figure		Page
1.	Graph depicting ordinal interaction of two-way analysis of variance for educational attainment and marital status	38
2.	Graph depicting ordinal interaction of two-way analysis of variance for educational attainment and family size	40

ABSTRACT

The purpose of this study was to investigate the relationships between family stressors and child abuse potential among a low income population in rural southwestern Montana. The factors of parental age, educational attainment, marital status, and family size were examined in relation to the potential for child abuse. Child abuse potential was assessed by use of the Child Abuse Potential Inventory (CAPI), a screening instrument developed by Milner and Wimberly (1979) to identify personality traits of individuals who abuse and neglect children. The study also evaluated the validity and reliability of the Parental Expectations Questionnaire (PEQ) as an instrument for measuring parental knowledge of and expectations for child development.

Low income mothers (N=138) who were participants in the Women and Infant Children program (WIC) in Gallatin and Park Counties completed a questionnaire designed to measure knowledge of child development, parenting strategies, child abuse potential, and parental attitudes. Results indicated significant relationships between the factors of parental age, educational attainment, marital status, and family size, and the potential for child abuse. Higher scores on the CAPI indicated less potential for child abusive behaviors. Older mothers scored significantly higher on the CAPI than younger mothers. Mothers with at least a high school education had significantly higher CAPI scores than those mothers who had not graduated from high school. Married mothers scored significantly higher than single mothers. Further, the PEQ failed to demonstrate reliability or validity, and could not be used to measure the factor of parental knowledge in relation to the potential for child abuse.

Educational attainment appeared to be a key factor in relation to child abuse potential in this study. Maternal educational attainment may ameliorate the effects and family stressors of single parenthood, large family size, and low income as potential contributors to child abusive behaviors.

Implications of this study were relevant for educators, junior and senior high school teachers, counselors, parents, family practitioners, and communities. Implications for the WIC program were also examined.

CHAPTER 1

ORIENTATION OF THE STUDY

Introduction

Physical abuse, neglect, and maltreatment of children have been symptomatic of a variety of unhealthy patterns of parent-child relations (Garbarino, 1977). Child abuse has been viewed as a complex phenomenon stemming from the interaction of multiple factors and forces. "Increasing numbers of families are vulnerable to the conditions which produce the maltreatment of children due to changing patterns of family structure, economic patterns, and social conditions" (Garbarino, 1977, p. 725).

The maltreatment of children has often been related to incompetence in the caregiving role (Garbarino, 1977). Role incompetence has been associated with the interaction of low levels of skill as a caregiver and social stressors. Low levels of skill have included inconsistent and unrealistic expectations about children, lack of knowledge regarding children's development and care, and inappropriate values in relation to children (Garbarino, 1977; Parke & Collmer, 1975). Indicators of social stress which have been correlated with abuse are associated with unplanned or unwanted pregnancy, inadequate

economic resources, unemployment, marital difficulties, excessive transience, and unsatisfactory social relations (Garbarino, 1977; Parke & Collmer, 1975).

Abusing parents often have viewed themselves as powerless in the presence of forces both internal and external to the family. "Families involved in abuse seem caught up in a pattern of . . . chronic and acute mismatch between reality and the parents' ability to effectively manage that reality" (Garbarino, 1977, p. 724).

Conceptual Framework

Ecological theory (Bronfenbrenner, 1977) detailed the dynamic relationship between the person and the environment. Related models (Belsky, 1980; Garbarino, 1977) have applied ecological theory specifically to abusive situations.

Ecological theorists (Belsky, 1980; Bronfenbrenner, 1977; Garbarino, 1977) have seen development as a continuous, ongoing, interacting process between the individual and the environment. The individual and the environment have been considered mutually influencing and reciprocal systems. Garbarino (1977) conceived of the environment as an "interacting set of systems 'nested' within each other" (p. 722). Multiple bidirectional variables influenced the "progressive, mutual adaptation of the organism and the environment" (p. 722).

The ecological model proposed by Belsky (1980) consisted of four levels of analysis: ontogenic development, the microsystem, the exosystem, and the

macrosystem. Belsky defined ontogenic development as what parents bring with them to the parenting role and to the family setting. The microsystem consisted of the family itself. The exosystem was comprised of the social structures or forces that influence, limit, or impinge upon the family setting. The macrosystem was formed of the cultural values and belief systems which surround and influence the first three levels of this model.

Forces acting at different system levels have served to impact development (Trickett & Susman, 1988). Ontogenic development has been affected by parental age, personal history and experiences, and educational level, which influenced the degree of parental knowledge regarding child development (Belsky, 1980; Garbarino, 1976; Garbarino, 1977). Forces affecting the microsystem, the composition of the family itself, have included marital status, number and ages of children, family problems, stress, and stress tolerance (Belsky, 1980; Garbarino, 1977). The exosystem has been impacted by such outside forces as poverty, unemployment, and isolation (Belsky, 1980). Environmental quality, the influence of political, economic, and demographic factors, has affected the quality of life for children and families (Garbarino, 1977).

Purposes and Problem Statement

The primary purpose of this study was to investigate the relationships between family stressors and child abuse potential among a low income population in rural southwestern Montana. This population has experienced

the exosystem stressors of poverty and rural isolation, and several participants were unemployed.

Specifically, the study examined the relationship among the ontogenic developmental factors of parental age and educational attainment with the potential for child abuse. Microsystem factors of marital status and family size were examined in relation to the potential for child abuse.

The study also attempted to include the ontogenic developmental factor of parental knowledge of and expectations for child development as it related to the potential for child abuse among this population. Therefore, the second purpose of this study was to evaluate the validity and reliability of the Parental Expectations Questionnaire (PEQ) (Berg, 1975) for measuring parental knowledge of and expectations for child development.

Nominal Definitions

The following definitions are presented to clarify terminology used throughout the study.

(1) Ontogenic development -- What parents bring with them to the parenting role; limited in this study to expectations for and knowledge of child development, educational level, and parental age (Belsky, 1980).

(2) Microsystem -- The family setting, context, and environment; limited in this study to marital status of parent(s) and number of children (Belsky, 1980; Bronfenbrenner, 1977).

(3) Exosystem -- Social structures that influence, impact, and limit the family setting; limited in this study to poverty, unemployment, and isolation (Belsky, 1980; Bronfenbrenner, 1977).

(4) Macrosystem -- Cultural values, belief systems, and societal attitudes regarding children, violence, and physical abuse (Belsky, 1980; Bronfenbrenner, 1977).

(5) Abuse -- Parental behavior which does not meet cultural expectations, and which "departs from social norms in its intensity and its appropriateness" (Garbarino, 1977, p. 726).

(6) Physical abuse -- Excessive and inappropriate use of physical force against children (Garbarino, 1977).

(7) Neglect -- Inadequate provision of essential nurturance (Garbarino, 1977).

(8) Social stressors -- Those factors or variables within the ecological model which may contribute to greater family stress and potential abuse: poverty, unemployment, isolation, family size, parental age, educational attainment, marital status, and expectations for child development.

(9) Family size -- The number of children present in the home; categories in this study include one, two, or three or more children per family.

(10) Educational attainment -- A parent's highest level of formal schooling completed; categories in this study include less than high school graduation, high school graduation, and more than high school graduation.

(11) Marital status -- The state of being either married or single at the time of the survey; single respondents included not married, never married, widowed, separated, or divorced mothers.

(12) Isolation -- The state of being separated geographically, physically, or emotionally from family, friends, neighborhoods, or support systems.

(13) Parental expectations -- The level of awareness of child development norms as measured by the Parental Expectations Questionnaire (Berg, 1975).

(14) Families at risk -- Families with the potential for abuse to occur due to the impact of a number of social stressors.

(15) Child abuse potential -- The possible inclination to be abusive, as determined by the Child Abuse Potential Inventory (Milner & Wimberly, 1979).

CHAPTER 2

REVIEW OF LITERATURE

A literature review was conducted to examine the general characteristics of abusive families and families at risk for abuse to note commonalities shared. A review was also conducted on the following topics as they relate to abusive parent-child relationships: knowledge of child development and parental expectations, parental personal history and experiences, level of parental educational attainment, age, marital status, family problems and stress, number and ages of children in the home, poverty, unemployment, and isolation. The literature was reviewed utilizing Belsky's (1980) and Garbarino's (1977) ecological framework. Variables in this study were limited to the levels of ontogenic development, the microsystem, and the exosystem.

Introduction

Parenting has been viewed as a complex process influenced by personal, social, and cultural circumstances. Various aspects of parental functioning have been directly related to one another (Reis, Orme, Barbera-Stein & Herz, 1987). "Any comprehensive explanation of family violence will certainly require consideration of specific family environments, child rearing practices,

marital relationships, social attitudes, and social institutions. . . ." (Finkelhor, Hotaling & Yllö, 1988, p. 22).

Families have been vulnerable to conditions which produce maltreatment of children -- the changing patterns of family structure, economic patterns, and social conditions (Garbarino, 1977). "The presence of child-aversive behavior and a stress filled environment are precipitating conditions that interact with parental experience and competence" (Wolfe, 1985, p. 463).

There has been a consensus regarding who is at risk and the types of families and individuals likely to experience violence (Barnard & Olson, 1986; Finkelhor et al., 1988; Garbarino, 1977; Graham, Dingwal & Wolkind, 1985; Pagelow, 1984; Straus, 1988). Physically abusive parents have been shown to be "parents caught in highly stressful, unsupportive circumstances who have ineffective and unrealistic behaviors and attitudes surrounding child care" (Finkelhor et al., 1988, p. 2). Abusive parents have had ineffective and conflict-prone styles of parenting, inappropriate expectations of children, and have been overly reactive in their dealings with children (Finkelhor et al., 1988).

Particularly at risk have been low income parents, persons living in poverty, and children existing in socially deprived living conditions (Graham et al., 1985; Pagelow, 1984). Teenage parents, parents without partners, parents with low levels of education, and parents with unwanted children have been prone to abusive behavior (Finkelhor et al., 1988; Graham et al., 1985; Pagelow, 1984).

Other factors that have increased the probability of parental child maltreatment include having other young children at home, health problems of the child and/or parent, unwillingness to join social or religious groups, inability to deal with stress, and excessive mobility (Barnard & Olson, 1986; Pagelow, 1984). Social isolation, being distanced from family, neighborhood, or institutional support, also has contributed to abusive situations (Garbarino, 1977).

Ontogenic Development

Knowledge of Child Development and Parental Expectations

Knowledge of child development has been of prime importance for effective parenting. However, such knowledge has not been necessarily innate, nor has it been automatically acquired with parenthood. Parenting has not been viewed as "an inherent inability but derives from a variety of sources including maturation, psychological health, and personal history" (Dubowitz & Egan, 1988, p. 39).

Parenting has required an understanding of child development. Knowledge of child development has included an awareness of the norms and milestones of physical, emotional, social, and cognitive development, as well as awareness of strategies and skills for caregiving. Knowledge also has included a recognition of the abstract principles of development, such as the importance of early experiences and the recognition of individual differences (McPhee,

1983). What parents know about child development has been positively related to their skill in creating a supportive learning environment and their ability to interact in a positive, stimulating manner with their children (Stevens, 1984).

Without an adequate knowledge base, parents may have established unrealistic and inappropriate expectations for their children which, in turn, may have had a negative effect on childrearing (Larsen & Juhasz, 1985; Orme & Hamilton, 1987; Shaner, Peterson & Roscoe, 1985). Research (Reis et al., 1987) has suggested that abusing mothers have unrealistic developmental expectations and more undesirable childrearing attitudes than nonabusing mothers. Unrealistically high expectations have led to abusive situations when parents perceived deviancy when none actually existed (Rickard, Graziano & Forehand, 1984; Showers & Johnson, 1985; Twentyman & Plotkin, 1982).

Child development knowledge has affected childrearing practices, and the relationship between knowledge and skill has been important (McPhee, 1983; Stevens, 1984). Knowledge of child development norms and effective child management techniques have influenced parental interpretation of a child's behavior (Rickard et al., 1984). Children who have behaved in a developmentally appropriate way for their age have been frustrating for parents who wanted their children to behave like adults (Sebastian, 1983).

In a study of urban adolescents, Showers and Johnson (1985) found that the least knowledgeable adolescents selected punishing and abusive behavior management techniques as appropriate adult actions governing child behaviors.

None of the four groups of adolescents in the study scored above 50% on child development questions. Teenage parents' unrealistic expectations frequently have led to child abuse because young parents often believed that their children were deliberately misbehaving if they did not meet the parents' specific behavioral expectations (Earhart, 1980).

Vukelich and Kliman (1985) assessed groups of older and teenage mothers to determine their knowledge or expectations for infant growth and development. The study revealed that all mothers had some inappropriate expectations for children, but the teenage mothers had considerably less knowledge than the older mothers. While the teenage mothers in this study were found to typically expect certain behaviors to occur substantially earlier than normal, another study (Shaner et al., 1985) indicated that adolescents both over- and underestimated developmental landmarks.

Parents overly concerned about a perceived developmental delay may have become abusive, believing that a child can and should perform a behavior but chooses not to perform (Vukelich & Kliman, 1985). On the other hand, parents may have expected less from children, believing that they were not capable of performing certain behaviors. In this situation, the parents may have failed to provide an appropriate environment (Twentyman & Plotkin, 1982). Abusive parents have been less satisfied in the parental role, and have been more likely to perceive childrearing as a difficult task (Trickett & Susman, 1988), while mothers with greater knowledge have tended to be more likely to enjoy the parenting role (McPhee, 1983).

Personal History and Experiences

"The maltreatment of children (both abuse and neglect) is incompetence in the role of caregiver" (Garbarino, 1977, p. 724). Maltreating parents typically have had little opportunity to rehearse for the caregiving role (Parke & Collmer, 1975), and have exhibited low levels of skill. This lack of practice for parenting has increased the possibility of inappropriate response to the demands of the role (Belsky, 1980).

Lack of training with good role models during childhood has contributed to a restricted view of childrearing later on and increased the likelihood of abuse (Dubowitz & Egan, 1988). Abusive disciplinary tactics (Anderson, 1982) have been linked with this "lack of childrearing acumen" (Garbarino, 1977, p. 724).

Educational Attainment

Lack of education or low levels of educational achievement have been linked to abusive parenting behaviors (Garbarino, 1976). A common characteristic present in reported cases of child abuse has been that of low parental education level (Pagelow, 1984).

Low educational levels have also been correlated with negative emotional states such as depression and paranoia which affect parenting attitudes and behaviors (Conger, McCarty, Yang, Lahey & Kropp, 1984). Conger et al. found that the most consistent predictor of maternal behavior in relation to environmental stress was the educational level of the mother.

Well educated parents have been shown to be better able to provide for their children, as adult educational attainment increases the potential for better jobs and higher salaries. Well educated parents also have been shown to be more likely to provide nutritional and medical care, as well as to utilize community resources and social supports (Birns, 1988).

Educated parents have been shown to be more likely to feel competent in their roles as caregivers, for educational level has been found to affect child development knowledge. High educational and occupational levels have been shown to be positively related to and accurate predictors of maternal child development knowledge (Vukelich & Kliman, 1985). Vukelich and Kliman also demonstrated that as educational level increased, mothers were more likely to seek information regarding child development from a wide variety of sources, as well as to rely on parental educational groups as resources.

Parental Age

Parental age has been mentioned in the literature as a factor in abusive family situations, particularly when the parents are adolescents or very young (Finkelhor et al., 1988; Graham et al., 1985; Larsen & Juhasz, 1985; Pagelow, 1984; Straus, Gelles & Steinmetz, 1980). Adolescents have been considered high risk for maltreatment of their children (Dubowitz & Egan, 1988). Young parental age has been associated with decreased educational attainment, marital instability, and child abuse (Berger, 1978).

Further, young parents have been shown to lack caregiving experience and training, to be less knowledgeable than older parents, to be likely to have unrealistic expectations of children, and to be prone to using physical punishment with their children (de Lissovoy, 1973; Reis et al., 1987). In his classic study of teenage parents, de Lissovoy (1973) concluded, "Children of many adolescent marriages have a high risk of joining the number of battered and abused babies" (p. 25).

The Microsystem

Family Problems, Stress, and Stress Tolerance

A common factor associated with family violence is stress (Anderson, 1982; Belsky, 1980; Finkelhor et al., 1988; Gaines, Sandgrund, Green & Power, 1978; Garbarino, 1977; Gelles, 1983; Kaufman & Zigler, 1987; Pagelow, 1984; Wolfe, 1985). Socioeconomic and/or environmental stressors have been implicated in child abusive situations (Gaines et al., 1978) and have negatively influenced parental functioning (Garbarino, 1976).

Garbarino (1976) identified several possible sources from which stress may emanate. Demographic conditions which are indicators of stress included financial stress from lack of economic resources, and environmental stress which is work or job related. Family structural stress included the timing and number of children, the presence of unwanted or special needs children, or marital discord. Past events which can contribute to continuing stress included

maternal age at the birth of the first child, and inadequate educational resources (Garbarino, 1977).

Investigators (Belsky, 1980; Garbarino, 1977; Pagelow, 1984; Straus et al., 1980) have found a consistent relationship between stress and violence. Stress, in and of itself, has not been a sufficient factor to explain family violence. However, when stress has occurred in conjunction with other factors, it has served as a catalyst, and violence has been a frequent result (Garbarino, 1977; Pagelow, 1984).

While abusive families may not necessarily have been subjected to more socioeconomic disadvantages than nonabusive families, it is the perception of the stress that has determined a particular family outcome (Wolfe, 1985). The ability to tolerate stress has depended on the family's perception of that stress, the ability to cope with adversity, and the levels of stress to which the family is subjected (Belsky, 1980).

Marital Status

Marital status has been an important consideration in the study of child abuse. The family structure itself has formed the microsystem in which all family interaction occurs. Marital conflict and/or the stresses of being a single parent have contributed to a family's at-risk status (Barnard & Olson, 1986; Finkelhor et al., 1988; Garbarino, 1977; Graham et al., 1985; Pagelow, 1984; Straus et al., 1980).

Single parents have been shown to be at greater risk for being socially isolated, for suffering economic deprivation, and for lacking resources (Dubowitz & Egan, 1988). Given the "generally lower income and social isolation of many single mothers . . . single parent households are significantly implicated in cases of abuse" (Burgess & Garbarino, 1983, p. 97).

Family Size

A contributing factor of abuse frequently cited in the literature is the presence of too many or unwanted children. It has been shown that as family size increases, so, too, does the potential for abuse (Straus et al., 1980). Cases of neglect more often have come from families with two or more children (Pagelow, 1984) and have occurred with disproportionate frequency in large families where children are close in age (Belsky, 1980).

Interaction patterns of abusive and neglectful families have been found to increase in intensity with the addition of children to the family (Burgess & Garbarino, 1983). The chance of abuse occurring has been greater when the number of children to be disciplined is increased (Herrenkohl, Herrenkohl & Toedter, 1983). Coercive styles of parenting which can result in abuse and neglect have been more likely to occur in large families (Burgess & Garbarino, 1983). Economic and human resources may have become overextended in large families with many dependent offspring (Belsky, 1980).

The Exosystem

Poverty

Poverty has been a critical consideration in the study of potentially abusive situations. Family income has been negatively related to abusive practices (Herrenkohl et al., 1983; Straus et al., 1980), with abuse and neglect occurring more frequently among those families with incomes under $7,000 per year (Birns, 1988). "Insufficient income was cited as a factor of maltreatment in almost 50% of child abuse and neglect cases in statistics compiled by the American Humane Association in 1978" (Burgess & Garbarino, 1983, p. 95). There has been an association between low socioeconomic status (SES) and violent behavior. Statistics have shown a predominance of low SES families implicated in abusive situations (Pagelow, 1984).

Unemployment

Abuse has been more common in families where unemployment and economic deprivation are serious problems (Finkelhor, 1985; Straus et al., 1980). Unemployment has been an important stressor which can contribute to child maltreatment, and has been a primary factor distinguishing between abusive and nonabusive families (Belsky, 1980; Dubowitz & Egan, 1988). Families in which unemployment is common have had some of the highest rates of violence by parents toward children (Straus et al., 1980).

Unemployment has served as a catalyst, stimulating family violence by increased family economic and social stress. Alterations in family life due to unemployment have resulted in an increased amount of contact between demanding children and frustrated mothers and fathers (Graham et al., 1985).

Isolation

Many abusive families have experienced geographic isolation which may preclude an extended family's helping with child care, offering emotional or financial support, or providing other assistance (Dubowitz & Egan, 1988). Isolation need not be only geographic, but has also occurred in high density living areas as well as in rural areas (Pagelow, 1984). However it occurs, family isolation frequently has been associated with child abuse and neglect (Ballew, 1985; Straus et al., 1980).

Isolation has been multiply determined by the interaction of the individual and the environment. Isolation from support systems has resulted from disparity in the relationship of the family to the community (Garbarino, 1977). Abuse has been associated more often with families that do not belong to organizations or attend community meetings, and have few community ties or friendships (Finkelhor, 1985; Pagelow, 1984; Straus et al., 1980).

Families may have become alienated from community structures through events and social stresses which have the effect of separating those families from strong support systems. Excessive transience and mobility patterns have been shown to be disruptive to family life. Frequent moves have limited

opportunities for establishing social exchange and community support (Dubowitz & Egan, 1988).

Characteristics of families may have contributed to their isolation. Abusive families have held strong beliefs about isolating themselves and their children from the external world (Trickett & Susman, 1988). The privacy of these families has decreased the amount of social control over their actions and has precluded the effectiveness of intervention by persons from outside the family (Pagelow, 1984). Child abuse or neglect may have occurred when parents' backgrounds and beliefs kept those parents from establishing contacts with people who could have been supportive to their parenting role (Belsky, 1980).

Social support systems of marriage, the extended family, close neighborhoods, work and jobs, and community services have served to help relieve family stress, reduce family dysfunction, and provide information, help, and assistance (Ballew, 1985; Swift, 1988). Failure to use social support systems has been common among abusive and neglectful families. Parents who have broken the cycle of abuse report strong reliance on using extensive social support (Kaufman & Zigler, 1987).

Summary and Hypotheses

A myriad of forces and events have impacted families at each level of development. Ontogenic development has been affected by parental age, educational and occupational attainment, personal history and experiences, and

expectations for child development. The microsystem, the family context, has been vulnerable to problems and stress, which may be compounded by marital status, living arrangements, and family size. Poverty, isolation, and unemployment have influenced parental and family functioning at the exosystem level.

No single force or factor at any level has been typically sufficient to cause abuse. However, when a number of factors have occurred concurrently, the potential of resulting child abuse has been heightened.

The population in this study consisted of low income mothers, many of whom lived in rural areas and were relatively isolated. Low income and isolation are two factors implicated in child abuse. The additional factors of parental age, educational attainment, marital status, and family size were examined to determine to what extent the potential for abuse existed within this population.

Furthermore, the study attempted to discern to what extent the factors of parental age, educational attainment, marital status, and family size might either ameliorate or compound the potential for abuse. If, indeed, these factors were related to potentially child abusive situations, then an examination of this population would contribute to knowledge about child abuse within similar populations.

Based on the review of literature and the population studied, the following null hypotheses were formulated for analysis:

(1) There will be no relationship between parental age and the potential for child abuse.

(2) There will be no relationship between educational attainment and the potential for child abuse.

(3) There will be no relationship between marital status and the potential for child abuse.

(4) There will be no relationship between family size and the potential for child abuse.

In order to include parental expectations for child development as a variable, the Parental Expectations Questionnaire (PEQ) was evaluated to establish validity and reliability. The following guidelines regarding the PEQ were formulated and examined:

(1) The PEQ will exhibit content validity by having each individual item correlate to the total score with a .5 minimum correlation.

(2) The PEQ will demonstrate reliability with a minimum .7 Cronbach alpha correlation.

CHAPTER 3

METHODS

This study was a secondary analysis of data derived from a broader exploratory research study conducted during June through August, 1988 (Chandler, Osborne & Wilson, 1988). The purpose of the original study was to describe low income mothers' knowledge of child development, and to explore factors which might affect satisfaction with parenthood and the use of developmentally appropriate disciplinary strategies. The low income mothers were enrolled in Women, Infants and Children (WIC) clinics in rural southwestern Montana.

Procedure

All mothers attending WIC clinics in Livingston (Park County) and Bozeman (Gallatin County) from June through August, 1988, were given the opportunity to participate in this research. The purpose of the Special Supplemental Food Program for Women, Infants and Children has been to improve the health of persons nutritionally at risk through education and provision of supplemental foods (Farrior & Ruwe, 1987). Clients attended the clinic once a month to receive health and nutrition counseling, and to receive vouchers to purchase additional food.

Financial eligibility for the WIC program was determined by the family size and income guidelines established by the United States Department of Agriculture (USDA). Participants were at or below 185% of poverty level (Health Services Division, *WIC Program Policy Statement,* 1987). Priority considerations for the program included pregnant women, breastfeeding women, infants, children at risk nutritionally, and high risk post-partum women, particularly teenagers. Applicants must have resided in the geographic area of the local agency; Gallatin County also administered the program in Park and Madison Counties.

Approximately 200 mothers were asked to complete a self-report instrument developed by Chandler, Osborne, and Wilson (1988). The questionnaire was designed to measure knowledge of child development, parenting strategies, child abuse potential, parental satisfaction, and parental attitudes.

With the approval of the Gallatin County Health Department, a research packet was distributed by WIC personnel to each mother during her regularly scheduled monthly visit. The research packet contained a letter of instruction (see Appendix A), the self-report questionnaire, a consent form on a pre-addressed, stamped postcard (see Appendix B), and a complimentary brochure on children's play.

Potential participants were offered the choice of completing the questionnaire in the WIC office, taking the questionnaire home for completion, or not participating in the study. Boxes were provided in each office for

placement of finished questionnaires and consent cards. Those participants who chose to take the questionnaire home were given a pre-addressed, stamped envelope in which to return the questionnaire.

Sample Population

The population was comprised of approximately 200 mothers who attended the WIC clinics in Livingston and Bozeman, Montana, during June through August, 1988. The self-selected sample consisted of 138 respondents who completed the questionnaire (N=138). Gallatin County was the primary residence of 112 mothers (81%), and Park County was the place of residence for 26 (19%) of the mothers.

Maternal ages ranged from 17 years to 42 years. Mean maternal age was 27.7 years. Married respondents comprised 75% of the sample (N=104), while 24% (N=33) of the mothers were single. One mother failed to respond to the question, accounting for the remainder.

Educational attainment ranged from four years (fourth grade) to 18 years (college degree plus two years) of formal schooling. The mean level of educational attainment was 13 years.

Regarding family size, nine mothers were pregnant with their first child, which was the smallest family size reported. Two families consisted of six children each, comprising the largest families. Mean family size was 1.9 children per family.

Limitations

This sample may not necessarily have been representative of all WIC populations, particularly those in urban areas, for two reasons. First, the sample was comprised of 16 mothers (11.6%) who were students, while 36 (26.1%) reported spouses/partners who were currently students, most of whom were attending Montana State University. As members of a university community, the students' inclusion as members of a low income population was perhaps due to temporary family circumstances. Secondly, only eight mothers, or 6% of the sample, were under 20 years of age. This percentage may not have been reflective of the numbers of teenage mothers participating in WIC programs in large cities.

In addition, the study was restricted to female parents, as the WIC clients are women. Certainly in those families with a male present, the additional information from the male would have allowed further examination of the total family situation.

Instruments

Demographic Questionnaire

A 12-item questionnaire was constructed to elicit demographic data (see Appendix C). Information requested included community size of current residence, community size of childhood residence, participant's age, the number and ages of children in the family, living arrangements, religion, level of

educational attainment, and occupational attainment. This secondary analysis focused on respondents' answers to age, marital status, number of children in the family, and educational attainment as possible contributing factors to potential child abuse.

Child Abuse Potential Inventory

The Child Abuse Potential Inventory (CAPI) was developed to identify personality traits that are characteristic of individuals who abuse and neglect children (Milner & Wimberly, 1979). The CAPI was a 37 item screening device which assessed an individual's potential for child abuse by identifying four subscales or factors which can discriminate potential for abuse: loneliness, rigidity, problems, and control (see Appendix D).

Seven loneliness items related to feeling alone, feeling rejected, fearing one's children would not love one, and being a quiet person. Fifteen items on the CAPI related to the subscale of rigidity. Rigidity included dimensions of order and fear of failure related to home, children, and self: keeping a spotless home, keeping children neat and orderly, feeling depressed and/or distrustful of others, and using punishment to control a child's behavior. The subscale for problems included nine items which indicated concerns with self, family, and friends. The last subscale dealt with lack of social and self control. Fearing loss of self control, worry about not having enough to eat, and not having oneself or one's feelings understood comprised the six questions relating to this subscale (Milner & Wimberly, 1979).

Validity and reliability data available on the CAPI indicated that it has been an effective instrument for discriminating abusers from nonabusers when tested longitudinally with groups of at risk parents (Milner, Gold, Ayoub & Jacewicz, 1984). Criterion related validity was reported as a 96% correct classification rate. Internal consistency was established with a split-half reliability of .963, and stability measures indicated a one-week test-retest reliability of .896 (Milner & Ayoub, 1980; Milner & Wimberly, 1980).

Respondents were asked to respond to simple statements by marking either agree or disagree. One point was given for each preferred answer, while no points were given for the alternative. A total of 37 points was possible, which included all subscales.

Parental Expectations Questionnaire

The Parental Expectations Questionnaire (PEQ) was a 30-item instrument which asked respondents to indicate in months when a child may be expected to perform specific behaviors (Berg, 1975). Developmental milestones included such behaviors as social smiling, feeding oneself, sitting alone, walking unassisted, toilet training, learning to read, and telling time (see Appendix E).

All items on the PEQ were cross referenced with standardized instruments. The Learning Accomplishment Profile-Diagnostic Edition (LeMay, Griffin & Sanford, 1977), the Denver Developmental Screening Test (Frankenberg, Dodds, Fandal, Kazuk & Cohrs, 1975), and the Vineland Adaptive Behavior Scale (Sparrow, Balla & Cicchetti, 1984) were used to

substantiate all items on the PEQ. Any item which could not be validated by one of the standardized instruments was omitted. Eight questions were subsequently omitted.

Reliability and validity information was not available for the PEQ. Hence, it was necessary to establish reliability and validity of the PEQ for use with this particular sample to determine whether it was a viable instrument.

The content validity was evaluated using a Pearson Product Moment correlation. This method was utilized to determine how each item related to and was representative of the overall score. Reliability was established through a Cronbach's alpha coefficient.

Scoring methods for the PEQ were not reported. Therefore, two different methods of scoring the instrument were devised in order to explore possible equitable scoring procedures. For both scoring methods, the answer which most closely matched in months the age reported on a standardized instrument was designated as the "ideal" answer.

In the first method of scoring, one point was given for each ideal answer, and no points were given for all other responses. In using this method, the higher the respondent's score, the closer that score was to the ideal. The second method of scoring assigned zero points to the ideal score, and increasing points were given for each increment off the ideal score. This scoring method yielded results in which higher scores indicated fewer correct responses, and greater discrepancy between actual and ideal scores.

Data Analysis

Statistical analyses of the data consisted of one-way ANOVAs to determine whether a relationship existed between the factors and the potential for child abuse. A minimum significance level of $p < .05$ was utilized to determine significant differences between groups. Significant differences were subjected to Tukey post-hoc multiple comparison tests in order to determine where the significant differences existed.

Child Abuse Potential scores were compared by groups. The various groups were established on the basis of parental age, marital status, educational attainment, and family size. For purposes of analysis, age groups were formed by dividing the sample into quartiles. Marital status arbitrarily divided the sample into two groups: married and single. Educational attainment was classified according to three groups of increasing level of schooling completed: less than high school graduation, high school graduation, and some post-secondary education. Family size formed three groups according to the number of children present in the family: one child, two children, and three or more children.

Two-way ANOVAs were employed to determine whether combinations of the factors of parental age, marital status, educational attainment, and family size would produce results over and above those that would be produced by the factors independently and separately. The same groupings were utilized to compare each combination of two factors with the CAPI scores.

CHAPTER 4

RESULTS

The independent demographic variables of parental age, educational attainment, marital status, and family size as they relate to child abuse potential were examined in this study. Respondents' scores on the Child Abuse Potential Inventory formed the dependent variable in the analyses.

Preliminary Analyses

A preliminary analysis was conducted on the Child Abuse Potential Inventory (CAPI) to determine the range of scores. Of a possible total of 37 points, the minimum points scored was 11 (n=1), and the maximum points scored was 37 (n=1), revealing a 26 point spread for the scores. The mean score on the CAPI was 28.087, with a standard deviation of 5.75 (see Appendix F).

Main Analyses

Hypothesis 1

The first null hypothesis stated that there will be no relationship between parental age and the potential for abuse. The sample was divided into quartiles to form four groups of increasing age (see Table 1). A one-way

ANOVA of age groups by CAPI scores revealed significant differences in the group mean scores, $F(3, 132) = 2.635$, $p < .05$ (see Table 2). A post-hoc Tukey multiple comparison statistic indicated that age group 4 was significantly different from the other groups at the .05 level. Since there was a relationship between parental age and the potential for child abuse, Null Hypothesis 1 was rejected.

Table 1. Age groups and CAPI scores.

Groups by Age	(N)	Mean CAPI Score
(1) 17-24	37	26.57
(2) 25-27	31	27.42
(3) 28-30	32	27.84
(4) 31-42	36	30.14

Table 2. Analysis of variance of age groups and CAPI scores.

Source of Variation	Sum of Squares	df	Mean Square	F
Between	251.839	3	83.946	2.635*
Within	4205.154	132	31.857	
Total	4456.993	135	33.015	

*Significant at the .05 level.

Hypothesis 2

The second null hypothesis stated that there will be no relationship between educational attainment and the potential for child abuse. The sample was divided into three groups of increasing educational attainment (see Table 3). A one-way ANOVA conducted on CAPI scores by educational attainment indicated significant differences in the group mean scores, $F(2, 135) = 16.67$, $p < .000$ (see Table 4). A post-hoc Tukey multiple comparison revealed that groups 2 and 3 were significantly different from group 1 at the .05 level. Null Hypothesis 2 was therefore rejected.

Table 3. Educational attainment and CAPI scores.

Groups by Educational Attainment	(N)	Mean CAPI Score
(1) Non-high school graduate	15	20.80
(2) High school graduate	51	28.78
(3) More than high school	72	29.11

Table 4. Analysis of variance of educational attainment and CAPI scores.

Source of Variation	Sum of Squares	df	Mean Square	F
Between	896.818	2	448.409	16.667***
Within	3632.139	135	26.905	
Total	4528.957	137	33.058	

***Significant at the .000 level.

Hypothesis 3

Null Hypothesis 3 stated that there will be no relationship between marital status and the potential for child abuse. The sample was divided arbitrarily into two groups: married respondents and single respondents (see Table 5). A one-way ANOVA on marital status and CAPI scores revealed a significant difference in the mean scores of the two groups, $F(1, 135) = 10.920$, $p < .001$ (see Table 6). Due to the significant relationship between marital status and the potential for child abuse, Null Hypothesis 3 was rejected.

Table 5. Marital status and CAPI scores.

Marital Status	(N)	Mean CAPI Score
(1) Married	104	28.98
(2) Single	33	25.30

Table 6. Analysis of variance of marital status and CAPI scores.

Source of Variation	Sum of Squares	df	Mean Square	F
Between	338.835	1	338.835	10.920***
Within	4188.931	135	31.029	
Total	4527.766	136	33.292	

***Significant at the .001 level.

Hypothesis 4

The fourth null hypothesis stated that there will be no relationship between family size and potential for child abuse. Three groups were formed based on the increasing number of children per family (see Table 7). A one-way ANOVA on family size by CAPI score failed to reach significance, $F(2, 135) = .143$, $p > .05$ (see Table 8). Since no relationship was evident between family size and the potential for child abuse in this study, Null Hypothesis 4 was retained.

Table 7. Family size and CAPI scores.

Groups by Family Size	(N)	Mean CAPI Score
(1) One child	57	27.88
(2) Two children	40	27.98
(3) Three or more children	41	28.49

Table 8. Analysis of variance of family size and CAPI scores.

Source of Variation	Sum of Squares	df	Mean Square	F
Between	9.567	2	4.799	.143
Within	4519.359	135	33.477	
Total	4528.957	137	33.058	

Instrument Analyses

The Parental Expectations Questionnaire (PEQ) was analyzed to determine reliability and validity of the instrument in order to include parental expectations for child development as a factor in relationship to child abuse potential. After verifying items on the PEQ by cross-referencing with standardized instruments, eight items were deleted from the PEQ, leaving 22 items for analysis. Fifteen of the 138 questionnaires were incomplete or had missing information, so the remaining 123 questionnaires were subjected to validity and reliability analysis.

Content validity of the PEQ was determined by Pearson correlations which indicated the relationship of individual items to the total score. Using the first scoring method, in which one point was given for each ideal answer and no points were given for any other response, only one item reached a .5 correlation; item 14 had a correlation of .5020. With the second scoring method, in which zero points were assigned to the ideal score and increasing points were given for each increment off the ideal score, no single item met the minimum established correlation level of .5. Guideline 1 stated that the PEQ will exhibit content validity by having each item correlate to the total score with a .5 minimum correlation. The PEQ failed to meet the minimum requirement established by this guideline.

Reliability of the PEQ was determined by a Cronbach's alpha correlation reliability coefficient for measuring internal consistency. The first method of

scoring yielded a Cronbach's alpha of .1775, while the second method resulted in a Cronbach's alpha of .2380. Guideline 2 stated that the PEQ will demonstrate reliability with a minimum .7 Cronbach alpha correlation. The PEQ also failed to meet this minimum guideline.

The PEQ failed to demonstrate reliability or validity, and therefore could not be used as a viable instrument for measuring parental expectations for child development. As a result, parental knowledge/expectations for child development could not be used as a factor relating to the potential for child abuse in this study.

Further Analyses

Two-way ANOVAs testing for interaction were conducted on all possible combinations of factors with CAPI scores. The six different groups included age and marital status, age and educational attainment, age and family size, marital status and family size, educational attainment and marital status, and educational attainment and family size.

Four of the ANOVAs failed to reach significance at the .05 level, indicating no interaction between the factors and the dependent variable of CAPI scores. The results of these analyses are summarized in Table 9.

A two-way ANOVA on educational attainment and marital status revealed significant interaction with the two factors and the dependent variable, CAPI scores, $F(2, 131) = .3.815$, $p < .05$ (see Table 10). In both the single and married groups, the mean CAPI scores showed a tendency to

improve with increasing levels of educational attainment. Married mothers with a high school education had the highest mean scores of all groups. However, single mothers with more than a high school education had higher mean scores than married mothers in the same educational attainment grouping (see Table 11). The ordinal interaction presented in Table 11 was graphed in Figure 1 for purposes of illustration.

Table 9. Two-way analyses of variance.

Factors by CAPI Scores	Results*
Age, marital status	$F(3, 127) = 1.747$
Age, educational attainment	$F(6, 124) = 1.344$
Age, family size	$F(6, 124) = .520$
Marital status, family size	$F(2, 131) = .488$

*None of the values are significant.

Table 10. Two-way analysis of variance: Educational attainment and marital status.

Source	Sum of Squares	df	Mean Square	F
Educational attainment (A)	695.867	2	347.934	13.089**
Marital status (B)	134.555	1	134.555	5.340*
A x B	192.271	2	96.136	3.815*
Remainder	3300.793	131	25.197	
Total	4527.766	136		

*Significant at the .05 level
**Significant at the .01 level

Table 11. Mean CAPI scores for educational attainment and marital status groups.

	Educational Attainment		
Group	< High School	High School	> High School
Married	24.14 (n=7)	29.71 (n=41)	29.05 (n=56)
Single	17.88 (n=8)	25.00 (n=10)	29.47 (n=15)

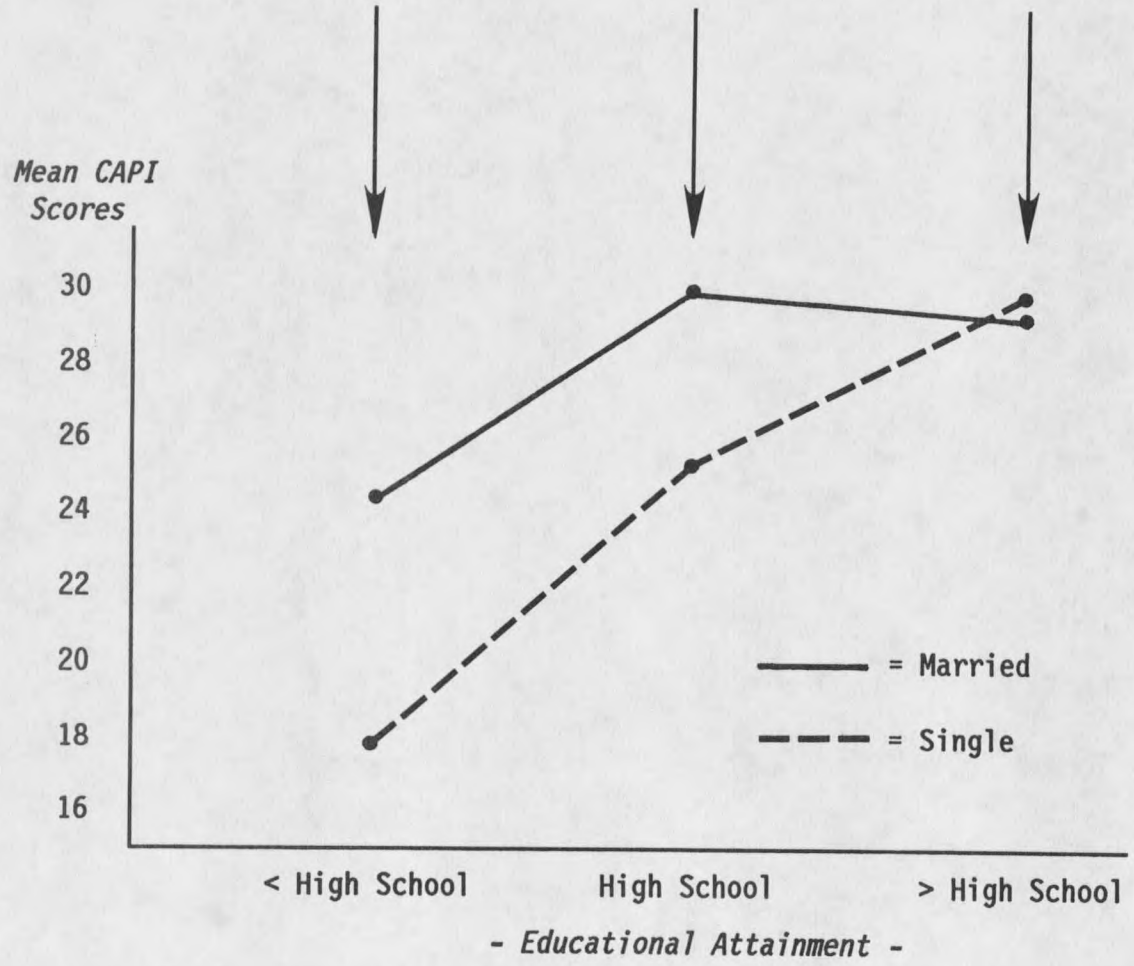


Figure 1. Graph depicting ordinal interaction of two-way analysis of variance for educational attainment and marital status.

Educational attainment and family size also yielded a significant interaction, $F(4, 129) = 2.677$, $p < .05$ (see Table 12). Increasing family size did not produce a predictable drop in mean CAPI scores with respondents having at least a high school education. Group mean scores for mothers with less than a high school education fell dramatically in those families with three or more children present. Those mothers with more than a high school education and three or more children in the family had the highest mean CAPI scores of all groups (see Table 13). Figure 2 is presented to clarify the interaction displayed in Table 13.

Table 12. Two-way analysis of variance: Educational attainment and family size.

Source	Sum of Squares	df	Mean Square	F
Educational attainment (A)	927.683	2	463.841	18.043**
Family size (B)	40.462	2	20.231	.787
A x B	275.321	4	68.830	2.677*
Remainder	3316.355	129	25.078	
Total	4528.957	137		

*Significant at the .05 level
**Significant at the .01 level

Table 13. Mean CAPI scores for educational attainment and family size groups.

Educational Attainment	Family Size by Number of Children		
	1 Child	2 Children	3+ Children
< High School	15.25 (n=4)	25.40 (n=5)	20.67 (n=6)
High School	28.12 (n=17)	29.12 (n=17)	29.12 (n=17)
> High School	29.17 (n=36)	27.61 (n=18)	30.50 (n=18)

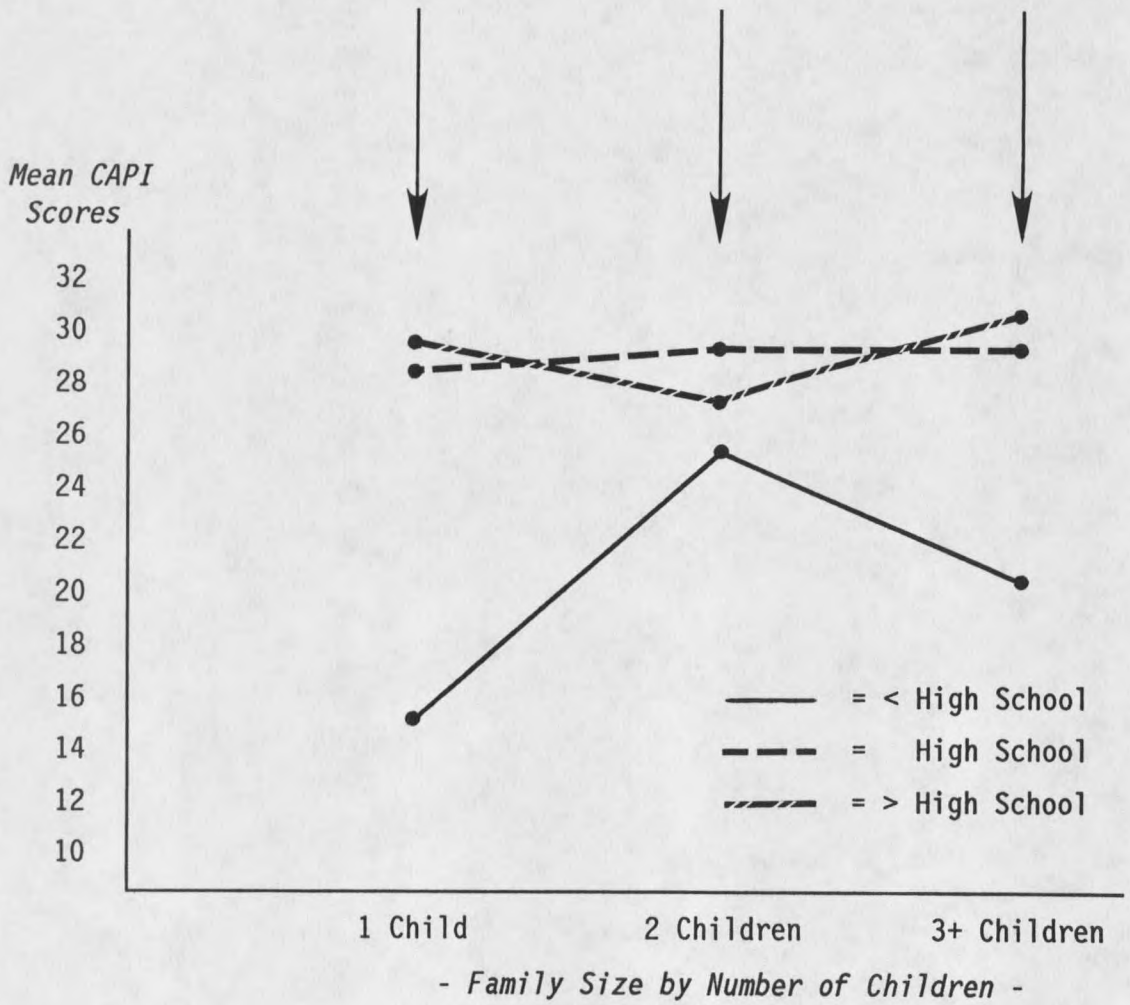


Figure 2. Graph depicting ordinal interaction of two-way analysis of variance for educational attainment and family size.

Summary of Findings

Analyses of the variables of parental age, educational attainment, marital status, and family size in conjunction with the dependent variable of CAPI scores revealed the following findings:

(1) Parental age was related to child abuse potential, with older mothers scoring significantly higher than other age groups at the .05 level.

(2) Educational attainment was significantly related to child abuse potential at the .001 level. Respondents with educational attainment of high school and above had significantly higher scores than respondents who had not completed high school.

(3) Marital status was related to child abuse potential, significant at the .001 level. Married respondents as a group scored significantly higher than did single respondents.

(4) Family size was not related to child abuse potential in the study, denoting no significant relationship between the variables.

In addition, a significant interaction was found between the variables of educational attainment and marital status with child abuse potential. Educational attainment and family size also produced a significant interaction in relation to the potential for child abuse.

CHAPTER 5

DISCUSSION

The results of this study indicated that the potential for child abuse exists within the sample investigated. The use of the Child Abuse Potential Inventory revealed that several members of the sample may be at risk for being abusive. Twenty-three of the total 138 participants scored below one standard deviation from the mean, and an additional 28 respondents were within one standard deviation below the mean.

The findings were consistent with ecological theory (Belsky, 1980; Bronfenbrenner, 1977; Garbarino, 1977) which advocated that an individual is influenced by many factors, and these factors, in combination, may contribute to potentially abusive situations. The factors in this study which impacted on the potential for child abuse included parental age, marital status, educational attainment, and family size. Further, the evidence indicated significant relationships among parental age, marital status, educational attainment, and family size and the potential for child abuse.

Findings

This study examined the factors of parental age, parental educational attainment, marital status, and family size as potential contributors to child

abuse. Child abuse potential was determined by respondents' scores on the CAPI. Higher scores indicated less potential for the presence of child abusive behaviors.

Parental Age and the Potential for Child Abuse

Older mothers scored significantly higher than younger mothers on the CAPI, which would indicate that parental age influences the potential for child abuse. As parental age increased, so did the group mean CAPI scores, suggesting a reduced potential for child abuse among the older mothers. Perhaps these older mothers had greater knowledge of child development, more experience in the caregiving role, higher educational attainment, or more stable marital relationships. The oldest group of mothers, aged 31 to 42, scored significantly higher than the other three groups of younger mothers. This finding supported research which associated young parental age with potentially abusive situations (de Lissovoy, 1973; Dubowitz & Egan, 1988; Finkelhor et al., 1988; Graham et al., 1985; Larsen & Juhasz, 1985; Pagelow, 1984, Reis et al., 1987; Straus et al., 1980).

Educational Attainment and the Potential for Child Abuse

Educational attainment and child abuse potential were significantly related. As educational attainment increased, the group mean CAPI scores also increased. A significant difference was found between those mothers with at least a high school education and those who had not completed high school.

Higher educational attainment may have afforded these mothers greater knowledge of child development or better future occupational prospects, which could serve to alleviate family stress. Those mothers with higher educational attainment would appear to be less likely to be abusive towards their children, which was consistent with the literature (Birns, 1988; Conger et al., 1984; Garbarino, 1976; Pagelow, 1984; Vukelich & Kliman, 1985).

Marital Status and the Potential for Child Abuse

Married respondents as a group scored significantly higher on the CAPI than did the single mothers. This would indicate that married respondents may be less likely to exhibit abusive behaviors towards their children. The relationship between marital status and CAPI scores suggested that being married may reduce the likelihood of potential child abuse, perhaps by providing additional financial, experiential, or emotional support for the parenting role. This finding supported previous research on child abuse which implicates single parenthood as one factor of child abuse potential (Barnard & Olson, 1986; Burgess & Garbarino, 1983; Dubowitz & Egan, 1988; Finkelhor et al., 1988; Garbarino, 1977; Graham et al., 1985; Pagelow, 1984; Straus et al., 1980).

Family Size and the Potential for Child Abuse

In analyzing family size and CAPI scores, no significant relationship was found utilizing a one-way ANOVA. The results of this analysis were inconsistent with research in that the data did not support the hypothesis that larger families will exhibit a greater possible potential for abuse (Belsky, 1980; Burgess & Garbarino, 1983; Herrenkohl et al., 1983; Pagelow, 1984; Straus et al., 1980). In fact, the mothers with three or more children, as a group, had a slightly higher mean CAPI score than the groups having only one or two children. This was perhaps due to the fact that 18 mothers, each having three or more children, also had more than a high school education.

Educational Attainment, Family Size, and the Potential for Child Abuse

While family size alone was not a significant factor for child abuse potential in this study, there was a significant interaction with educational attainment when the two factors were subjected to a two-way ANOVA. Null Hypothesis 4, which stated that families with more children would exhibit a greater potential for child abuse, held true only for mothers with less than a high school education. Mothers with more than a high school education and having three or more children had the highest mean CAPI score for all family size groups. This would serve to explain why, taken together as a group, all mothers with three or more children had such a high mean CAPI score. It would appear that increased educational attainment may have

negated the effects of large family size as a contributing factor of potential child abuse.

Educational Attainment, Marital Status, and the Potential for Child Abuse

The interaction between marital status and educational attainment was also significant. There was a definite trend for both married and single respondents' group mean CAPI scores to increase as educational attainment increased. One surprising finding was that single mothers with more than a high school education had higher mean scores on the CAPI than did married mothers with more than a high school education. Educational attainment would appear to be the key factor in this interaction. Education beyond the high school level may again have negated the effects of being a single parent in potentially abusive situations.

Implications

Methodological Implications

A major weakness of this study was the use of the Parental Expectations Questionnaire (PEQ) to assess parental knowledge of child development. Since the PEQ was found to be inconsistent, and to display neither reliability nor validity, the data collected for assessing parental expectations was not usable. Subsequently, this critical aspect of parental functioning could not be adequately measured within this sample.

The failure of the PEQ to demonstrate reliability or validity points out the need for development of a viable and accurate instrument to measure parental knowledge of child development norms. Further, caution must be taken when using any instrument which purports to measure such a nebulous concept as parental knowledge.

By its very nature, a voluntary self-report questionnaire may not be the most accurate measure of parental functioning. It would be difficult to assess to what degree respondents willingly reported actualities, or attempted to comply with societal expectations by providing socially acceptable answers.

Implications for Further Research

Several possibilities for research are suggested by this study. Further investigations would be of interest to secondary and post-secondary educators, adult educators, social service providers, and university departments of child development and family relations.

Additional analyses of educational attainment with consideration to income level in this sample should be performed. Since many of the families surveyed consisted of college students, their status as members of a low income population may not be truly representative of other low income families. College students' low income classification may be only temporary and subject to change upon graduation. Other low income families may not have the potential or capabilities to change income status so readily.

Further research is needed to clarify the relationship between educational attainment and child abuse potential. There is a need to understand how increased educational attainment can or may function as a factor in reducing the potential for child abuse within families. Perhaps parents with increased educational attainment have a greater awareness and use of support systems, perhaps they are more likely to seek help in the parenting role, or they may have a greater awareness of alternate parenting styles.

Another research need is to determine if there is a relationship between educational attainment and child development knowledge. It may be that mothers with higher educational attainment do have more realistic expectations for their children's development. In acquiring more education, perhaps a greater chance exists that mothers have received courses in various aspects of child development such as normative information, child management strategies, and family relations, and thus may be better prepared for parenthood. If, indeed, "maternal education is a key to abuse prevention" (Birns, 1988, p. 26), there is a need to determine what educational opportunities may be best suited for young mothers.

In consideration of ecological theory, all factors that impinge upon and impact WIC families should be explored. Certainly, the role of the father or other significant male figure affects the functioning of the family. Future research should attempt to include this important aspect of the family context.

Replications of this study are needed with WIC program participants in other geographic areas, both urban and rural, in order to contrast findings.

Without further substantiation, attempts to generalize from this sample would not be representative.

Implications for Practitioners

In order to help families, practitioners must understand the ecological contexts of the families, and the various problems, stresses, and situations to which those families are subjected. Provision of continuing social support is crucial in the attempt to prevent child abuse.

Implications for the WIC program. The mothers in this study were utilizing one social support system to help provide resources for their families. The WIC program provided nutritional information and food supplements for the participating mothers. Unfortunately, less than half of the eligible women who apply nationwide are receiving the services of WIC programs (Birns, 1988; Children's Defense Fund [CDF], 1989). The WIC program must provide continued medical and nutritional support to all enrolled families and must be expanded to provide that support to all eligible families in need.

The WIC program could also provide additional support for women and families by serving as a screening and referral service. WIC personnel could easily administer the CAPI or other appropriate screening instrument to mothers enrolled in the program. Those mothers identified as being at risk for possible child abusive behaviors could be referred for other services such as parenting classes or personal counseling, provided additional financial resources could be made available. In addition, the WIC program could be a

logical, convenient, and efficient source for dispersing information to mothers about child development and child behavior management strategies.

Implications for educators. Since educational attainment appeared to be a key factor in relation to child abuse potential in this study, implications for junior and senior high school teachers, educators, counselors, parents, and communities are extremely pertinent. Schools are a logical source of information and potential support for teenage parents. Additional support from the parents of teenage parents, as well as from community resources, is necessary.

Nearly half of all teenage girls who become pregnant will fail to complete high school (CDF, 1989). All attempts must be made to help teenage girls, married or single, complete their high school education. Young family programs, operated jointly by schools and communities, are a vital component of this support system, and have been successful in various communities. The programs provide child care for children of teenage mothers, thus enabling those mothers to attend school. Young family programs are also a source of education for young parents, providing information about child development, child behavior management techniques, family relations, and individual counseling.

Information and courses dealing with child development and family relations should be part of required curriculum for all junior and senior high school students. Students must be provided with realistic information about the effects and consequences of early parenthood on their future economic

prospects and educational opportunities. Delaying parenthood must be presented as a viable and critical alternative for future lifestyle.

If a teenage mother chooses to remain single, all efforts should be made for that mother not only to complete high school, but to receive additional education. Vocational training, adult education, or college are all possible options.

College departments of family science and child development are influential in disseminating information through courses regarding lifestyles and family relations, parenting and child management techniques, and child and human lifespan development. Perhaps these courses should be part of the required curriculum for all college students.

This study provided evidence of a relationship between educational attainment and the potential for child abuse. Maternal educational attainment may indeed negate the effects of single parenthood, large family size, and low income as potential contributors to child aversive behaviors. Education and knowledge are powerful and effective forces in the endeavor to reduce the incidence of child abuse.

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APPENDICES

APPENDIX A

INSTRUCTIONS AND CONSENT FORM

INSTRUCTIONS AND CONSENT FORM

Name of Project: Child Development Knowledge and Discipline Strategies

Researchers: Dr. Stephan M. Wilson, Dr. Sandra Osborne, Ms. Nancy Chandler

Purposes: (1) To determine how experiences and knowledge about children relate to parenting practices, and (2) to determine how the above are related to emotions and expectations concerned with parenting.

By participating in this study, you may learn more about yourself and your family life. We do not believe there are potentially dangerous risks in being involved in this study. However, your participation in this study is voluntary, and you may refuse to participate at any time while completing the questionnaires.

Instructions:

Please do not put your name on the questionnaire. Results of the questionnaires will be reported for groups only with all identifying information omitted. Your answers will not be reported to the Women, Infants and Children (WIC) program or to others.

MSU requires us to have you sign the enclosed consent form (postcard) acknowledging that you have read this explanation of confidentiality and risks and agree to participate. After you sign the card, please put it in the mail (no postage needed).

After returning the signed postcard, begin answering the questions on the first page. You should do this in private. When you are finished, place your questionnaire in the enclosed self-addressed, stamped envelope and drop it in the mail. There is a separate envelope in which to return the questionnaire. Please, return the questionnaire (no postage needed) to us no later than June 15. The results of this study will be available in early Autumn, 1988. If you would like to read the report, several copies will be made available in the WIC office.

If you have any questions, please contact any of the following:

- The WIC staff
- Dr. Stephan M. Wilson
- Dr. Sandra Osborne
- Ms. Nancy K. Chandler

APPENDIX B

CONSENT POSTCARD

Montana State University
Parenting Project
Sherrick Hall
Bozeman, MT 59717

MSU Parenting Study
Sherrick Hall
College of Nursing
Montana State University
Bozeman, MT 59717

MSU PARENTING STUDY, 1988

I am a willing participant in the MSU Parenting Study and have been informed of the following items: (1) I have been informed of the following description of the project, its purpose, and benefits; (2) I have been given an explanation as to why I have been asked to participate; (3) I have been given an explanation of my specific involvement and potential risks, if any; (4) I understand that I may withdraw from the study at any time that I desire; and (5) I understand that my responses will be kept anonymous.

_____

(Signature)

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

THE PARENTING PROJECT

1. What county do you live in? (check one)
   _____ Gallatin _____ Park _____ Madison

2. What community/town do you live in? _____

3. Was your childhood for the most part spent in: (check one)
   _____ open country, open range _____ town of 50-500 people
   _____ town of 500-1,000 _____ town of 1,000-5,000
   _____ city of 5,000-10,000 _____ city of 10,000-50,000

4. When is your birthday? (month and year) _____

5. What is the birthday of each of your children? (month and year)
   Boys _____
   Girls _____

6. Are you now married? _____ yes _____ no
   What year were you married? _____

7. Was your previous marriage ended because of: (check one)
   _____ divorce _____ never married
   _____ desertion _____ death

8. Who lives with you? (check those that apply)
   _____ spouse _____ parent(s)
   _____ brother or sister _____ grandparent(s)
   _____ male friend _____ female friend

9. To what church do you belong? _____

10. Draw a circle around the number of years of schooling you have completed.

1 2 3 4 5 6 7 8	1 2 3 4	1 2 3 4	1 2 3 4
Grade School	High School	College	Post-Graduate

11. What is your occupation (for example, full-time homemaker, secretary, drug store clerk, hairdresser, student)? _____
    In a few words, please tell us what you do. _____
    _____

12. What is your husband or partner's occupation (if he or she has one)?
    _____
    In a few words, tell us what he or she does. _____
    _____

APPENDIX D

CHILD ABUSE POTENTIAL INVENTORY

CHILD ABUSE POTENTIAL INVENTORY

		Circle One	
1.	I often feel very alone.	Agree	Disagree
2.	I am usually a quiet person.	Agree	Disagree
3.	I am often lonely inside.	Agree	Disagree
4.	Children should never be spoiled.	Agree	Disagree
5.	Sometimes my behavior is childish.	Agree	Disagree
6.	A good child keeps his toys and clothes neat and orderly.	Agree	Disagree
7.	A five-year-old who wets his bed is bad.	Agree	Disagree
8.	I have headaches.	Agree	Disagree
9.	I have several close friends in my neighborhood.	Agree	Disagree
10.	I have many personal problems.	Agree	Disagree
11.	I sometimes worry that I will not have enough to eat.	Agree	Disagree
12.	Other people do not understand how I feel.	Agree	Disagree
13.	Sometimes I feel all alone in the world.	Agree	Disagree
14.	I often feel alone.	Agree	Disagree
15.	My home must be spotless.	Agree	Disagree
16.	Children should always be neat.	Agree	Disagree
17.	Little boys should never learn sissy games.	Agree	Disagree
18.	I am often depressed.	Agree	Disagree
19.	Children should never disobey.	Agree	Disagree
20.	Things have usually gone against me in life.	Agree	Disagree

		Circle One	
21.	Few people have as many problems as I do.	Agree	Disagree
22.	I sometimes wish that my mother would have loved me more.	Agree	Disagree
23.	Teenage girls need to be protected.	Agree	Disagree
24.	I sometimes fear that my children will not love me.	Agree	Disagree
25.	I often feel rejected.	Agree	Disagree
26.	A home should be spotless.	Agree	Disagree
27.	Everything in a home should always be in its place.	Agree	Disagree
28.	These days a person does not really know on whom one can count.	Agree	Disagree
29.	I sometimes fear that I may spoil my child.	Agree	Disagree
30.	I do not trust most people.	Agree	Disagree
31.	A parent must use punishment if he wants to control a child's behavior.	Agree	Disagree
32.	My family has many problems.	Agree	Disagree
33.	I enjoy having pets.	Agree	Disagree
34.	Sometimes I fear that I will lose control of myself.	Agree	Disagree
35.	I have a good sex life.	Agree	Disagree
36.	I am not very attractive.	Agree	Disagree
37.	People do not understand me.	Agree	Disagree

APPENDIX E

PARENTAL EXPECTATIONS QUESTIONNAIRE

PARENTAL EXPECTATIONS QUESTIONNAIRE

This questionnaire was designed to help us learn at what ages parents expect their children to be able to do certain things. Following each item you will find a list of ages. Please circle the age by which you hoped your child would perform that item.

We want to know when you expected your child to do them. There are no right answers, and we are not interested in when your child actually did these things.

1. Sleep through the night:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

2. Sit up by self:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

3. Eat solid foods without messing:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

4. Drink from a cup without spilling:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

5. Smiles at parent:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

6. Understand what "no" means:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

7. Play with other children without fighting:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

8. Not break their toys:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

9. Recognize mother's face:
   ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
   ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

10. Walk without help:
    ___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
    ___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

11. Respond to own name:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

12. Toilet trained for bowel movements:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

13. Stop crying when told to stop:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

14. Make sounds like "mama," "dada," and "baba."
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

15. Follow simple instructions:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

16. Make own bed:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

17. Wave bye-bye:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

18. Keep own room clean:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

19. Help around the house:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

20. Learn to read:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

21. Turn over from stomach to back:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

22. Grasp parent's hand or finger:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

23. Know right from wrong:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

24. Respect their parents:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

25. Toilet trained for bladder control:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

26. Tie own shoes:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

27. Not cry when hurt:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

28. Tell time:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

29. Stay dry all night:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

30. Know when parents are not feeling well:
___ 6 mo ___ 1 yr ___ 1 1/2 yrs ___ 2 yrs ___ 3 yrs ___ 4 yrs
___ 5 yrs ___ 6 yrs ___ 7 yrs ___ 8 yrs ___ 9 yrs ___ 10 yrs

APPENDIX F

RANGE OF CAPI SCORES

Table 14. Range of CAPI scores (N=138).

Score	Frequency	Percent	Cumulative Percent
11.00	1	.7	.7
13.00	1	.7	1.4
14.00	1	.7	2.2
16.00	4	2.9	5.1
17.00	2	1.4	6.5
18.00	3	2.2	8.7
19.00	3	2.2	10.9
20.00	5	3.6	14.5
21.00	3	2.2	16.7
22.00	3	2.2	18.8
23.00	4	2.9	21.7
24.00	5	3.6	25.4
25.00	4	2.9	28.3
26.00	5	3.6	31.9
27.00	7	5.1	37.0
28.00	3	2.2	39.1
29.00	12	8.7	47.8
30.00	8	5.8	53.6
31.00	17	12.3	65.9
32.00	12	8.7	74.6
33.00	16	11.6	86.2
34.00	12	8.7	94.9
35.00	3	2.2	97.1
36.00	3	2.2	99.3
37.00	1	.7	100.0
Total	138	100.0	100.0

Mean = 28.087 Minimum = 11.000
Std Dev = 5.750 Maximum = 37.000

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