A COMPARISON OF MOTHERS' AND FATHERS' KNOWLEDGE OF CHILD DEVELOPMENT

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CHAPTER I

INTRODUCTION

Children need parents who are able [illegible] quality and continuity of parenting whic[illegible] optimal development. Recent research sug[illegible]hat parents who are knowledgeable about normative child growth and development are more likely to provide a nurturant atmosphere for their children (Parks and Smeriglio, 1986; Showers and Johnson, 1985). Joseph Stevens (1984) examined the relationship between parents' knowledge of child development and the ability to create a quality home environment. The results of Stevens' study support the assumption that what parents know about normative child development is positively related to their skill in designing a supportive learning environment, and their ability to interact in ways that stimulate a young child's development.

Studies concerning knowledge of child development have focused on fairly specific population groups, such as adolescents and young adults. Showers and Johnson (1985) found that urban adolescents have inadequate levels of knowledge about child health and development. Shaner (1985) found that older adolescent females both overestimate and

underestimate children's developmental norms.

Bullock (1988) examined differences between rural parents' and non-parents' knowledge about child development. Results of the study indicated that rural adults' knowledge of child development was limited. The average rural adult correctly answered 61.4% of the 49 knowledge items. On a scale of 100% this is generally considered a poor score. Women with and without children scored higher on the child development questionnaire than men, with or without children.

Research focusing on males' knowledge of child development is sparse. Kliman and Vukelich (1985) found that fathers lack a considerable amount of child development knowledge. Showers and Johnson (1985) found that urban adolescent males are less knowledgeable about child health and child-rearing than urban adolescent females.

Other studies of knowledge of child development have focused attention on population groups such as married adolescents (deLissovoy, 1973), black grandmothers and black adolescent mothers (Stevens, 1984), black and white mothers of various socioeconomic groups (Stevens, 1984), and parents of clinic and non-clinic referred children (Graziano and Forehand, 1984). The results of these studies suggest that individuals who lack knowledge of child development hold unrealistic expectations for children. Unrealistic parental expectations may, in turn, contribute to detrimental effects upon children.

Several researchers have identified a positive link between the lack of knowledge of normative child development, unrealistic expectations of children and child abuse (Alford, Martin and Martin, 1985; deLissovoy,1973; deLissovoy, 1975). Johnson, Loxterkamp, and Albanese (1982) found that a positive relationship existed between knowledge of child development, unrealistic expectations for a child's performance and child abuse. In a similar study, Showers and Johnson (1984) examined the effects of knowledge of child health and development and choice of disciplinary approaches. Results of the study indicated that subjects who were the least knowledgeable about normative child development, most frequently chose harsh disciplinary methods in simulated child management situations. Consequently, family life educators continue to express concern over the lack of child development knowledge that parents and parents-to-be possess (Showers and Johnson, 1985; Stevens, 1984; Stevens, 1984).

Statement of the Problem

Research indicates a need for parents to be informed about normal child growth and development in order to maximize their potential for quality parenting (Stevens, 1984). Parents who are knowledgeable about child development are more likely to provide an atmosphere in which children thrive (Parks and Smeriglio, 1986). Moxley-

Haegert and Serbin (1983) found that developmental education helped parents with developmentally delayed infants to discriminate small gains, promoting intrinsic motivation for working with their children.

Research indicates that many parents lack a considerable amount of knowledge about normal child development (Kliman and Vukelich, 1985). Of particular concern is the fact that a positive link has been identified between the lack of knowledge about normal child development and unrealistic expectations of children and child abuse (Showers and Johnson, 1985). The problem to be examined in this study was to assess parents' knowledge of normative child development.

Purpose of the Study

The primary purpose of this study was to determine if parents' level of knowledge of child development was related to sex of parent, parenting experience or income levels. The secondary purpose of this study was to determine if a relationship existed between parents' levels of knowledge of child development and interactions with their children, as measured by the Child Abuse Potential Inventory (CAP)(Milner, 1980).

Hypotheses

The following hypotheses were examined in this study:

1. There will be no significant difference in the level of child development knowledge between mothers and fathers as measured by the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986).
2. There will be no significant difference in the level of child development knowledge of parents on the basis of parenting experience.
3. There will be no significant difference in the level of child development knowledge of parents on the basis of income level.
4. There will be no significant relationship between the scores measuring child development knowledge and scores on the Child Abuse Potential Inventory (Milner, 1980).

Limitations of the Study

A limitation of this study was the utilization of the non-random sampling procedure. The sample of subjects may not be representative of the greater population of parents of preschool-age children; therefore, results of this study may not be generalized to other populations.

Another limitation of the study was the lack of validity information on the Knowledge Inventory of Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986). Reliability had been determined on adolescent and early college-age populations. The KIDS inventory has not been used in previous studies

with a mature population of parents. This project was part of a larger study of child development knowledge and will serve as pilot work for determining reliability of the instrument.

Definition of Terms

In this study, several terms were used that require explanation for the reader to fully understand the meaning of the author. Definition of these terms have been listed below.

1. Unrealistic expectations refers to the process of parents setting expectations that are clearly beyond the child's capability. When the parents' expectations are deviant, the resulting frustration caused by the child's perceived non-compliance is believed to function as a contributing, if not necessary cause of child abuse (Twentyman and Plotkin, 1982).
2. Child development knowledge refers to the level of understanding parents of preschool-age children possess about normal child growth and development. Child development knowledge was measured in this study using the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986).
3. Parents refers to mothers and fathers, age 22 to 49, who had one or more preschool-age child during the course of this study.
4. Parenting experience refers to the number of children in

a particular family. Parents with more children would presumably have more contact hours with children, thus more parenting experience. The parents were placed in one of two groups. Group one parents had one or two children and group two parents had three or more children.

5. Child abuse potential refers to the degree to which parents possess certain personality characteristics which may predispose them to engage in aberrant parenting styles. Child abuse potential was measured in this study using the Child Abuse Potential Inventory (CAP) (Milner, 1986).

CHAPTER II

REVIEW OF LITERATURE

Child-rearing is a physically and emotionally stressful experience. Parents are essentially responsible for establishing a sound base for a child's lifelong physical, social, intellectual, and emotional development. It is unfortunate, however, that the knowledge needed for the difficult task of parenting is not automatically granted with the onset of parenthood (Stevens, 1984).

This chapter will review two broad areas of the literature related to the present study: (1) the relationship between child development knowledge and parenting skills and (2) the relationship between unrealistic parental expectations and the potential for negative parent/child interactions. Previous research links unrealistic parental expectations to potential for child abuse. This relationship will also be examined.

Child Development Knowledge and Parenting Skill

Child development specialists, family life educators, and social workers have focused concern on the information needs of parents with young children, especially

on the need to teach such information to parents (Moxley-Haegert and Serbin, 1983). There is a widespread hypothesis that valid and appropropriate expectations for children's behavior is one of the key factors which contributes to parents' ability to rear young children well. In families where children experience less favorable development, many researchers associate the less effective parenting observed not only to a lack of parenting skill but also to a lack of knowledge about development (Parks and Smeriglio, 1986). Consequently, a significant element of learning to become a skillful parent would appear to be the accumulation of a sound knowledge base about normative child development. However, limited evidence exists which suggests that what parents know about child development is related to their parenting skills (Stevens, 1984).

In a study by Stevens (1984), the relationship between parents' knowledge about child development and their ability to design a quality home learning environment was examined. Two hundred and forty-three black and white mothers of infants were studied on measures of child development knowledge and parenting skills. Parents who knew more about crucial environmental components and infant normative development scored higher on a parenting skill measure. Controls for income and education were utilized.

In 1978, Stevens reviewed studies of systematic parent education programs which were designed to enhance the parents' competence in the role of parenting, thereby

improving the child's functioning. Stevens found that effective parent education programs improved parents' skill in designing an optimal home learning environment for their children. Parents provided more age-appropriate play materials and displayed greater awareness of the learning potential of usual household routines. Significant improvement was reported in children's language development and intellectual and cognitive functioning. Children of participating parents also demonstrated greater curiosity, more willingness to explore their environment independently, and more cooperative play with parents. In some of the studies reviewed by Stevens, mothers were observed to be more responsive and skilled in reading their child's cues.

Parks and Smeriglio (1986), studied relationships among parenting knowledge, quality of stimulation in the home, and infant developmental performance in three socio-economic status groups. One hundred and twenty-six families with 6-month-old infants were studied using the Infant Caregiving Inventory (ICI), Home Observation for Measurement of the Environment (HOME) Scale, and Hollingshead Index. Results of the study indicated that parenting knowledge was significantly related to infant developmental performance in low socio-economic groups.

The above-mentioned study was the first published which examined a cross-section of socio-economic groups while exploring the relationships between knowledge of child development and the quality of stimulation in the home.

Since socio-economic status was a significant variable in the relationship between parenting knowledge and quality of infant stimulation, the findings of this study suggest implications for planning parent education programs.

Moxley-Haegert and Serbin (1983), studied the effectiveness of developmental education for parents with developmentally delayed infants. Thirty-nine delayed infants, matched for age and degree of delay, and their families were randomly assigned to one of three treatment groups. Comparisons were made between developmental education for parents with education in child management and with a no-education control condition in motivating parents to participate in home treatment programs. Results of the study revealed that children in the developmental education group gained a greater number of skills and their parents participated more in the home treatment programs than parents in the other two groups. In a one-year follow-up study, parents who had received developmental education continued to participate more than the other parents in their child's treatment program. Developmental education seemed to facilitate parents' ability to discriminate small gains, promoting the intrinsic motivation involved in working with their children.

Many research studies of parent education have focused on the effects of intervention on children at-risk due to biological, emotional, or environmental factors (Bridges, 1982; Moxley-Haegert, 1983; Parks and Smeriglio,

1986). Few studies, however, have considered the effects of providing parent education and emotional support for middle-class families (Metzl, 1980).

In an innovative study by Metzl (1980), the effects of a specific parent-administered infant language stimulation program on the development of normal, middle-class firstborn infants were investigated. Sixty infants of two-parent, self-supporting families were the subjects of this study. Subjects were divided into three groups: 1) control group, 2) mothers receiving a specific language stimulation program, and 3) mothers and fathers receiving the program simultaneously. A measure of infant development and a measure of the environment was utilized to test all infants and their environments at six weeks of age and again at six months of age. The results of the study revealed that infants whose parents received simultaneous training exhibited the greatest developmental gain over time. Metzl's assumption is that high-risk intervention strategies may benefit all children, regardless of income level, and that parents of firstborn children would benefit from parent education and assistance in helping their children achieve maximum potential.

In a study by Kliman and Vukelic (1985), both parents of first-born infants were interviewed about their infants' growth and behavior, the sources they used to acquire accurate information, and the kind of information they thought other parents should have. The results of the

study indicated that mothers' and fathers' knowledge about infant behavior and growth is similar and that there is a considerable amount of knowledge that these parents do not possess.

In a second study by Vukelic and Kliman (1985), comparisons were made between mature mothers and a group of teenage mothers to assess their knowledge about infant growth and development. The findings of this study also indicated that there was a substantial body of knowledge about infant development that these mothers, regardless of familial characteristics did not possess. All the mothers participating in this study possessed inappropriate developmental expectations for children. The teenage mothers, however, knew considerably less about child development than the mature mothers. Even though the mature mothers' expectations were moderately more appropriate, the findings clearly indicated that they, too, needed more factual information about normal infant development.

Previous research demonstrates that adolescent mothers' knowledge of child development is limited. Research also indicates that knowledge about child development is related to a mothers' interactions with her child. Fulton, Murphy, and Anderson (1990), examined the effectiveness of an intervention program for adolescent mothers in increasing their knowledge about child growth and development. The study further assessed whether increases in knowledge were related to a decrease in negative parent-

child interactions and if the increase in knowledge of growth and development had an influence on the young mothers' self-esteem.

Results of the above-mentioned study indicated significant increases in the mothers' knowledge of infant and toddler development. Test scores measuring the potential for negative parent-child interactions decreased as scores of knowledge increased. However, no significant differences in self-esteem were apparent at the end of the program.

Parental knowledge about normative child development is a multidimensional experience which has been conceptualized and measured in a variety of ways. The most common approach to estimating knowledge of child development involves assessing awareness of developmental milestones. The content and format of these measures have varied across investigators (deLissovoy, 1973; Jarrett, 1982; Stevens, 1984).

Researchers Orme and Hamilton (1987), agree that parental knowledge of normative child development is an important determinant of effective parenting. Many measures of this construct have been developed in recent years, although little is known about the reliability and validity of these measures. Orme and Hamilton examined the reliability and validity of three instruments and found only one of the three to be an adequate measure. The evidence here suggests the difficulty of measuring child development

knowledge. The results of this study should be considered when reviewing studies related to knowledge of child development.

Unrealistic Parental Expectations

As discussed in the previous section, an important aspect of parenting skill is a knowledge of normative child development. Lack of knowledge about child development can lead parents to hold expectations for their child that is beyond the child's capabilities. Recent evidence suggests that unrealistic expectations about childrens' developmental abilities may result in poor parenting and adverse consequences for children (Orme and Hamilton, 1987). For example, data suggests that parents' knowledge of normative child development is inversely related to punitive childrearing practices (Johnson, Loxterkamp, and Albanese, 1982). Parental knowledge is also positively related to parenting skills such as mothers' responsivity to children (Steinhauer, 1983; Stevens, 1984). Even more significant is the implication that inadequate levels of knowledge about normative child development is a factor in child abuse and neglect (Twentyman and Plotkin, 1982). Such a connection may be due to parental frustration and aggressive behavior directed at the child as a result of the child's failure to meet unrealistic parental expectations (Twentyman and Plotkin, 1982). This section will review some of the literature related to unrealistic parental expectations and

attitudes toward parenting and how these factors relate to the potential for child abuse and neglect.

Showers and Johnson (1984), examined the relationship between knowledge of child health and development and approaches to discipline in a college student population. The Iowa Child Development Test was administered to 299 students at Ohio State University. Results of the study indicated that college students possessed inadequate levels of knowledge about child health and development. Those students who most frequently chose harsh disciplinary methods in simulated situations requiring behavior management were least knowledgeable. College men in the study knew less about child development than the college women and more frequently chose harsh punishment.

The findings in the Showers and Johnson study are similar to those reported in an earlier study of high school students in Iowa. Johnson, Loxterkamp, and Albanese (1982) investigated a representative sample of students utilizing a questionnaire about normal child development, child health maintenance, and discipline aspects of childrearing. Though academically students in Iowa rank high, the results indicated that students in grades 9 through 12 had low levels of child development knowledge. Students who knew least about development most frequently chose 'punish' or 'abuse' responses in simulated childrearing situations. Boys at all grade levels knew less than girls about child development and more often chose 'punish' or 'abuse'

responses.

Ford, Massey, and Hyde (1986) examined the type of attitudes college students have toward parenting; that is, whether the attitude is authoritarian or nonauthoritarian. The study also assessed the relationship of these attitudes to parental occupation, education, family income, religious affiliation, childrearing techniques, and type of discipline ured by parents. Results of the study found that the majority of students in the sample had an authoritarian attitude toward parenting.

An authoritian attitude, according to Ford, Massey, and Hyde (1986), is parental belief in total control of the child, favoring the child's blind obediance to their authority. This type of parenting tends to limit the growth of the conceptual level of the child by not allowing the individual adequate freedom to expand cognitive structures to explore new possibilities.

Another report which supports the view that parents who lack knowledge of child development tend to set unrealistic goals for their children is that of Twentyman and Plotkin (1982). In this study, 41 parents who were predominantly from an urban population in New York were divided into 3 groups on the basis of prior history of child abuse, child neglect, or no previous background of abuse or neglect. Results of the study revealed that parents who have abused or neglected their children are less knowledgeable about children's developmental processes than

are matched controls.

Gerler and Merrell (1985) assessed the effectiveness of a parent training program on parents' perceptions of their children. The participants were parents who attended and completed a parent training program led by a school counselor. The parents were referred to the program by counselors, psychologists, and administrators. The purpose of the program was to help parents become skillful and confident in their parental roles and to help them deal with their children's behavior problems in a more positive way. Results of the study indicated that participation in the training group improved parents' perceptions of their children.

Wolfe, Edwards, Manion, and Koverola (1988), examined an early intervention program for young parents and children who had been identified as being at risk for child maltreatment. Thirty mother-child pairs were randomly assigned to one of two groups: 1) an information group offered by the child protective agency or, 2) a special program of behavioral parent training in addition to the agency group. Results of the study indicated that mothers who received parent training in addition to information reported fewer and less intense child behavior problems associated with the risk of maltreatment than did mothers in the control group.

In recent years there has been an increasing recognition of the complex, multiple determinants of child

abuse and its' consequences (Belsky, 1980; Graham, Dingwall, and Wolkind, 1985). One significant determinant involves negative patterns of parent-child interactions. Trickett and Kuczyhski (1986), examined an area of parent-child interaction that has particular relevance for child abuse studies; that of children's misbehaviors and parental discipline strategies. Abusive and nonabusive families were investigated. The results of the study indicated that the abusive parents used punitive disciplinary practices more frequently than control parents, who more often chose reasoning techniques and simple commands. Abusive parents more frequently reported being angry and disgusted after disciplinary interventions. The type of discipline used by the control parnets depended on the type of misbehavior. For the abusive parents, punishment was the primary type of discipline for any type of child misbehavior.

Education for parenthood in secondary schools is strongly advocated as a means of preventing child abuse (Pringle, 1980). The aims of such education is a sensible approach to marriage, family planning, the use of health services in the prenatal period, and combining career with family life (Graham, Dingwall, and Wolkind, 1985).

Recent attempts to develop parent education programs have focused on an assortment of populations and objectives. There are programs designed to serve teenage parents, parents of exceptional children, and abusive parents (Swick, 1983). Within most existing parent education

programs the developmental processes which occur within parenting have received little attention. This is particularly relevant to the education of parents during the early, formative years of the family (White, 1981). For instance, while the content of a variety of parent education programs have focused on the learning and development of the child during the preschool years, these same developmental processes are often ignored in regard to the way parents learn (Galinsky, 1981).

Based on his observations of parents, White (1979), maintains that parent education programs should be based on the individual dimensions of the parents' developmental stage and the related issues that will help them be effective in both personal and parental roles.

Kliman and Vukelic (1985), found that mothers and fathers lack a considerable amount of knowledge about child behavior and growth. In order to improve parenting skills and increase parents' knowledge about behavior and growth, parent education programs should be established to meet the needs of all parents, including middle-class parents, first-time parents, single parents, and parents who are at risk for pathology. Parent education programs should be designed to reach a variety of populations, from the socially isolated, to the upwardly mobile.

Research indicates that parents who lack knowledge about normal child development tend to set unrealistic expectations for their children, placing them at-risk for

child maltreatment (Twentyman and Plotkin, 1982). College and High School students who possess inadequate levels of knowledge of child development tend to choose harsh disciplinary methods in simulated child management situations (Johnson, Loxterkamp, and Albanese,1982; Showers and Johnson, 1984). The results of studies such as these strongly indicate a need for parents to become more knowledgeable about child development and appropriate methods of discipline in order to reduce the risk for child maltreatment.

In summary, there appears to be a relationship between parents knowledge about normative child development and parenting skills. Few studies have examined this relationship. However, the research which has been done suggests a need for parents to be informed about normative child development in order to become a more skillful parent (Parks and Smeriglio, 1986; Steinhauer, 1983; Stevens,1983).

CHAPTER III

METHODOLOGY

Type of Research

This study utilized the descriptive research technique for the collection of data. According to Issac and Michael (1981), the purpose of descriptive research is "to describe systematically the facts and characteristics of a given population or area of interest, factually and accurately",(p.46). Research authorities have differing opinions on what constitutes "descriptive research" and often expand the term to include all forms of research except experimental and historical. In the broader sense, the term "survey studies" is frequently used to refer to studies which identify problems and make comparisons and evaluations (Issac and Michael, 1981).

Subjects

This non-random sample of subjects were parents of preschool age children who were attending the Child Development Laboratories (CDL) at Oklahoma State University during the Spring of 1987. One hundred and forty-four parents were invited to participate in the study. One hundred and eight responses from subjects were utilized in

the final analysis. Responses were collected from 51 males and 57 females. Reliability analysis of the KIDS inventory utilized responses of married couples (n=51).

The age of subjects ranged from 22 to 49 with a mean age of 36. The majority of subjects (83.4%) were college graduates, many of whom had additional graduate study or professional training beyond the four year degree. Seventy-two percent of the subjects had income levels of $30,000 or above. It is important to note that the subjects in this study were not suspected of child abuse nor had they been reported for abuse.

Data Collection and Procedure

Two questionnaires and a demographic form were utilized in gathering the data for this study. The Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986) was used to assess the subjects' levels of child development knowledge. The Child Abuse Potential Inventory (CAP) (Milner, 1980) was used to assess the subjects' levels of potential for child abuse (See Appendix A).

Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS)

The KIDS Inventory consists of 48 items which illustrate normative characteristics of children from infancy through school-age. The subject is asked to

determine the age at which a particular childhood behavior would first be demonstrated. Responses for the childhood behaviors are:

Infancy (birth to 12 months)

Toddler (1 and 2 year olds)

Preschooler (3 through 5 year olds)

School-Age (6 through 12 year olds)

Five scores are calculated for the KIDS (Fulton, 1987): a total score (alpha = .83), infancy subscale score (alpha = .69), toddler subscale score (alpha = .67), preschool subscale score (alpha = .66), and school-age subscale score (alpha = .64).

Child Abuse Potential Inventory

The CAP Inventory, designed by Milner (1980), is used by professionals to assess an individuals' potential for child abuse. The CAP Inventory consists of 160 statements concerning parents' feelings about themselves and their relationships with family and others. The subjects are instructed to complete the questionnaire by selecting "agree" or "disagree" at the end of each statement. Scores are weighted and can range from 0 to 486. Higher scores indicate greater potential to abuse than do lower scores. Obtained scores at or above the suggested cut-off score of 166 are considered elevated. The CAP has correctly identified 94% of abusing versus nonabusing subjects. Milner and colleagues reported split-half and Kuder-

Richardson (KR-20) reliability coeffecients for the Inventory as ranging from .92 to .98 for abuse, high risk, and control groups (Milner, 1980).

Demographic Data Form

The demographic data form recorded personal information concerning the subject and his or her family. Information gathered on the demographic data form included age, sex, marital status, education level, income level, number of children in family and employment status. The form also collected information about whether or not the parent had exposure to child growth and development classes.

Procedure

One hundred, forty-four parents were invited to participate in this study. Each parent received a letter from the researcher which briefly explained the procedure. Two weeks later, parents were greeted by the researcher upon arrival of their child to the Child Development Laboratories (CDL). The researcher instructed parents to fill out the questionnaires and return them within one week to a drop box in their child's classroom. Returning the questionnaires constituted consent of the parents to participate in the project. Subjects were asked not to compare answers with their spouses. After one week, several questionnaires had not been returned. Notices were placed in each of the three classrooms in the CDL to encourage parents to return the

questionnaires. The subjects were able to complete the questionnaires in approximately 20-30 minutes.

Mothers' and fathers' questionnaires were exactly the same. An identification number was placed in the upper right hand corner of the questionnaires for the purpose of matching the mothers' responses to the corresponding fathers' responses. Data for the project was collected during March of 1987. One hundred, eight questionnaires were returned and utilized in the final analysis.

Data Analysis

A statistician was consulted to lend assistance and expertise in analysis of the data. A paired t-test was used to compare mothers' scores on the KIDS Inventory to fathers' scores. T-test was also used to compare parents' scores on the KIDS Inventory on the basis of parenting experience. One-way ANOVA was utilized to compare parents' scores on the basis of income level. The SPSS-X computer statistical analysis program was used to calculate the reliability scores for the KIDS Inventory. Reliability was determined using Cronbach's alpha coefficient of internal consistancy. Pearson Product Correlation Coefficient was used to compare the subjects' total score on the KIDS Inventory with the total abuse score on the CAP Inventory. The Statistical Analysis System (SAS) was used to determine t-test, ANOVA, and correlation coefficients.

CHAPTER IV

RESULTS

Goals of the Study

The major goal of this study was to assess parents' levels of knowledge of normal child development, as measured by the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986). Comparisons of parents' child development knowledge were made on the basis of parenting experience, sex of parent, and income level.

An additional goal of the study was to compare subjects' scores on the KIDS Inventory (Anderson and Fulton, 1986), with scores on the Child Abuse Potential Inventory (Milner, 1980). The subjects in this study, however, were not suspected of child abuse.

Subjects

The non-random sample of subjects were parents of preschool-age children who attended the Child Development Laboratories at Oklahoma State University in the Spring of 1987. One-hundred, eight questionnaires were collected and utilized in the final analysis. The majority of subjects were college graduates, many of whom had graduate study or professional training (See Table 1).

Table 1

Description of Subjects

Sex of Subjects		Employment Status	No.
(n = 108)		Unemploy. Looking for Work	19
Male	51	Unemploy. Not Looking for Work	13
Female	57	Employed, Part Time	20
		Employed, Full Time	74

Level of Education	No.	Marital Status	No.
High School Grad.	1	Single	4
Voc/Tech School	2	Married First Time	86
College w/o Grad	15	Remarried	18
College Grad.	34		
Grad. Ed. or Prof.	56	Yearly Income	No.
Age Group	No.	Less than $10,000	2
22-29	19	$10,000-$20,000	7
30-35	51	$20,000-$30,000	21
36-39	24	$30,000-$40,000	39
40-49	18	$40,000-$50,000	16
		over $50,000	23

Participation in Child Growth and Development Classes

	No.
Yes	48
No	60

Procedure

Data was gathered through the use of two hand-delivered questionnaires plus a demographic form to a non-random sample of subjects. Each subject was instructed to read and complete their own questionnaires without comparing responses to those of their spouse.

Findings

Four hypotheses were examined in this study.

Hypothesis #1. There will be no significant difference in the level of child development knowledge between mothers and fathers. Significant differences were found in the levels of child development knowledge between mothers and fathers. Using a paired t-test, the average KIDS total score for the fathers (34.01) was found to be significantly higher than the mothers' average KIDS total score (30.80), $t=3.95$, $p<.0001$. Thus, the first hypothesis was not supported by the data. The four subscales of the KIDS were examined.

No significant differences were found between mothers' ($x = 8.45$) and fathers' ($x = 9.96$) scores on the Infancy subscale, ($t=2.96$, $p<.0038$). Thirteen points were possible on this subscale.

No significant differences were found between mothers' ($x=7.70$) and fathers' ($x=8.33$) scores on the toddler

subscale, ($t=1.70$, $p<.0909$). Eleven points were possible on this subscale.

No significant differences were found between mothers' ($x=8.03$) and fathers' ($x=8.69$) scores on the preschool subscale, $t=1.51$, $p<.1337$. Twelve points were possible on this subscale.

No significant differences were found between mothers' ($x=6.60$) and fathers' ($x=7.03$) scores on the school-age subscale, $t=.90$, $p<.3679$. Twelve points were possible on this subscale. Although no significant differences were found between mothers' mean scores and fathers' mean scores on each of the subscales, it is important to note that the fathers consistently had higher mean scores than the mothers. It is also important to note that on the infancy subscale, differences were nearing a level of significance (See Table 2).

Hypothesis #2. There will be no significant difference in the level of child development knowledge of parents on the basis of parenting experience. Subjects in this study were placed in one of two groups for calculating differences on the basis of parenting experience. Group one parents, ($n=85$), had one or two children and group two parents, ($n=23$), had three or more children. Using a paired t-test, no significant differences in the levels of child development knowledge were found between group one parents, and group two parents, $t=-0.05$, $p>.96$; therefore, the second hypothesis was supported by the data. (See Table 3)

Table 2

Comparison of Mothers' and Fathers' Scores on the Knowledge Inventory of Child Development: Infancy to School-Age (KIDS).

Paired t-test Procedure

	Sex	N	Mean	STD Dev	t	Prob> T
KIDS Total Score	Male	51	34.01	4.09	3.95	
	Female	51	30.80	4.09	3.95	p<.0001
Infancy Subscale Score	Male	51	9.96	2.39	2.96	
	Female	51	8.45	2.73	2.96	p<.0038
Toddler Subscale Score	Male	51	8.33	1.55	1.70	
	Female	51	7.70	2.10	1.70	p<.0909
Preschool Subscale Score	Male	51	8.68	2.08	1.51	
	Female	51	8.03	2.23	1.51	p<.1337
School-age Subscale Scale	Male	51	7.03	2.34	.90	
	Female	51	6.60	2.47	.90	p<.3679

Table 3

Comparison of Group I and Group II Parents' Scores on the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS).

t-test Procedure

Group	N	Mean	Std. Dev.	t	Prob> T
I	85	32.68	4.63	-0.054	
II	23	32.73	4.34	-0.052	p>.96

Note. Group I parents had 1 or 2 children. Group II parents had 3 or more children.

Hypothesis #3. There will be no significant difference in the level of child development knowledge of parents on the basis of income level. Initially, subjects were placed in one of six income level groups. Upon inspection of the data, it was discovered that very few subjects were in the lower two income level groups; therefore, the lower income level groups, group one and two, were collapsed with group three. Subjects were then placed in one of four income level groups. Group one parents' household income levels were up to $30,000, group two parents income levels were from $30,000 - $40,000, group three parents' income levels were from $40,000 - $50,000, and group four parents' income levels were over $50,000. One-way analysis of variance found that no significant differences in child development knowledge existed between the various income level groups, (n=102), $F=.70$, $p>.56$; thus, the third hypothesis was accepted on the basis of the data analyzed (see appendix B).

Hypothesis #4. There will be no significant relationship between scores measuring child development knowledge and scores on the Child Abuse Potential Inventory (CAP). The Pearson Correlation Coefficients were used in determining whether or not a relationship existed. The analysis, (n=108), revealed no significant relationship between the KIDS total scores and the CAP scores, $r=-0.012$, $p<.91$. The data analysis supports hypothesis number four. Upon visual inspection of the data, a trend was noted

between scores on the KIDS and scores on the CAP for individual subjects. Four of the 108 subjects had high scores on the abuse scale which correlated with lower scores on the KIDS inventory (See Table 4).

Additional Findings

The present study was used to determine the reliability of the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS)(Anderson and Fulton, 1986) for mature parents of preschool-age children. Reliability was calculated using Cronbach's alpha coefficient of internal consistency. Reliability on the KIDS total score for this group (n=95), was relatively high, .8297. However, reliability on each of the four subscales was lower, infancy subscale was .7596, toddler subscale was .6869, preschool subscale was .6724, and school-age subscale was .5766. Previously, reliability for the KIDS inventory had been calculated using high school seniors as the subjects (DeMarco, 1987). Cronbach's alpha coefficient was utilized in the previous calculation. Reliability on the KIDS total score for the younger population (n=222) was also relatively high, .8309, which is very close to the reliability found in the present study. Differences in reliability were noticed , however, on several of the subscale scores. Reliability for the infancy subscale was .6949, toddler subscale was .6721, preschool subscale was .6564, and school-age subscale was .6388. With the

Table 4

Elevated Abuse Scale Scores

Subject Number	Abuse Scale Score	KIDS Total Score
12	186	29
25	197	27
52	195	24
77	347	33

Note: Obtained scores at or above the suggested Abuse Scale cut-off score of 166 are considered elevated. The mean score for Total Child Development Knowledge for mothers and fathers was 32.69 out of a possible 48 points.

exception of the reliability on the school-age subscale, reliability on other subscales for the mature group was higher than those of the younger population. This difference in reliability may be due to the fact that the mature adults had children of preschool age. The experience of being a parent may have enabled them to score higher on the infancy, toddler, and preschool subscales. Also, 44.4 percent of the mature population had taken child growth and development classes which may be another reason for the difference in scores.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The primary purpose of this study was to determine if the level of knowledge of child development varies on the basis of the following factors: sex of parent, parenting experience, and income level. The secondary purpose was to determine if a relationship existed between parents' levels of knowledge of child development and interactions with their children.

Knowledge of child development was assessed through utilization of the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS) (Anderson and Fulton, 1986). The Child Abuse Potential Inventory (CAP) (Milner, 1980) was used to assess the subjects levels of potential for child abuse.

Research has shown that knowledge about normal child growth and development helps parents to provide a positive, nurturing environment for their children (Stevens, 1984). Some researchers have found that a positive relationship exists between knowledge of child development and potential for child abuse (Showers and Johnson, 1984). Parents who have inadequate knowledge of normal child development tend to set unrealistic expectations for their

children (Johnson, Loxterkamp, and Albanese, 1982). Unrealistic expectations can place a parent at risk for child abuse (Twentyman and Plotkin, 1982).

Summary of Results

In summary of hypothesis #1, significant differences were found in the levels of child development knowledge between mothers and fathers. It is interesting to note that the fathers' mean KIDS total score (34.01) was significantly higher than the mothers' mean KIDS total score 30.80. The opposite result was expected since mothers are often the primary caregiver of young children. It seemed logical to assume that mothers would be more knowledgeable about development than the fathers. Previous research indicates that females tend to score higher than males on measures of child development knowledge (Bullock, 1988). This assumption could not be made, however, in this study. The population surveyed in this study was unique in that 44.4 percent of the subjects had taken child growth and development classes. Visual inspection of the data revealed that 45 of the fathers and 40 of the mothers were college graduates (n=102). We might conclude that the difference between mothers' and fathers' scores on the KIDS inventory may be due to the fathers' higher education levels. Those with higher educational levels may be more inclined to read informational books and journals as opposed to fiction.

More information about child development might then be gained through an interest in reading.

In examining the data for hypothesis #2, no significant differences were found in the level of child development knowledge of parents on the basis of parenting experience. Differences in levels of knowledge were anticipated between parents with more parenting experience and parents with less parenting experience. For example, parents with more contact hours with children have had more time to observe children and gain knowledge about typical behavior at various developmental stages. It is important to note that a large majority (78.7%) of the subjects surveyed in this study had one or two children while only 21.3% had three or more children. We might assume that if the number of subjects in each group had been equal, then differences in levels of knowledge might have been present.

Research hypothesis #3 stated that there would be no significant differences in the level of child development knowledge on the basis of income level. No significant differences were noted between the various income level groups; therefore, the third hypothesis was accepted on the basis of the data analyzed. The lowest income level group had household income levels of up to $30,000. We might conclude that subjects in this study had similar access to parenting information through education, books, magazines, and television. A more economically diverse group might have shown different results.

Research hypothesis #4 examined the relationship between scores measuring child development knowledge and scores on the Child Abuse Potential Inventory (CAP). The data analysis revealed no significant relationship between the KIDS total scores and the CAP scores. It was expected that low scores on the CAP would correspond with high scores on the KIDS. Visual inspection of the data, however, did reveal an inverse relationship between scores on the KIDS inventory and scores on the CAP for individual subjects. Four of the 108 subjects had elevated Abuse Scale scores on the CAP inventory which correlated with relatively low scores on the KIDS inventory. A more diverse population of subjects might have given us a clearer picture of the relationship between child development knowledge and potential for child abuse.

The non-random sample of subjects utilized for this study prevents us from generalizing the results to the greater population of parents of preschool-age children. Research is needed in order to determine the special needs parents have for child development knowledge.

Recommendations

Research has been completed in the area of child abuse and neglect, yet few studies exist which link knowledge of child development and child abuse potential. Those studies which have been reported, however,

consistantly indicate that parents who do not possess adequate levels of knowledge of normal child development are at greater risk for punitive childrearing practices than parents who are more knowledgeable about child development (deLissovoy, 1973; deLissovoy, 1975; Johnson, Loxterkamp, Albanese, 1982; Showers and Johnson, 1984). Even more noteworthy is the implication that inadequate levels of knowledge about normal child development is a factor in child abuse and neglect (Twentyman and Plotkin, 1982). This link may be due to parental frustration and aggressive behavior directed at the child as a result of the child's failure to meet unrealistic parental expectations (Twentyman and Plotkin, 1982). Additional research is needed in each of the following areas:

1. Research should examine further the differences in mothers' and fathers' knowledge and expectations of children.
2. More diverse populations of parents should be studied in order to understand the special information needs of all parents.
3. Longitudinal research is needed to determine the long-term effectiveness of parent education programs on parents' knowledge of child development and on maintaining positive parental attitudes towards their children.

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APPENDIX A

INSTRUMENTS

KIDS

(Knowledge Inventory of Development and Behavior: Infancy to School-age)

INSTRUCTIONS: KIDS describes the characteristics of children at different ages. Think about the age you would expect a child to be when he or she first shows the behavior described. Use this key when thinking about your answers:

I = Infancy (birth to 12 months)
T = Toddler (1 and 2 year olds)
P = Preschooler (3 through 5 years)
S = School-age (6 through 12 years)

Circle the age to the right which you think MOST children are at when they FIRST show the behavior described.

At which age would you first expect most children to

1.	cut most of their permanent teeth	I	T	P	S
2.	boast or brag about what they can do	I	T	P	S
3.	feed themselves with a spoon	I	T	P	S
4.	attempt to imitate sounds made by people	I	T	P	S
5.	identify and name basic shapes (circle, square, etc.)	I	T	P	S
6	like being played with, talked to and held	I	T	P	S
7.	play games that require following rules and taking turns (checkers, monopoly, team sports, etc.)	I	T	P	S
8.	pull themselves to a standing position	I	T	P	S
9	use scissors to cut paper	I	T	P	S
10.	use the toilet with little adult assistance	I	T	P	S
11.	be able to pick up small objects (raisins, beads, dimes, etc)	I	T	P	S
12	enjoy pushing large objects, such as boxes, across the floor	I	T	P	S
13.	want to play almost exclusively with children their own sex	I	T	P	S
14.	hold and drink from their own cup or glass	I	T	P	S
15.	want to do things by themselves even though they aren't yet capable of doing the task on their own	I	T	P	S
16.	develop an interest in collections and clubs	I	T	P	S
17.	learn to ride a bicycle (two wheeler without training wheels)	I	T	P	S
18.	point to their nose when asked to do so	I	T	P	S

I = Infancy (birth to 12 months)
T = Toddler (1 and 2 year olds)
P = Preschooler (3 through 5 years)
S = School-age (6 through 12 years)

At which age would you first expect most children to

19. know that they are a boy or a girl ..... I T P S
20. imitate grownup roles in their play (firefighter, teacher, etc.) ..... I T P S
21. practice simple skills with objects (dropping and throwing, opening and closing, putting together and taking apart, etc.) ..... I T P S
22. enjoy playing near other children even though they have difficulty with cooperating and sharing ..... I T P S
23. enjoy telling jokes and riddles ..... I T P S
24. usually understand what is being said to them even though they don't always do as requested ..... I T P S

25. develop the skills needed to play ordinary games (ball, hopscotch, tag, jump rope, etc.) ..... I T P S
26. touch, handle and taste everything within reach ..... I T P S
27. be concerned about what others think of them ..... I T P S
28. hop on one foot ..... I T P S
29. have strong feelings about being treated fair ..... I T P S
30. run to adults with complaints about other children ..... I T P S

31. show fear or cry when a stranger approaches ..... I T P S
32. put two or three words together in a sentence ..... I T P S
33. be concerned with gaining approval from their friends ..... I T P S
34. cut their first tooth ..... I T P S
35. scribble when given a crayon or pencil ..... I T P S
36. cry or be startled by strange objects or loud sounds and voices ..... I T P S

37. do craft work with tools that require some skill and manipulation (making potholders, needlework, model airplanes, etc.) ..... I T P S
38. pick out the larger of two circles when asked, "which is bigger?" ..... I T P S
39. identify and name pictures of familiar objects (ball, truck, doll, etc.) ..... I T P S

40. object when mother leaves and squeal with joy when she returns ..... I T P S
41. be eager to help around the house ..... I T P S
42. sit alone ..... I T P S

43. sleep through most nights without wetting ..... I T P S
44. recognize and respond to familiar people (mother, father, sister, brother, etc.) ..... I T P S
45. be able to cooperate and share with other children as they play ..... I T P S
46. frequently say "NO!" to questions or requests ..... I T P S
47. imitate simple movements such as clapping hands ..... I T P S
48. understand that 10 pennies is the same as one dime ..... I T P S

CAP INVENTORY FORM VI

Joel S Milner Ph D
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INSTRUCTIONS: The following questionnaire includes a series of statements which may be applied to yourself Read each of the statements and determine if you **AGREE** or **DISAGREE** with the statement If you agree with a statement, circle **A** for agree If you disagree with a statement, circle **DA** for disagree Be honest when giving your answers Remember to read each statement; it is important not to skip any statement

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1	I never feel sorry for others	A	DA
2	I enjoy having pets	A	DA
3	I have always been strong and healthy	A	DA
4	I like most people	A	DA
5	I am a confused person	A	DA
6	I do not trust most people	A	DA
7	People expect too much from me	A	DA
8	Children should never be bad	A	DA
9	I am often mixed up	A	DA
10	Spanking that only bruises a child is okay	A	DA
11	I always try to check on my child when it's crying	A	DA
12.	I sometimes act without thinking	A	DA
13	You cannot depend on others	A	DA
14	I am a happy person	A	DA
15	I like to do things with my family	A	DA
16	Teenage girls need to be protected	A	DA
17	I am often angry inside	A	DA
18	Sometimes I feel all alone in the world	A	DA
19	Everything in a home should always be in its place	A	DA
20.	I sometimes worry that I cannot meet the needs of a child	A	DA
21	Knives are dangerous for children	A	DA
22	I often feel rejected	A	DA
23	I am often lonely inside	A	DA
24	Little boys should never learn sissy games	A	DA
25	I often feel very frustrated	A	DA

●OOO

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O●OO

26	Children should never disobey	A	DA
27	I love all children	A	DA
28	Sometimes I fear that I will lose control of myself	A	DA
29	I sometimes wish that my father would have loved me more	A	DA
30	I have a child who is clumsy	A	DA
31	I know what is the right and wrong way to act	A	DA
32	My telephone number is unlisted	A	DA
33	The birth of a child will usually cause problems in a marriage	A	DA
34	I am always a good person	A	DA
35	I never worry about my health	A	DA
36	I sometimes worry that I will not have enough to eat	A	DA
37	I have never wanted to hurt someone else	A	DA
38.	I am an unlucky person	A	DA
39	I am usually a quiet person	A	DA
40	Children are pests	A	DA
41	Things have usually gone against me in life	A	DA
42	Picking up a baby whenever he cries spoils him	A	DA
43	I sometimes am very quiet	A	DA
44	I sometimes lose my temper	A	DA
45	I have a child who is bad	A	DA
46	I sometimes think of myself first	A	DA
47	I sometimes feel worthless	A	DA
48	My parents did not really care about me	A	DA
49	I am sometimes very sad	A	DA
50	Children are really little adults	A	DA
51	I have a child who breaks things	A	DA
52	I often feel worried	A	DA
53	It is okay to let a child stay in dirty diapers for a while	A	DA
54	A child should never talk back	A	DA
55	Sometimes my behavior is childish	A	DA
56.	I am often easily upset	A	DA
57	Sometimes I have bad thoughts	A	DA
58	Everyone must think of himself first	A	DA
59.	A crying child will never be happy	A	DA
60	I have never hated another person	A	DA
61	Children should not learn how to swim	A	DA
62	I always do what is right	A	DA
63	I am often worried inside	A	DA
64	I have a child who is sick a lot	A	DA
65	Sometimes I do not like the way I act	A	DA
66	I sometimes fail to keep all of my promises	A	DA
67	People have caused me a lot of pain	A	DA
68	Children should stay clean	A	DA
69	I have a child who gets into trouble a lot	A	DA
70	I never get mad at others	A	DA

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71	I always get along with others	A	DA
72	I often think about what I have to do	A	DA
73	I find it hard to relax	A	DA
74	These days a person doesn't really know on whom one can count	A	DA
75	My life is happy	A	DA
76	I have a physical handicap	A	DA
77	Children should have play clothes and good clothes	A	DA
78	Other people do not understand how I feel	A	DA
79	A five year old who wets his bed is bad	A	DA
80	Children should be quiet and listen	A	DA
81	I have several close friends in my neighborhood	A	DA
82	The school is primarily responsible for educating the child	A	DA
83	My family fights a lot	A	DA
84	I have headaches	A	DA
85	As a child I was abused	A	DA
86	Spanking is the best punishment	A	DA
87	I do not like to be touched by others	A	DA
88	People who ask for help are weak	A	DA
89	Children should be washed before bed	A	DA
90	I do not laugh very much	A	DA
91	I have several close friends	A	DA
92	People should take care of their own needs	A	DA
93	I have fears no one knows about	A	DA
94	My family has problems getting along	A	DA
95	Life often seems useless to me	A	DA
96	A child should be potty trained by the time he's one year old	A	DA
97	A child in a mud puddle is a happy sight	A	DA
98	People do not understand me	A	DA
99	I often feel worthless	A	DA
100	Other people have made my life unhappy	A	DA
101	I am always a kind person	A	DA
102	Sometimes I do not know why I act as I do	A	DA
103	I have many personal problems	A	DA
104	I have a child who often hurts himself	A	DA
105	I often feel very upset	A	DA
106	People sometimes take advantage of me	A	DA
107	My life is good	A	DA
108	A home should be spotless	A	DA
109	I am easily upset by my problems	A	DA
110	I never listen to gossip	A	DA
111	My parents did not understand me	A	DA
112	Many things in life make me angry	A	DA
113	My child has special problems	A	DA
114	I do not like most children	A	DA
115	Children should be seen and not heard	A	DA

OO●O

OOO●

116	Most children are alike	A	DA
117	It is important for children to read	A	DA
118	I am often depressed	A	DA
119	Children should occasionally be thoughtful of their parents	A	DA
120	I am often upset	A	DA
121	People don't get along with me	A	DA
122	A good child keeps his toys and clothes neat and orderly	A	DA
123	Children should always make their parents happy	A	DA
124	It is natural for a child to sometimes talk back	A	DA
125	I am never unfair to others	A	DA
126	Occasionally, I enjoy not having to take care of my child	A	DA
127	Children should always be neat	A	DA
128	I have a child who is slow	A	DA
129	A parent must use punishment if he wants to control a child's behavior	A	DA
130	Children should never cause trouble	A	DA
131	I usually punish my child when it is crying	A	DA
132	A child needs very strict rules	A	DA
133	Children should never go against their parents' orders	A	DA
134	I often feel better than others	A	DA
135	Children sometimes get on my nerves	A	DA
136	As a child I was often afraid	A	DA
137	Children should always be quiet and polite	A	DA
138	I am often upset and do not know why	A	DA
139	My daily work upsets me	A	DA
140	I sometimes fear that my children will not love me	A	DA
141	I have a good sex life	A	DA
142	I have read articles and books on child rearing	A	DA
143	I often feel very alone	A	DA
144	People should not show anger	A	DA
145	I often feel alone	A	DA
146	I sometimes say bad words	A	DA
147	Right now, I am deeply in love	A	DA
148	My family has many problems	A	DA
149.	I never do anything that is bad for my health	A	DA
150.	I am always happy with what I have	A	DA
151	Other people have made my life hard	A	DA
152	I laugh some almost every day	A	DA
153	I sometimes worry that my needs will not be met	A	DA
154	I often feel afraid	A	DA
155	I sometimes act silly	A	DA
156	A person should keep his business to himself	A	DA
157	I never raise my voice in anger	A	DA
158	As a child I was knocked around by my parents	A	DA
159	I sometimes think of myself before others	A	DA
160	I always tell the truth	A	DA

OOO●

GENERAL INFORMATION

Please complete the following information in the space provided:

49. Your age: _____

50. Sex: male _____ female _____

51. What is the highest level of education you have completed?

_____ less than high school graduate

_____ high school graduate

_____ attended vocation/technical school

_____ attended college but did not graduate

_____ college graduate; major _____

_____ graduate education or professional training; major _____

52. Which of the following best describes your current employment status?

_____ unemployed, looking for work

_____ unemployed, not looking for work

_____ work part-time

_____ work full-time

53. What is your current job or occupation? _____

54. What is your marital status?

_____ single, previously married

_____ married, first time

_____ remarried

_____ other, specify _____

55. Have your even taken any classes related to child growth and development?

yes _____ no _____

56. List by age and sex all children living in home:

1. _____ age Male _____ Female _____
2. _____ age Male _____ Female _____
3. _____ age Male _____ Female _____
4. _____ age Male _____ Female _____
5. _____ age Male _____ Female _____
6. _____ age Male _____ Female _____
7. _____ age Male _____ Female _____

57. What is the approximate yearly income of your household? (check one)

less than $10,000 _____

10,000 -20',000 _____

20,000 - 30,000 _____

30,000 - 40,000 _____

40,000 - 50,000 _____

over 50,000 _____

APPENDIX B

TABLES

Table 1

Description of Subjects

Sex of Subjects		Employment Status	No.
(n = 108)		Unemploy. Looking for Work	19
Male	51	Unemploy. Not Looking for Work	13
Female	57	Employed, Part Time	20
		Employed, Full Time	74

Level of Education	No.	Marital Status	No.
High School Grad.	1	Single	4
Voc/Tech School	2	Married First Time	86
College w/o Grad	15	Remarried	18
College Grad.	34		
Grad. Ed. or Prof.	56	Yearly Income	No.
Age Group	No.	Less than $10,000	2
22-29	19	$10,000-$20,000	7
30-35	51	$20,000-$30,000	21
36-39	24	$30,000-$40,000	39
40-49	18	$40,000-$50,000	16
		over $50,000	23

Participation in Child Growth and Development Classes	No.
Yes	48
No	60

Table 2

Comparison of Mothers' and Fathers' Scores on the Knowledge Inventory of Child Development: Infancy to School-Age (KIDS).

Paired t-test Procedure

	Sex	N	Mean	STD Dev	t	Prob> T
KIDS Total Score	Male	51	34.01	4.09	3.95	
	Female	51	30.80	4.09	3.95	p<.0001
Infancy Subscale Score	Male	51	9.96	2.39	2.96	
	Female	51	8.45	2.73	2.96	p<.0038
Toddler Subscale Score	Male	51	8.33	1.55	1.70	
	Female	51	7.70	2.10	1.70	p<.0909
Preschool Subscale Score	Male	51	8.68	2.08	1.51	
	Female	51	8.03	2.23	1.51	p<.1337
School-age Subscale Scale	Male	51	7.03	2.34	.90	
	Female	51	6.60	2.47	.90	p<.3679

Table 3

Comparison of Group I and Group II Parents' Scores on the Knowledge Inventory of Child Development and Behavior: Infancy to School-Age (KIDS).

t-test Procedure

Group	N	Mean	Std. Dev.	t	Prob> T
I	85	32.68	4.63	-0.054	
II	23	32.73	4.34	-0.052	p>.96

Note. Group I parents had 1 or 2 children. Group II parents had 3 or more children.

Table 4

Elevated Abuse Scale Scores

Subject Number	Abuse Scale Score	KIDS Total Score
12	186	29
25	197	27
52	195	24
77	347	33

Note: Obtained scores at or above the suggested Abuse Scale cut-off score of 166 are considered elevated. The mean score for Total Child Development Knowledge for mothers and fathers was 32.69 out of a possible 48 points.

ANALYSIS OF VARIANCE PROCEDURE

DEPENDENT VARIABLE KTS KIDS TOTAL SCORE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PR > F	R-SQUARE	C V
MODEL	3	40 79466930	13 59822310	0 70	0 5552	0 020934	13 6133
ERROR	98	1907 91121305	19 46848177		ROOT MSE		KTS MEAN
CORRECTED TOTAL	101	1948 70588235			4 41231025		32 41176471

SOURCE	DF	ANOVA SS	F VALUE	PR > F
YI	3	40 79466930	0 70	0 5552

APPENDIX C

LETTER TO PARTICIPANTS

Parents:

Here are the questionnaires I told you about a few weeks ago! Remember, please do not compare answers with your spouse as you fill them out. One of the questions I am looking at is "how does mother's knowledge of child development compare with father's?"

There is a code number on your questionnaires which will enable me to match husbands with wives. Do not put your names on the questionnaires. All information will be completely confidential.

The questionnaires deal with your feelings, attitudes, and knowledge about parenting, children, and child abuse. When you are finished filling out the questionnaires, please put them in the drop box provided in your child's room. Returning the questionnaires will constitute your consent to participate in this project. Each returned questionnaire will be greatly appreciated.

I will let you know the results of my study before May 1st. Thank you for your help.

Sincerely,

Laurie Logan

Laurie Logan

If you have any questions feel free to contact me at home, 743-3108 (after 5:00 p.m.)

Arlene M. Fulton
Assistant Professor/Child Development Specialist

APPENDIX D

VITA

VITA

Laurie W. Cowell

Candidate for the Degree of

Master of Science

Thesis: A COMPARISON OF MOTHERS' AND FATHERS' KNOWLEDGE OF CHILD DEVELOPMENT

Major Field: Family Relations and Child Development

Biographical:

Personal Data: Born in Poteau, Oklahoma, January 15, 1963, the daughter of James and Joyce Woodruff.

Education: Graduated from Poteau High School, Poteau, Oklahoma, in May, 1981; received Associate of Science Degree from Carl Albert Junior College at Poteau in May, 1983; received Bachelor of Science Degree in Elementary Education from Oklahoma State University at Stillwater in May, 1985; completed requirements for the Master of Science Degree at Oklahoma State University in May, 1991.

Professional Experience: Graduate Assistant, Child Development Laboratories, Oklahoma State University, August, 1985, to May, 1987; Child Abuse Prevention Specialist, McCurtain County Health Department/ Guidance Clinic, October, 1987, to the present.