

SPOUSAL RELATIONSHIP AND PARENTAL BEHAVIOR AS
RELATED TO GIRL'S INTELLIGENCE AND MOTIVATION

BY

THOMAS MICHAEL WHITSITT

B. A., Oklahoma Baptist University, 1978

A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1981

Approved by:


Major Professor

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TABLE OF CONTENTS

List of Tables.....	i
Acknowledgements.....	ii
Introduction.....	1
Literature Review.....	3
Method.....	11
Instruments.....	11
Sample.....	16
Procedure.....	17
Results.....	18
Discussion.....	30
References.....	36
Appendix	41
Parent Questionnaire	
Abstract	

LIST OF TABLES

Barrett-Lennard Relationship Inventory.....	19
Correlation Coefficients for Marital Satisfaction and Mother's and Father's Barrett-Lennard: and Partial Correlations For MC Scale.....	21
Iowa Parent Behavior Inventory.....	22
Correlations Coefficients for Mother's Parent Behavior and Mother's and Father's Spousal Relationship.....	24
Correlation Coefficients for Father's Parent Behavior and Mother's and Father's Spousal Relationship.....	24
Partial Correlations for Father's and Mother's Parent Behavior and Spousal Relationship Controlling for Marital Con- ventionalization.....	27
Correlation Coefficients for Mother's and Father's IPBI & PPVT-R & ANCR.....	29
Correlation coefficients for Mother's and Father's Barrett-Lennard & PPVT-R and ANCR.....	30

ACKNOWLEDGEMENTS

I want to thank Robert H. Poresky for his guidance as a major professor and Candyce Russell and Al Davis for contributing to my learning experience by serving on my committee. I also want to thank my other friends who encouraged me in my efforts as a student and helped me gain confidence in myself.

Thomas M. Whitsitt

INTRODUCTION

In a nuclear family unit consisting of a mother, father and child, each adult relates to the child as a parent and to one another as spouses. Also, each adult relates to the other as a member of a parent-child dyad. For example, the father relates to the mother who is interacting with the child as a parent. Thus, the interaction between the mother and father as spouses might be influencing the interaction occurring in the parent-child dyad. The focus of this paper is on the possible correlation between behavior in the spousal dyad and the behavior of an adult as a parent interacting in the parent-child dyad.

Rosenblat (1974) presented evidence which illustrated the association between the amount of adult-adult interaction and the presence of a child, thus indicating the effect of one person (the child) on the interaction of two adults. Lamb's (1976b) results indicated differences between interactions involving one parent and an infant and interactions involving both parents and an infant demonstrating an influence of the presence of one parent on the amount of interaction between the other parent and child. Based on these studies and others emphasizing the importance of the father's role in the family (Lamb, 1978; 1977; 1976b; Kotelchuck, 1976), Belsky (1979) conducted a study which focused on the interrelatedness of observed husband-wife interaction and the quality and quantity of mothering and fathering. The author found correlations between spousal harmony (amount of careful listening, emotional warmth and mutual agreement) and positive emotional interaction with the child for both parents. Furthermore, Krige (1976) compared the interaction patterns of parents and children in family triads of low achieving and high achieving boys and girls. Krige (1976) found that fathers of high achieving girls gave their wives more support than fathers of low achieving girls as indicated by the amount of socioemotional activity (raises other's status, shows satisfaction, shows positive acceptance) directed toward the wife. Mothers of high achieving girls were more actively involved with their daughters than mothers of low achieving daughters, thus suggesting a relationship between the father's socioemotional activity directed toward the wife and the wife's interaction with the daughters.

In Belsky's (1979) study, spousal harmony was related to the mother's cognitive stimulation and object mediated verbal interaction with the child. The same spousal variable was related to the father's holding, play contact and object mediated verbal stimulation. Krige (1976) found father's supportive behaviors were associated with the mother's coercive role with her daughter, specifically in regard to the daughter's achievement. Hurley (1965) found that daughters' I.Q. scores were most closely related to the mothers' acceptance-rejection. Heilbrun (1967) found that rejection tendencies in parents tend to impair the cognitive performance of their daughters. Epstein & Radin (1975) reported correlations between fathers' nurturant behaviors (empathy, attention to child's verbalizations, and physical restrictiveness) and daughter's achievement motivation, but, motivation was not an intervening variable between father behavior and girls' cognitive performance as it was for boys. The authors speculate that the mother is perhaps the intervening variable between father's behavior and girls' cognitive performance.

A relationship between supportive spousal behavior and positive emotional interaction with the child has been reported by Belsky (1979) and Krige (1976). Other studies indicate that nurturance, parental involvement and acceptance are related to girls' achievement motivation and cognitive performance (Hurley, 1965; Heilbrun, 1967; Epstein & Radin, 1975). Supportive spousal interaction appears to be associated with parental behaviors which are associated with girls' cognitive performance and achievement motivation.

The primary purpose of this study is to explore the relationship between supportive spousal interaction and parental behaviors. The relationship between spousal interaction and parental behavior will be compared with 4 and 5 year old girls' intelligence and achievement motivation.

Literature Review

Lewis & Feiring (1978) point out that in a nuclear family consisting of a mother, father and child, there are seven interactional relationships; mother-infant, father-infant and the father-mother; the relationship between an individual and one dyad, infant-mother/father, father-infant/mother and mother-father/infant, and the triad itself. The increase from dyads to larger systems can be viewed in terms of the number of possible relationships for each person in a social network. As the number of possible relationships increases, interaction of any dyad occurs in relation to an individual or another dyad. The relationship between husband and wife becomes part of the relationship between parent and child via the parent involved in the parent-child dyad. The following literature review illustrates the relationship between an individual and a dyad, then presents data suggesting an association between specific types of spousal interaction and parent behaviors.

Rosenbalt (1974) reports results concerning changes that occur when adult couples are joined by a child. A total of 440 adult couples either accompanied or not accompanied by children, were observed to determine if a child's presence affected the level of touching, talking and smiling between adults. Since the observation was unobtrusive, the experimenter did not know whether or not the adults with the child were his/her prents. Even so, the results show interesting findings about the amount of adult interaction in this situation. Those adults with children had a lower level of adult-adult touching and talking. Rosenblat claims age of the adults was related to less adult-adult talking and touching for the sample, but, since age of the adults was not linearly correlated with presence of a child, the relationship between presence of child and lower levels of adult-adult talking and touching was not a function of the variable "age of adult". This study illustrates how an individual, the child in this case, can influence the interaction of a dyad. It is important to remember that any dyad in a family context can be influenced by another individual, but, the emphasis of the following literature is on the relationship between one parent and the parent-child dyad.

Lamb (1976b) conducted an observational study in a laboratory setting

involving 12 month old infants and both parents. Parents and their infants were observed interacting in a standardized situation. Lamb found that during episodes in which one parent was alone with the infant, there was significantly more "vocalization to the child" than when both parents were together with the child. This was true for both the father and mother. Also, results indicated that more attachment behaviors were directed toward both parents in the single parent situation than in the both-parent situation. Lamb (1978) suggests the levels of dyadic interactional behaviors, such as "attachment behaviors" defined by Bowlby (1969) and observed by Ainsworth (1972; 1969; 1967), are a function of group size. In a triad, each person has alternative social partners and therefore, tends to distribute attention among interactants. Furthermore, he attributes the child's "attachment behaviors" in a system to two factors:

- (1) the tendency to interact with both parents when they are available;
- and (2) the reduced social salience of each parent due to adult-adult interaction.

Parke & O'Leary (1976) explored the manner in which parents interact with their newborn infants by observing the mother-father-infant triad in the hospital within the first 48 hours of the child's life. Three types of observations were made: (1) mother-infant; (2) mother-father-infant; and (3) father-infant. Parents were informed that they could either pick up the baby or leave him in the crib. This was done to increase the range of parental behavior. Observations of mother-infant and mother-father-infant interactions allowed an estimate of the father's effect on mother-infant interaction. Analysis of the data demonstrated differences in two situations. When the mother was alone, mother-infant interaction was much higher than when the father was present. She was more likely to hold, touch, rock, vocalize to, initiate and feed her offspring (infants were all bottle fed). When the mothers were alone, they rocked first-born babies more than later-born babies, but, when the father was present, rocking of both was decreased and first-born and later-born babies were rocked equally. Similarly, mothers touched first-born girls more than first-born boys, but, the differences in regard to sex faded when the father was present. The authors attributed these findings to the father's high level of interest as estimated by the amount

of interaction in the hospital setting which reduced maternal behaviors. They caution, however, that the high level of interest in the hospital setting may not be evident in the home environment.

The studies cited have focused mainly on the impact that the presence of one parent or child can have on a dyad. Belsky (1979) provided evidence for a relationship between supportive spousal interaction and parental behavior, thus demonstrating the possible effect of one spouse's behavior on the behavior of the other spouse acting as a parent. Belsky (1979) conducted a naturalistic, observational study involving forty middle class families with 15 month old infants. Each family was observed in their own home two different weekdays for two hours each day. Observations were made during a time when father-infant interaction was maximized. Also, an attempt was made to observe segments of the day that were generally considered representative of the young child's experience. Mother and father were each rated on Intensity of Positive Affect they displayed toward the child and the cognitive stimulation they provided the child. Each couple was rated on Spousal Harmony which provided information about the amount of careful listening, emotional warmth and mutual agreement present in the spousal interaction. Finally, the researchers measured the Facilitation of Three Person Interaction, or the extent to which dyadic interactions were organized to include the other person. Spousal Harmony, measured by observational means, was positively and significantly related to one mother variable "cognitively stimulating object-mediated verbal interaction". This mother variable was also positively and significantly related to three person interaction and shared pleasure between spouses. Shared Pleasure was also related positively to the behavioral category of "basic responsive care: rating cognitive stimulation". Another mother variable, designated as "ignore" was positively related to "wife/non-baby related vocabulary." More specifically, husbands and wives who conversed about topics not related to the baby were less likely to be actively involved in parenting. Also, fathers who scored low on all measures of parenting spoke frequently about non-baby matters. For husbands, the father factor, "cognitively stimulating interaction: "alone" was positively correlated with Spousal Harmony, showing that careful listening, emotional warmth and mutual agreement were related to parenting behavior when the wife was not present. Likewise, "Object-mediated interaction: "alone" was positively and significantly related to Spousal

Harmony and Three Person Interaction. Finally, for fathers, "cognitively stimulating positive effective verbal interaction" was positively related to Three Person Interaction and Shared Pleasure, suggesting that activities involving all three members of the family facilitated the father's interaction with the infant and that when both husband and wife were pleased with an activity the father was more likely to be involved with the infant in a positive manner.

Belsky (1979) cautions against cause and effect interpretations based on these results because of their correlational nature and states that the sampling of spousal interaction was limited since the couples were only observed about an hour on two weekdays. Perhaps the most significant spousal interactions occur when the child is not present. The evidence does, however, suggest a relationship between careful listening, emotional warmth, and mutual agreement and parental involvement with the infant.

Krige (1976) compared the interaction patterns of parents and children in family triads of low achieving (L-A) and high achieving (H-A) boys and girls. The participants were from 40 white middle class families. Mean age of the children was 12 years. Parents had not been divorced or separated and raised only their natural offspring. The level of achievement was determined by summing the last three percentage marks that each pupil had obtained in the last three school examinations and determining an average score. High achievement was a score above the value of the percentage predicted from the I.Q. and scores below the value of the percentage predicted from the I.Q. were considered as indicative of low achievement. Based on this index, the children were divided into four groups: high achieving boys; high achieving girls; low achieving boys; and low achieving girls. Mean I.Q. for H-A boys was 115.6 and 116.7 for L-A boys. For H-A girls mean I.Q. was 115.9 and 116.5 for L-A girls. During home visits, the members of the triad completed a questionnaire (Schuham, 1970) from which the experimenter chose six items for the triad to discuss. The items were selected so as to establish three coalition patterns: one where the father was isolate and the mother and child agreed; another in which the mother was isolate and another with the child as isolate (Strodtbeck, 1958). The triads were asked to discuss the items while they were being tape

recorded in the experimenter's absence. Interaction was subsequently typed and scored according to the Bales system of Interaction Process Analysis (Bales, 1970). Finally, the twelve categories proposed by Bales were expanded to 35 by making various combinations. The interaction of each member of the family triad was analyzed in terms of these 35 categories. Krige (1975) found fathers of H-A children gave their wives more support and solidarity than fathers of L-A children. The amount of socioemotional activity (raises other's status, shows satisfaction, shows positive acceptance) directed toward the wife was also higher and the positive emotional interaction between husband and wife was greater for H-A children than it was for L-A children. Fathers of girls were less readily and less closely involved with daughters than with sons. Mothers of boys seemed to accept their husband's task role and supported it, while mothers of girls more actively drew fathers into a task by asking for opinions. Mothers did this most often in regard to H-A daughters. Overall, mothers had a more coercive and active role with daughters than with sons. There were strong emotional bonds between all family members particularly between mothers and daughters. As indicated above, the mothers did draw the fathers in and the fathers gave mothers of high achievers more support than did fathers of low achievers, suggesting a relationship between spousal interaction (father giving support) and the mother's parental behavior (active role, emotional bonds). Krige (1976) suggests that when husbands and wives interact with emotional warmth, mutual agreement and careful listening, the positive emotional interaction with their child increases. Krige (1976) suggests that wives who have husbands who raise their status, show satisfaction and shows positive acceptance are more actively, coercively and emotionally involved with their daughters. Finally, Krige suggests that this occurs specifically in relation to the girl's achievement.

PARENT-CHILD DYAD

Having considered the relationship between supportive spousal interaction and parental behavior, it is important now to look specifically at the nature of the parent-child dyad as it exists in the family context. The following literature presents evidence concerning the relationship between both mother and father, then deals specifically with parental behaviors which are associated with girl's achievement motivation and

cognitive performance.

Bowlby (1969) considers the mother-infant relationship as a necessary and most important relationship during infancy because the infant is biologically or genetically predisposed to emit certain "attachment behaviors" which function to bring the infant into proximity with the mother. Researchers, concentrating mainly on the mother-infant dyad, have substantiated the existence of "attachment behaviors" and bonding in the laboratory setting (Ainsworth, 1972; 1969; 1967; Stayton, Ainsworth & Main, 1973; Feldman & Ingram, 1975). Kotelchuck (1972) conducted an observational study involving fathers. The initial studies involved a series of separations from and reunions with father, mother and stranger in both home and laboratory settings. The primary measures of attachment have been separation protest (crying, disruption of play) and interaction behaviors such as smiling (Kotelchuck, 1976; Kotelchuck, Zelazo, Kagan, Spelke, 1967). Kotelchuck consistently found 12 to 21 month old children show similar responses to both parents whether observed at home or in an unfamiliar laboratory. Lamb (1976b, 1977) reported consistent evidence in a major study which involved observation of infants in naturalistic home settings. Infants were observed with both parents and showed no consistent preference for either parent over the other. This evidence is significant in that it establishes the existence of a bond between mother and child which is the basis for mother-child interaction affecting child development. Also, it demonstrates that the father, who has traditionally been considered to be peripherally involved in the family, is a significant attachment object for the child and therefore there is a potential for father-child bonding and influence similar to mother-child effects.

Busse (1969) observed low-income black fathers and their fifth-grade sons to explore relationship between boys' flexible thinking and paternal behavior and attitudes. Moderate material manipulation during a joint task, number of words spoken by the father, and a high number of expressions of warmth by the father were positively related to their sons' previously obtained flexible thinking scores. Fathers who preferred a moderately active role to an ignoring or overactive role had sons who scored higher on flexible thinking. Father's involvement with sons in academic matters was positively related to higher achievement motivation except in arithmetic (Boeger, 1971). Fathers who were overly controlling

and involved, however, had sons who were described as low-achievers. Even though these two studies do not address the father-daughter relationship, they do illustrate the importance of parental involvement, and warmth in relationship to children's cognitive performance and achievement motivation.

Hurley (1965) studied the relationship between I.Q. scores of third grade children and their parents' response to a questionnaire and two interviews measuring the parental behavior dimension of acceptance-rejection (A-R). He reports an inverse relationship between parental (A-R) and childrens' I.Q. scores. A significant inverse relationship was also found between the fathers' use of punishment and the child's I.Q. regardless of sex. Daughters' I.Q. scores were most significantly related to mothers' A-R and overall, A-R of both parents was more closely related to daughters' I.Q. than to sons I.Q.

Heilbrun, Harrell and Gillard (1967) studied the relationship between female college students' cognitive proficiency under socially reinforced conditions and the women's perceived childrearing attitudes of their fathers and mothers. Heilbrun et.al. (1967) concentrated on control and nurturance as perceived by the female subjects and combined them to form four childrearing patterns: (1) overprotected (high control-high nurturance); (2) rejected (high control-low nurturance); (3) accepted (low control-high nurturance); (4) ignored (low control-low nurturance). Control was measured by having the girls complete the PARI with instructions to complete the questionnaire as their fathers would and then as their mothers would. Nurturance was measured by having the subjects rate their parents on the Parent-Child Interaction Scale (Heilbrun, 1964). The cognitive task was a version of the Stroop Color Naming Test. The authors report that paternally rejected (low control-low nurturance) females were inferior to overprotected females and to ignored females on the Color Naming Test. Furthermore, this study was a replication of a previous study concerning mothers' attitudes and behaviors as perceived by their daughters in which rejection (low control-low nurturance) was related to inferior performance on the same cognitive task (Heilbrun et.al., 1967). The authors concluded that rejection tendencies in either mothers or fathers tend to be related to cognitive impairment of both sons and daughters when the activity is complex and socially reinforced.

Epstein & Radin (1975) working with 4 year-old white children evaluated

the relationship between task-oriented and interpersonal motivation and intelligence scores. The researchers interviewed the fathers while their child was present. Records of the interview (including verbal and non-verbal information) were scored according to 25 behavior categories. Epstein & Radin described six factors for girls which emerged after factor analysis of the 25 categories. The six factors included: (1) meeting and ignoring explicit needs; (2) aversive and non-aversive control; (3) verbal restrictiveness and requesting; (4) empathy, psychological manipulation; (5) attention to child's verbalizations (corrections and stopping to listen); (6) physical restrictiveness. Only the last three factors are clearly nurturant and first three contain both nurturant, supportive behaviors and restrictive, punitive elements. The authors state that empathy and attention to child's verbalizations are positively related to daughters' interpersonal motivation, but, restrictiveness and mixed messages (meeting and ignoring explicit needs) interfere with task-oriented motivation. They also concluded fathers influence their daughters' task-oriented and interpersonal motivation, but, the influence is not reflected in the daughters' intelligence scores even though I.Q. scores were positively correlated with task-oriented motivation ($r=.22$) and interpersonal motivation ($r=.30$, $p<.001$). These findings suggest that other antecedents must be sought to explain intellectual functioning in girls. Considering findings presented by Hurley (1965) and Heilbrun et. al. (1964), 1967) and Krige (1976) the mother can be considered an important factor in relation to girls' intellectual functioning. Parent preferences of preschool age children, ages two through four were studied by Lynn and Cross (1974). Each child was asked, in individual sessions, to choose which parent they wanted to participate with them in each of the seven play activities designed by the researchers. Results indicated that boys showed a strong preference for their fathers ($p<.01$), however, two year-old girls showed a father preference ($p<.05$) and four year-old girls showed a mother preference ($p<.05$) supporting the hypothesis of maternal influence on their daughters.

Parental behaviors such as: number of words spoken by the father, expressions of warmth (Busse, 1965); acceptance-rejection (Hurley, 1965); nurturance and control (Heilbrun et.al., 1967) nurturance (Epstein &

Radin, 1975); active involvement and strong emotional bonds (Krige, 1976) have been associated with cognitive performance and achievement motivation in the literature cited. Also, Krige (1976) has shown that the association between the father's supportive behavior and mother's parental behavior is especially strong in regard to girls. Finally, Lynn & Cross (1974) suggest that 4 year-old girls show a preference for the sex differences reported by Epstein & Radin (1975).

The above parental behaviors are similar to those reported by Belsky (1979) and Krige (1976) in that there is parental involvement, emotional warmth, nurturance and control. Therefore, it was hypothesized that these parental behaviors are associated with children's achievement motivation and cognitive performance and that parental behavior is related to supportive spousal interaction.

METHOD

Hypotheses

Based on findings suggesting a relationship between supportive spousal interaction and facilitative parental behavior (Belsky, 1979; Krige, 1976) associated with cognitive performance and achievement motivation (Busse, 1969; Heilbrun, et. al., 1967; Hurley, 1965; Krige, 1976) the first hypothesis was that supportive spousal interaction defined as the level of regard, empathy and congruence would be positively correlated with parental behaviors including parental involvement, limit setting, responsiveness, intimacy, reasoning guidance and free expression. Second, based on results reported by Epstein & Radin (1975) a positive correlation between the fathers' parental behavior and their daughters' achievement motivation was hypothesized. Next, considering the evidence presented by Lynn & Cross (1974) in conjunction with the findings of Epstein & Radin (1975), it was hypothesized that the mothers' parental behaviors would be positively correlated with girls' I.Q. Also, a positive correlation between achievement motivation and I.Q. scores was expected. Finally, the intercorrelations of these variables will facilitate a description of family interaction patterns and their association with girls' achievement motivation and intelligence.

Instruments

To obtain information about supportive spousal interaction, an abbreviated form of the Barrett-Lennard Relationship Inventory was used (Schumm

et. al., Unpublished Manuscript). The Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962, 1978) was designed to assess the therapeutic relationship from the client's perspective along five dimensions. The inventory has recently been adapted by family researchers to measure the spouses' perceptions of their own marital relationship (Cromwell, Olson, and Fournier, 1976; Sundrem, 1977; Schaivi, Derogatis, Kuriansky, O'Connor & Sharpe, 1979). Schumm et. al. (1980) investigated the dimensionality of the short form of the Barrett-Lennard Relationship Inventory. Sixteen of the 64 items in Form OS-64 (Litwack, Getson & Saltzman, 1968) representing the scales for regard, empathy and congruence were selected and administered to a random sample of 83 couples living in a rural community in Southwestern Kansas. For both husbands and wives, all but two items loaded primarily on their respective scales. A subsequent study (Schumm, Bollman & Jurich, Unpublished Manuscript) used a sample of 98 urban married couples. Items representing empathy, congruence and regard were administered to 88 husbands and 92 wives. Items pertaining to congruence had a moderate secondary loading on empathy and congruence suggesting that congruence as a factor is not as well defined as empathy and regard on which there were no secondary loadings greater than .39. In the final analysis, after deleting three items, three principle components corresponding to the anticipated factor structure emerged. These findings indicated that even though the dimensionality of the abbreviated inventory was not perfect, the three basic dimensions of regard, empathy and congruence appeared across four different groups of respondents who were reporting on their marital relationship (Schumm, et. al. Unpublished Manuscript). The abbreviated form of the Barrett-Lennard Inventory used in this study contained 15 items which measured the presence of empathy, regard and congruence in the marital relationship as perceived by both spouses. Each spouse was asked to report on the other's behavior in regard to the three factors. For example, the wife responded to "My spouse respects me as a person" and the husband responded to "My spouse respects me as a person." Subjects were asked to respond to each item on a five point scale of strongly disagree, disagree, mixed, agree, and strongly agree. Ratings on each item (1 to 5) were summed to produce a total raw score for each of the three principle components. These dimensions were chosen because they are similar to the three components (careful listening, emotional warmth and mutual agreement) which composed the variable Spousal Harmony in

Belsky's (1979) study. Finally, the length was appropriate for use with the other inventories used.

Since the Barrett-Lennard does not yield a composite score, three questions concerning marital satisfaction were asked: (1) How satisfied are you with your marriage; (2) How satisfied are you with your husband/wife; (3) How satisfied are you with your husband/wife as a spouse. Each statement is rated on a 1 to 7 scale ranging through: extremely dissatisfied; very dissatisfied; very satisfied; extremely satisfied. Ratings for each item are summed to produce a total score. Schumm (1979) reports that the alpha internal consistency reliability estimates for this Marital Satisfaction Scale are .92 for wives and .84 for husbands.

A Marital Conventionalization Scale (MC scale) was included in the questionnaire because all parent measures were self-report paper and pencil inventories subject to distortion by social desirability. Edmonds (1967) developed questions which were intended to measure marital conventionalization. Fifteen items which according to Edmonds (1967) are the most discriminating items were used as a Marital Conventionalization Scale (MC scale). The fifteen items were presented in a true-false format. Each item was weighted according to each item's contribution to total variance. Edmonds correlated the weighted scores of the 15 most discriminating items with the weighted scores on all 34 items and obtained a correlation coefficient of over .99.

Conventionalization, as used by Edmonds (1967) means the extent to which the report of an event is distorted in the direction of social desirability. Also, the author states that since all subjects in the study were assured that their answers were completely anonymous, the distortion is most likely unconscious, unintended and consists of fooling oneself instead of fooling others. Results of Edmond's study indicate the need for control of the conventionalization variable since a correlation coefficient of .63 was obtained for the Lock-Wallace short scale of marital adjustment and the MC scale.

Because of the small sample size in the present study, extremely conventional scores were not dropped, but, partial correlations were used to check the effect of Marital Conventionalization.

Parental behavior was measured by the Iowa Parent Behavior Inventory (Crane, Clark & Pease, 1978). Ratings were based on each parent's perception

of his/her own behavior. The items represent behavior situations and are self-rated on a 1 to 5 scale on which 1 means that the parent almost never behaves that way, 3 indicates that the parent behaves that way about half the time or is not sure how often he/she behaves that way and 5 means that the parent almost always behaves that way. Crase et.al. (1978) report factor analysis of data collected on 393 mothers and 371 fathers which yielded six factors for mothers and five factors for fathers (the IPBI is presented in a mother form and a father form). The factors are composed of 36 items in both forms. The factors in the mother form are: parental involvement; responsiveness; reasoning guidance; free expression; and intimacy. Total variance-reliability was derived from the Spearman-Brown formula which yielded figures of .616, .711, .787, .812, .559, and .753 for the six factors respectively. Unique variance computed by a variation of the Spearman-Brown formula where correlations among items were generated from loadings on a single factor, yielded an estimate of the reliability with which the scales measure the factors they were supposed to measure. The figures were: .633; .761; .745; .769; .628; .733. The five factors on the father form are: parental involvement; limit setting; responsiveness; reasoning guidance; and intimacy. Reported total variance reliabilities as derived from the Spearman-Brown formula for each factor are as follows: .843; .822; .810; .860; .638. Unique variance reliability for each factor is reported to be: .808; .819; .783; .829; .636 (Crane, et. al., 1978). This instrument does have face validity because the items appear to reflect the factors they are supposed to measure. Also, considering the factor analysis done on the original 67 items, and the revisions made in order to develop the present forms, the instrument does seem to have content validity. Unfortunately, test-retest reliability and construct validity have not been established since the instrument was just recently developed and data is still being collected.

The Peabody Picture Vocabulary Test-Revised (PPVT-R) (Dunn, 1981) was used as an estimate of the child's verbal intelligence. The test yields a total raw score which is converted into a standard score equivalent which indicates the extent to which an individual's score is above or below the mean score for people in the same age group with whom the instrument was standardized. The PPVT-R was standardized on a sample of 4,200 children and youth and 200 persons were included in each group. Split-half

analysis was made possible by using the Rasch-Wright latent trait methodology and the split-half reliability correlations coefficients were obtained for all age groups. For groups 4-0 to 4-5; 4-6 to 4-11; 5-0 to 5-5; and 5-6 to 5-11 the following coefficients were obtained: .74; .74; .78; .87. Concerning immediate retest reliability for the PPVT-R the median coefficient or equivalence was .79 for standard score equivalents. The delayed retest reliability coefficients decrease as the length of time between tests increases. Short-term stability (1 year or less) based on I.Q. scores was .72. The long-term (1 year or more) stability was .59. Finally, in summary of a more detailed description available in the manual (Dunn, 1981), PPVT-R scores correlated moderately with tests of scholastic aptitude and measures of school achievement. The test is administered individually and requires the subject to point to a picture which corresponds to a word given to the child by the examiner. The test is untimed, but, only 15 to 20 minutes are usually required to complete the test. It is administered over the critical range of items for each subject and the starting point, basal and ceiling vary from subject to subject (Dunn, 1981).

To measure the level of achievement motivation of each child, Animal Crackers: A Test of Motivation to Achieve was used (Adkins & Ballif, 1975). Animal Crackers (ANCR) is a revision of the original, objective-projective test called Gumpgookies (Ballif & Adkins, 1968) which was used in the National Evaluations of Head Start and Follow Through. Motivation to achieve in school, in this context, is implied by behavior directed toward a certain goal, for example doing well in school. Exhibited behavior is considered to be brought about by the presence of motivation for doing well in academic learning (Ballif, 1977). The behavior from which motivation for learning is inferred is presumed to occur only when five patterns of thinking are present. These five patterns are primarily below levels of awareness, but, they can be recognized. The presumed thought patterns are: "(1) expecting increased positive affect from learning; (2) conceptualizing self as being able to succeed in learning; (3) setting goals related to learning and using these to direct behavior; (4) having knowledge of the actions that will be instrumental in obtaining the desired goals; (5) evaluating self against internalized standards of excellence" (Ballif, 1977).

The five subscales in ANCR are related to its theoretical propositions and include: (1) school enjoyment; (2) self confidence; (3) purposiveness;

(4) instrumental activity; and (5) self evaluation. Ballif (1977) reports that these major factors have been extracted in numerous factor analyses (Adkins & Ballif, 1970a; 1970b; 1972; Adkins, Payne and Ballif, 1972). This test has been standardized on thousands of preschool and primary age children and KR-20 reliability coefficients for total scores are typically in the .90's. In a study by Bridgeman & Shipmen (1978), alpha coefficients were in the high .80's and low .90's. Test-retest reliability coefficients are in the high .60's and .70's (Ballif, 1977). Finally, a series of other studies correlating test scores with teachers' ratings of several scales of motivation, resulted in coefficients ranging from .48 to .72 (Adkins & Ballif, 1970b).

The test itself consists of 69 dichotomous items each depicting two amorphous characters. The examiner describes each item orally and then, the child decides which one is his/hers or is most like him/her. For example, the examiner might say:

Learning to count makes this one feel good.

Learning to count makes this none feel bad.

Which one is yours?

As reported earlier, the total scores of the test have been reliable, so the composite scores were used in the analysis. The maximum score possible is 60.

Sample

Thirty-three intact families with daughters between the ages of 49 to 69 months participated in the study. The mean age for the daughters was 59 months. All children were enrolled in either day care or kindergarten. According to initial telephone contact the girls were all the parents' offspring, had no physical or mental handicaps and had not been separated from either parent for more than six months.

All couples who completed the questionnaires were married and for all but one husband there were no previous marriages. The length of present marriage ranged from 4 to 31 years with a mean of 11 (SD=4). Net family income ranged from less than 5,000 to 50,000. The mean category was 20,000 to 24,999. Overall, the fathers in the sample were well educated (mean =17 years). The fewest number of years of education was 11 and the maximum number of years of education was 22 (PH.D).

Twenty-one fathers in the sample were employed in professional, techni-

cal and managerial occupations. Five fathers were involved in clerical and service occupations and the remaining men in the sample were evenly distributed among: service occupations; agricultural, fishery, forestry and related fields; machine trades occupations; structural work occupations; and student. The occupational categories were obtained from the Dictionary of Occupational Titles (Fourth Edition, 1977).

All but three fathers in the sample were employed fulltime. Two were employed part-time and one was unemployed. Fathers' ages ranged from 22 to 53 years. The mean age was 34 (SD=4.8).

The youngest mother in the sample was twenty years old and the oldest mother was 48 years old (M=32 years, SD=4.5). Eleven of the mothers were employed full-time, while four were employed part-time and 18 were full-time homemakers. The primary occupation of nine mothers was categorized as professional, technical and managerial. One mother's primary occupation was categorized as clerical and three other's occupations were considered service occupations. The mean for mother's education was 15 (SD=2.4).

Procedure

The sample was obtained by referring to the County Appraiser's Annual Enumeration for the City of Manhattan. The enumeration provided names of all family members, their ages and their addresses. Unfortunately, the most recent source was dated 1979, so the information was two years old. Those listed were quite often no longer available. Thus, those families who ultimately became the sample population might be considered more stable than others. One hundred names of families including a four or five year girl were selected. Then, 60 families were chosen according to a random numbers table. This list of names was used to locate families who were available by phone in the local area. When phone contact was made, the parent (either husband or wife) was briefly informed about the project, then asked four questions: (1) What race are you; (2) Does your child have any physical or mental handicaps; (3) Are you the child's biological parents; (4) Has your child been separated from either parent for more than six months. If the answers were, (1) Causian, (2) no, (3) yes, (4) no, they were asked to participate. When the parents agreed to participate, an appointment was made for a home visit the following week. The questionnaires were mailed immediately after telephone contact to give parents ample time to complete them

prior to the home visit. During the home visit, a few minutes were always taken initially to get acquainted with the child and achieve a reasonable level of comfort for the child. The examiner then administered the two child measures: ANCR and PPVT-R. The first fifteen girls completed ANCR first and PPVT-R second. The order was reversed for the rest of the sample. The examiner and the child completed the tests alone and the time needed to complete both tests was normally 50 minutes. Conditions for testing were considered good. Most often a kitchen table was available and other family members waited in another room. Curious siblings were asked to wait until the tests were completed, then they could see the tests more closely. After the tests were completed parents and interested siblings were given more details about testing. Finally, the parents' questionnaires were collected, completing contact with the families.

RESULTS

Parents' scores on the Barrett-Lennard, IPBI, Marital Satisfaction Scale and the Marital Conventionalization Scale provided spousal and parental data and scores from the PPVT-R and ANCR provided child data. The analysis included means, standard deviations, Pearson product moment correlations and partial correlations all computed on the Kansas State University computer utilizing the Statistical Package for the Social Sciences. The data was analyzed to test the following hypotheses: (1) regard, empathy and congruence would be positively correlated with parental involvement, limit setting, responsiveness, intimacy, reasoning guidance and free expression; (2) parental behavior would be positively correlated with their daughters' achievement motivation and with their daughters' intelligence; (3) achievement motivation and verbal intelligence would be positively correlated.

TABLE 1
 BARRETT-LENNARD RELATIONSHIP INVENTORY
 (Means and Standard Deviations)

Barrett-Lennard	Father		Mother	
	\bar{X}	SD	\bar{X}	SD
Regard	22.39	2.69	22.48	3.01
Empathy	18.27	3.09	18.39	3.44
Congruence	20.33	2.76	19.93	4.50

Note:

Mother's response reflects view of father
 Father's response reflects view of mother

N=33

Means and standard deviations for both mother's and father's responses to the Barrett-Lennard are presented in Table 1. Means for fathers and mothers are comparable on all three subscales, suggesting that the husbands and wives in this sample has similar perceptions of each other's regard, empathy and congruence. The sample means appeared high and reflected the nature of the sample which was middle to upper-middle class. The standard deviations, however, were considered to reflect sufficient ranges for statistical analysis. The sample means for fathers' and mothers' Marital Satisfaction were 18.64 (SD=2.07) and 17.87 (SD=3.75) indicating that both mothers and fathers in this sample were generally satisfied with their marriage and their husband/wife as a spouse. Regard, empathy and congruence were correlated with Marital Satisfaction for both mothers and fathers. These correlations were not significantly altered by partialing out Marital Conventionalization scores as can be seen in Table 2, indicating that correlations of the Barrett-Lennard and Marital Satisfaction Scales were not highly influenced by social desirability or conventionalization as defined by Edmonds (1967).

Table 3 provides means and standard deviations for the responses of both mothers and fathers on the Iowa Parent Behavior Inventory (IPBI). Mothers' and fathers' means cannot be compared because of differences between the items contained in the subscales of the mother and father forms. As can be seen in Table 3, the limits on each subscale change from the father's figures to the mother's figures. Means are generally in the moderate to high range, indicating that in this sample, both mothers and fathers generally reported themselves being actively involved in parenting. These findings give an overview of the parent sample. Now evidence concerning the hypotheses will be presented.

Spousal Relationship and Mother's Parental Behavior

Correlation coefficients were computed for the mother's responses to the three subscales of the Barrett-Lennard and the mother's responses to the IPBI in order to learn whether or not the mother's view of the father's expression of regard, empathy and congruence was related to her report of her own parenting behavior. It is important to note that the mother's responses to the Barrett-Lennard reflect the way in which the father behaves toward her. For example, the mother would respond to: "My spouse cares for me".

The correlations are presented in Table 4. Father's regard, as reported by the mother, was not significantly correlated with any of the six maternal

TABLE 2

Correlation Coefficients for Marital Satisfaction And
 Mother's and Father's Barrett-Lennard:
 and Partial Correlations Controlling for MC
 Scale

Marital Satisfaction	Regard		Empathy		Congruence	
	M	F	M	F	M	F
Pearson Correlation						
Mother	.74***		.61***		.88***	
Father		.59***		.44**		.69***
Partial Correlation						
Mother	.66***		.47**		.86***	
Father		.54**		.34		.62***

* $p < .05$
 ** $p < .01$
 *** $p < .001$

1

N=33

2

Mother: $df=25$

Father: $df=26$

TABLE 3
Iowa Parent Behavior Inventory
(Means and Standard Deviations)

IPBI	\bar{X}	SD	Range	Limit
Father				
Parental In- volvement	22.36	4.34	15-33	35
Limit Setting	37.09	4.95	20-45	45
Responsive- ness	25.45	4.76	17-33	35
Reasoning Guidance	37.97	4.74	26-48	50
Intimacy	13.12	2.01	9-15	15
Mother				
Parental In- volvement	13.00	2.88	7-18	20
Limit Setting	30.91	4.67	20-37	40
Responsive- ness	29.30	3.93	19-35	35
Reasoning Guidance	28.61	4.19	16-35	35
Intimacy	28.71	3.23	21-34	35
Free Expres- sion	7.55	2.09	3-13	15

N=33

IPBI subscales, suggesting that mothers involvement with their daughters, setting of limits, responsiveness, use of reasoning guidance, intimacy, and free expression are not related to her perception of her husband's expression of regard for her. Significant correlations were not found between the mother's report of her spouse's empathy and congruence and the mother's self-reported parental behaviors measured by the IPBI. Therefore, the first hypothesis was not supported in regard to mother's view of her husband's regard, empathy and congruence and its relationship to mother's parent behavior.

Correlation coefficients were computed for the father's responses to the three subscales of the Barrett-Lennard and the mother's responses to the IPBI in order to examine the relationship between the mother's regard, empathy and congruence as reported by the father and the mother's parental behavior as reported by herself. The correlations presented in Table 4 for mother's regard, empathy and congruence as reported by the father do not show significant correlations with any of the mother's IPBI subscales indicating that mothers self-reported parent of behavior is not statistically related to her spousal behavior as reported by her husband.

Spousal Relationship and Father's Parental Behavior

Correlation coefficients were computed for the father's responses to the three subscales of the Barrett-Lennard and the father's responses to the IPBI in order to learn whether or not the father's view of the mother's expression of regard empathy and congruence was related to his report of his own parenting behavior. It is important to note that the father's responses to the Barrett-Lennard reflect the way in which the mother behaves toward him. For example, the father would respond to: "My spouse cares for me."

The correlations between mother's spousal behavior and father's parent behavior are all positive and three significant correlations were found (see Table 5). First, mother's regard as reported by the father was positively and significantly correlated with the father's limit setting behavior, suggesting that fathers whose wives express their regard for the father, are likely to be more involved in setting limits for their daughters than fathers whose wives are not seen as expressing regard for their husbands. Second, a significant positive correlation was found between mother's empathy as reported by the father and the father's parental involvement with his daughter, indicating that fathers whose wives were perceived to be empathic are more likely to be involved with their daughters than fathers whose wives

TABLE 4
Correlation Coefficients for Mother's Parent Behavior
and Mother's and Father's Spousal Relationship

BARRETT-LENNARD						
Mother's IPBI	Regard		Empathy		Congruence	
	M ¹	F	M	F	M	F
Parental Involvement	.11	.10	.29	.26	.02	.15
Limit Setting	.02	.10	.05	-.08	-.10	.10
Reasoning Guidance	-.03	—	.08	-.02	.00	.31
Responsiveness	.01	.21	.18	.20	-.06	.32
Intimacy	.03	-.13	.14	.04	.16	.08
Free Expression	-.05	.07	-.08	.01	-.00	-.03

N=33

1 Note:

M=Mother's response, reflecting father's spousal behavior.
F=Father's response, reflecting mother's spousal behavior.

TABLE 5
Correlation Coefficients for Father's Parent Behavior
and Mother's and Father's Spousal Relationship

BARRETT-LENNARD						
Father's IPBI	Regard		Empathy		Congruence	
	M ¹	F	M	F	M	F
Parental Involvement	.16	.20	.34*	.50*	.23	.13
Limit Setting	.19	.36*	.26	.28	.21	.33 ¹
Reasoning Guidance	.18	.26	.40**	.39*	.31 ¹	.19
Responsiveness	.15	.06	.25	.18	.20	.05
Intimacy	.42*	.27	.51**	.20	.38*	.31 ¹

* $p < .05$, two-tailed test

** $p < .01$, two-tailed test

N=33

are not seen as empathic. Third, mother's empathy, as reported by the father, was positively and significantly correlated with the father's reasoning guidance. This finding suggests that fathers whose wives are seen as empathic are more likely to report providing guidance through reasoning than fathers whose wives are not seen by them as empathic. Finally, mother's congruence, as reported by the father, was positively correlated with each father IPBI subscale, but, none of the correlations were significant at the $p < .05$ level, suggesting that fathers whose wives do not relate to them in a congruent way, may still be likely to interact with their daughters in a positive manner suggested by the self reported parent behaviors of the IPBI.

Correlation coefficients were also computed for the mother's responses on the three Barrett-Lennard subscales and the father's responses to the IPBI to examine the relationship between the father's spousal behavior as reported by his wife and the father's parental behavior as reported by himself. Father's regard was positively correlated with the parent behavior intimacy (see Table 5). This correlation suggests that fathers who show regard toward their wives are also intimate in their relationship with their daughters as parents. Father's empathy as reported by the mother was positively correlated with parental involvement, thus, it would seem that fathers who are empathic in their spousal relationships are also involved with their daughters. Empathy was also positively correlated with reasoning guidance, therefore, it would seem that fathers who are empathic in their relationships as spouses also interact with their daughters by means of reasoning guidance. The positive correlation between empathy and intimacy was also significant giving evidence to support the interpretation that fathers who are empathic in their relationship with their wives are also intimate with their daughters. Finally, father's congruence as reported by the mother was positively and significantly correlated with the father's intimacy with his daughter, indicating that the fathers who are congruent in their spousal relationship are likely to be higher on the intimacy parental behavior scale. These results for families with 4 and 5 year old daughters show the hypothesized association between the spousal relationship and fathers' parent behaviors, but not between the spousal relationship and mothers' parent behavior.

Spousal regard, empathy and congruence is apparently not related to mothers' parental involvement, limit setting, reasoning guidance, responsiveness, intimacy or free expression, however, fathers' spousal regard was re-

lated to their parental intimacy; spousal empathy was related to parental involvement, reasoning guidance and intimacy; and, spousal congruence was related to parental intimacy. In addition some of the mothers' spousal factors were related to fathers' parental behaviors. Therefore, evidence supporting the first hypothesis was found for spousal behavior and father's parental behavior, although limited, and in regard to spousal behavior and mothers' parental behavior, evidence to support the hypothesis was not found. The hypothesis that spousal regard, empathy and congruence are related to parental behaviors gains limited support for fathers but not for mothers. Finally, it is important to note that partial correlations were computed, controlling for a possible bias associated with marital conventionalization in order to estimate the validity of responses to the self-report measures used in this study (see Table 6). By comparing Tables 4 and 5 with Table 6, it is apparent that the spousal relationship-parent behavior hypothesis maintains limited support for fathers but not for mothers.

CHILD MEASURES - PARENT BEHAVIOR

Peabody Picture Vocabulary Test-Revised (1981) raw scores were converted to Standard Equivalents using the conversion tables from the revised PPVT to yield measures of verbal intelligence. The children averaged 111.5 (SD=13.4) and their scores ranged from 89 to 142. The sample mean represents an above average PPVT-R score, however, the scores are not unusually high for this sample considering the SES level of the parents and the overall high level of parental education.

Animal Crackers: A Test of Motivation to Achieve, was administered and a total score was obtained for each child by summing the subscales. ANCR total scores ranged from 30 to 58 and the sample mean was 44.5 (SD=8.1). These values are comparable to figures obtained by Adkins & Ballif (1973) with a sample of 624 kindergarten children.

Parent Behavior and Child Functioning

Correlation coefficients were computed for both the father's and mother's scores on each IPBI subscale and ANCR scores and PPVT-R scores. These computations were performed, first, to test for a relationship between the specific parental behaviors and the child measures since these measures differed from instruments used in research cited in the literature review.

TABLE 6

Partial Correlations for Father's and Mother's
Parent Behavior and Spousal Relationship
Controlling for Marital Conventionalization

Father's IPBI	Regard		Empathy		Congruence	
	M ¹	F ²	M	F	M	F
Parental Involvement	-.00	.08	.25	.53**	.12	.06
Limit Setting	.21	.34	.30	.24	.23	.29
Reasoning Guidance	.18	.21	.52**	.40*	.35 ¹	.15
Responsiveness	.22	.06	.38*	.20	.30	.02
Intimacy	.36 ¹	.15	.47**	.08	.30	.21
<u>Mother's IPBI</u>						
Parental Involvement	-.07	.13	.19	.34	-.16	.14
Limit Setting	.10	.17	.16	-.06	-.07	.11
Reasoning Guidance	-.12	.00	.08	-.00	.08	.29
Responsiveness	-.12	.09	.13	.04	.13	.27
Intimacy	-.13	-.20	.07	.03	.07	.01
Free Expression	-.07	-.06	-.11	.19	-.11	-.07

* $p < .05$, two tailed test

** $p < .01$, two tailed test

*** $p < .001$, two tailed test

¹Controlling for Mother's Marital Conventionalization (df=25)

²Controlling for Father's Marital Conventionalization (df=26)

Second, these computations were made in order to determine if the parental behaviors which correlated with regard, empathy and congruence were related to child measures. Finally, previous studies indicated a tendency for father's parental behavior to be related to girls' achievement motivation and the mother's parental behavior to be related to girls' cognitive performance, in this study defined by verbal intelligence (PPVT-R).

The correlations between father's parental involvement, limit setting, intimacy, responsiveness and reasoning guidance and both ANCR and PPVT-R are provided in Table 7. There were no significant correlations between any IPBI subscale and either PPVT-R or ANCR scores. These results suggest that neither the daughter's verbal intelligence nor achievement motivation was associated with their father's reported parental behavior.

The correlations between mother's parental involvement, limit setting, intimacy, responsiveness, reasoning guidance and free expression and both ANCR and PPVT-R are in Table 7. There were no significant correlations found between mother's parental behavior as measured by the IPBI and either achievement motivation as measured by ANCR or verbal intelligence as measured by the PPVT-R. Therefore, the hypothesis concerning parental behavior and child functioning was not supported by the results of the statistical analysis of the data collected.

Achievement Motivation and Verbal Intelligence

ANCR scores and PPVT-R scores were analyzed to determine the relationship of these two specific child measures. Achievement motivation as measured by ANCR was positively correlated with verbal intelligence as measured by the PPVT-R ($r=.48$, $P.05$), therefore, children who have high achievement motivation scores also have high verbal intelligence scores.

Other Factors

The absence of significant correlations between parental behavior and achievement motivation or verbal intelligence was surprising and precluded an exploratory description of family interaction patterns involving both parents and their daughter. Furthermore, the child measures were not significantly correlated with regard, empathy and congruence for either parent (see Table 8), and there was no alternative linkage between parent measures as far as the study's major factors were concerned. Daughters' scores on the PPVT-R, however, were significantly correlated with mothers' education level ($r=.38$, $p < .05$) indicating that mothers who were well edu-

TABLE 7
Correlation Coefficients for Mother's
And Father's IPBI And PPVT-R And ANCR

IPBI	PPVT-R	ANCR
<u>Father</u>		
Parental Involvement	.11	-.18
Limit Setting	-.22	.02
Reasoning Guidance	.16	.21
Responsiveness	-.06	-.22
Intimacy	-.11	-.06
<u>Mother</u>		
Parental Involvement	.20	.24
Limit Setting	-.22	.20
Reasoning Guidance	-.17	.14
Responsiveness	.13	.15
Intimacy	.08	.09
Free Expression	-.18	.02

N=33

TABLE 8

Correlation Coefficients For Mother's
And Father's Barrett-Lennard And
PPVT-R And ANCR

<u>Barrett-Lennard</u>	<u>PPVT-R</u>	<u>ANCR</u>
<u>Father</u>		
Regard	.01	.12
Empathy	.14	.12
Congruence	-.19	.04
<u>Mother</u>		
Regard	-.02	.11
Empathy	.20	.29
Congruence	.18	.26

N=33

cated had daughters who had high scores on the verbal intelligence measure. Also, ANCR scores were significantly correlated with mothers' occupation...($r=.39$, $p < .05$). For mothers, occupation was collapsed into two groups, employed ($n=14$) and full-time homemakers ($n=19$). The mean ANCR score for the employed group was 41.4 and for fulltime homemakers the mean ANCR score was 46.8 and the post-hoc one-way analysis of variance revealed a significant employment effect ($F(32) = 3.9$, $p < .05$). These results suggest that mothers who were full-time homemakers had daughters who were more motivated to achieve than daughters whose mothers were employed either part-time or full-time. This evidence is significant in that it suggests a relationship between parent factors and achievement motivation and verbal intelligence, but, because no parental behaviors were related to either child measure, the mechanism for the relationship between mother's education level and primary occupation and verbal intelligence and achievement motivation is unclear. Finally, these results highlight the concern that the lack of significant correlations between parent measures (IPBI) and child measures may be a question of the discriminative validity of IPBI for an upper SES sample. This concern is addressed in the discussion.

DISCUSSION

Traditionally, fathers are viewed as peripheral members of a nuclear family especially in regard to parent-child interaction. The mother has long been regarded by researchers and the culture in general to be the appropriate person to be responsible for parenting. Recently an awareness of the family as a unit or system of individual members functioning in a family group has highlighted the importance of the father's role in relationship to his children (Lamb, 1976; Kotelchuck, 1972). One main focus has been the father's association with the mother and how that possibly affects the mothers parenting (Belsky, 1979). In the present study this effect was represented by the relationship between the father's regard, empathy and congruence as viewed by the mother and the mother's parental involvement, limit setting, responsiveness, reasoning guidance, intimacy and free expression. Correlations were expected to be high for this relationship, but, instead they were non-existent, however, the mother's regard and empathy as reported by the father was correlated with father's reasoning guidance, limit setting, and parental involvement. These results seem significant when considering the suggestion made by Belsky (1979) that the father's

parental behavior was apparently affected more by the mother's spousal behavior than vice versa. Therefore, before issues concerning procedure and future research are presented, tentative explanations for the results concerning the relationship between spousal regard, empathy and congruence and parental behavior will be presented.

Culturally, women have been expected to act as primary care-givers for their children and have generally accepted that role. Their models for such behavior have traditionally been females since this cultural norm has been intact for several generations. Therefore, it might be expected that mothers in nuclear families represented by the sample in the present study view parenting as a necessary part of their role in the family which is not dependent on the husband's attitudes about her or parenting since he may be viewed as peripheral and unskilled as far as parenting is concerned. Husbands, for example, might not be considered to be significant resources for advice about parenting whereas a female relative might be considered a significant resource in regard to parenting.

Fathers perhaps view themselves as inferior in parenting to the mother because of their lack of training as physical and emotional care-givers. Therefore, their position in the family might well be more peripheral and their main contribution may be made by providing for the family through activities that occur outside of the family system such as career. As more mothers, however, begin to take on new responsibilities outside of the family system, fathers are faced with new parenting responsibilities. Perhaps, since the father views the mother as a superior care-giver or parent, his own attempts at parental involvement are subject to his wives' confirmation. Those fathers who are able to affectively set limits for example are those whose wives regard them highly. Also, a father who becomes parentally involved and shows more intimacy with his daughter can do so perhaps because his wife understands (empathy) his parenting deficiencies and can provide the necessary instruction in a way that still expresses regard for the husband. Also, the father might need the mother's empathy and regard especially in regard to learning how to be involved with his daughter since sex-role stereotyping generally does not allow a boy's participation in activities generally accepted as feminine. The father's reference point for parental involvement is likely to be his own experience

as a boy. Taking these speculations into consideration, researchers might benefit from concentrating on the father's role as a parent of his daughter and its relationship to the mother's interaction with the father along various dimensions of spousal interaction which are considered to be indicative of a supportive relationship. Also, a study of this sort might be more beneficial if it included sons. This would provide information about the affect of sex differences and sex-role stereotyping for the mothers and fathers.

Procedural considerations which may account for the lack of broad support for the hypotheses include the non-clinical nature of the sample. A family would be considered clinical if they had sought professional services for the purposes of coping with family interactions or individual child behaviors which interfered with the normal healthy functioning of the family system. This factor is mentioned because it provides a possible explanation for the lack of strong relationships between regard, empathy and congruence and parental behavior. Often in the clinical population from which support for the hypotheses was drawn, the lack of emotional expression or perhaps the inability of spouses to resolve conflict (to name only two possible dysfunctional interaction patterns) are expressed indirectly through the parent-child relationship and become apparent through overt misbehavior of the child or a parent's complaint about the child's behavior. One characteristic of healthy families, however, is clear boundary maintenance between spousal issues and parenting issues. Couples who deal with spousal issues effectively between themselves are less likely to introject unresolved feelings into their relationship with the child. The lack of correlations, then might be an expression of these adults' ability to differentiate between the spousal role and the parenting role. This speculation is strengthened by the fact that generally the parents in the sample were satisfied with their marriage and scored moderate to high on the IPBI, indicating active, well adjusted parenting. This issue might well be addressed in future research by involving families representing both the clinical and non-clinical populations. Also, in regard to the sample, the number of subjects is considered to be a limitation since self-report measures were used and many variables were included in the analysis. The sample was restricted in regard to SES because it consisted almost entirely of middle class and upper-class families. This factor may have limited the range of

scores obtained especially from the IPBI. Findings might also have been confounded by the fact that some of the girls were in kindergarten and some were in preschool. Future research might be more productive if the sample is composed of children of the same age group or if the sample is composed of enough children in different educational groups to allow for comparative data analysis.

Other procedural considerations which might have influenced the results involve the instruments used. Perhaps the results were influenced by the fact that the IPBI is a newly developed instrument and its test-retest reliability and validity have not been established. Also, the extent to which it correlates with other measures of parental behavior has not been analyzed, therefore, the case for the validity of this measure is not strong. Results may have been influenced by the fact that the parental behaviors measured were not defined in the same way as those tested in previous studies. In order to substantiate findings reported by Epstein & Radin (1975) or Hurley (1965) the specific observational behavioral categories which they used would need to be used. So, even though the subscales would appear to be indicative of pertinent parental behaviors, they may not tap the same dimensions as assessed by Hurley (1965).

Epstein & Radin (1975) defined motivation in terms of the Stanford Binet Face Sheet which is an evaluation of the child's performance as he/she completes the tasks in the Stanford Binet I.Q. test. ANCR, however, defines "achievement motivation" in terms of the child's answers to questions concerning performance in specific situations such as watching the teacher write on the board, finishing a book or showing art projects to other children. So, the difference in the way motivation was operationally defined may have been a factor influencing the results.

Finally, the Barrett-Lennard (short form) has been used in previous research but, test-retest reliability has not been determined. The instrument has a positively biased response set and such a response set facilitates unrealistically high scores. So, when considering findings presented in this study, the question of validity is an important one to consider, even though the instruments in question do have face validity. Future researchers using these instruments (IPBI, or Barrett-Lennard) should consider including an analysis designed to test the validity of these instruments, or utilize observational methods.

SUMMARY

Father's parental involvement, reasoning guidance and limit setting were related to mother's regard and empathy as reported by the father. Father's parental involvement, reasoning and intimacy were also related to the father's regard and empathy as reported by the mother. Mother's parental behavior was not related to father's regard and empathy or congruence nor to her regard, empathy or congruence as reported by the father. These findings suggest that fathers who are involved parents are understanding of their wives and perhaps respond to their wives' understanding and regard of them. Achievement motivation was correlated with verbal intelligence. Maternal employment was inversely associated with their daughters' achievement motivation and maternal education was positively correlated verbal intelligence. Parental behavior was not related to their daughters' achievement motivation or verbal intelligence. The lack of expected results are not accepted with a high level of confidence because of findings presented in previous research and procedural and validity weaknesses. Considerations for future research include, concentration on the father's parenting role as related to the mother's supportive behavior, sex differences, sex role stereotyping and the use of clinical and non-clinical subjects in a larger sample. Future researchers must also consider more closely the discriminative validity of the instruments used in this study.

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APPENDIX
(Parent Questionnaire)

MOTHER FORM

These questionnaires have been developed to gain information about you and what you do in your family both as spouse and parent. The first section includes general information questions. The next section concerns your parental behavior in regard to your preschool age daughter. When you answer these questions, have your daughter in mind. To aid you in this, place your daughter's name at the top of the first page of this section. The third section contains questions about your marital relationship. Please complete all three sections without comparing answers with your spouse. Comparing answers might cause you to change your responses and I want to know how you feel. Finally, please keep the questionnaires until I visit your home.

Thank you for your participation. This research depends heavily on your cooperation.

I have read the cover letter and have been fully advised of the procedures to be used in this project. I voluntarily agree to complete these procedures and also agree to allow my daughter's participation.

Date _____

Child's name _____

Signed _____ (Mother)

I would like to receive a summary of the results of this study.

☐ Yes

☐ No

FATHER FORM

These questionnaires have been developed to gain information about you and what you do in your family both as spouse and parent. The first section includes general information questions. The next section concerns your parental behavior in regard to your preschool age daughter. When you answer these questions, have your daughter in mind. To aid you in this, place your daughter's name at the top of the first page of this section. The third section contains questions about your marital relationship. Please complete all three sections without comparing answers with your spouse. Comparing answers might cause you to change your responses and I want to know how you feel. Finally, please keep the questionnaires until I visit your home.

Thank you for your participation. This research depends heavily on your cooperation.

I have read the cover letter and have been fully advised of the procedures to be used in this project. I voluntarily agree to complete these procedures and also agree to allow my daughter's participation.

Date _____

Child's name _____

Signed _____ (Father)

General Information

1. Your age: _____ years
2. Length of present marriage: _____ years
3. Number of children you have in each age group. (If none, write "0")

Number of Children

_____ Under 5 years of age
_____ 5 to 12
_____ 13 to 18
_____ 19 to 24
_____ 25 and over

4. Your employment status: (Please circle number)

1 Employed Full-time
2 Employed Part-time
3 Unemployed
4 Full-time Homeworker
5 Retired

5. Your primary occupation: _____

6. Sex: 1 Female
2 Male

7. Your current marital status: (Please circle number)

1 Living together, not married
2 Married
3 Separated

8. Have you been married previously? (Please circle number)

1 Yes How many times? _____
2 No

9. Which is the highest level of education that you have completed?

(Please circle number of years)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

(8 = Grade School, 12 = High School, 16 = BA/BS, 18 = MA/MS, 22 = Ph.D/EdD)

10. What was your approximate net family income from all sources, before taxes in 1979? (Please circle number)

1 LESS THAN 5,000

2 5,000 to 9,999

3 10,000 to 14,999

4 15,000 to 19,999

5 20,000 to 24,999

6 25,000 to 29,999

7 30,000 to 39,999

8 40,000 to 49,999

9 OVER 50,000

Please continue and answer the questions on the next three pages with your preschool age daughter in mind.

IOWA PARENT BEHAVIOR INVENTORY (MOTHER FORM)

CHILD'S NAME _____

We are interested in learning more about how parents and children interact. The following statements represent a variety of ways that parents may interact with their children. Before you begin, have firmly in mind the child you are rating. Please respond to the statements in the way which you feel best represents your behavior toward the child. Base your ratings on your own experiences with this child over the last month.

Consider each statement separately. There are no "right" or "wrong" responses. In the space provided to the left of each statement, place the number (1 to 5) that best describes how you see your behavior toward your child. Respond "5" if you think you always behave as described and "1" if you think you never behave that way. Use numbers larger than "3" to show you behave that way more than half the time, and numbers smaller than "3" to show you behave that way less than half the time. This means the more you behave as described, the larger the numbers should be, and the less you behave as described, the smaller the numbers should be.

If you are uncertain you behave that way, your response should be "3". If an item does not apply to your home situation, place a "3" in the rating column. Please make use of the full range of the scale.

I almost never behave this way	I seldom behave this way	I behave this way about half the time or I'm not sure how often I behave this way	I often behave this way	I almost always behave this way
--------------------------------------	--------------------------------	--	-------------------------------	---------------------------------------

1	2	3	4	5
---	---	---	---	---

TO WHAT EXTENT DO YOU

- | Rating | Item |
|--------|--|
| ___ 1. | Excuse yourself from invited guests when your child asks for help with such things as pasting, sewing or model building? |
| ___ 2. | Require your child to remain seated in the car while you are driving? |
| ___ 3. | Give your child things he or she especially likes when he or she is ill? |
| ___ 4. | Go to your child quickly when you see his or her feelings are hurt? |
| ___ 5. | Find children's books, reference books or records that you and your child can share together? |
| ___ 6. | Explain to your child the consequences related to his or her behavior? |

I almost
never behave
this way

I seldom
behave
this way

I behave this
way about half
the time or I'm
not sure how often
I behave this way

I often
behave
this way

I almost
always
behave
this way

1

2

3

4

5

TO WHAT EXTENT DO YOU

Rating

Item

- ___ 7. Restrict the times your child can have friends over to play?
- ___ 8. Find crafts such as painting, coloring, woodworking, or needlework you and your child can do together on cold, rainy days?
- ___ 9. Listen when your child tells you of a disagreement he or she has had with another child?
- ___ 10. Interrupt a telephone conversation to assist your child if he or she can't find such things as scissors, thread or paste?
- ___ 11. Require your child to put away his or her clothes?
- ___ 12. Enforce your child's established bedtimes when he or she ignores them?
- ___ 13. Restrict the kinds of food your child eats?
- ___ 14. Listen to your child when he or she is upset even though you feel he or she has nothing to be upset about?
- ___ 15. Tell your spouse of your annoyance with a neighbor or employer while your child is listening?
- ___ 16. Insist your child speak politely to you as opposed to being sassy?
- ___ 17. Remind your child when he or she forgets to do daily household chores?
- ___ 18. Explain to your child, when he or she behaves in an unacceptable behavior, your reasons for not approving that kind of behavior?
- ___ 19. Hold, pat, or hug your child?
- ___ 20. Point out to your child the acceptable choices of behavior when he or she misbehaves?
- ___ 21. Maintain the limits you have set for your child's television watching?
- ___ 22. Change plans to attend a night meeting so you can be with your child if he or she becomes ill?
- ___ 23. Go immediately to your child when you see him or her hurt from a fall off a bicycle?

I almost
never behave
this way

I seldom
behave
this way

I behave this
way about half
the time or I'm
not sure how often
I behave this way

I often
behave
this way

I almost
always
behave
this way

1 2 3 4 5

TO WHAT EXTENT DO YOU

Rating

Item

- ___24. Disagree with your spouse when your child is present?
- ___25. Ask your child for his or her reasons when he or she misbehaves?
- ___26. Go to your child quickly when you hear him or her sobbing?
- ___27. Get out of bed at night to go to your child as soon as you hear him or her crying?
- ___28. Let your child know that you are afraid during fear-provoking situations such as storms?
- ___29. Make special efforts to stay with your child when he or she is ill?
- ___30. Hug or kiss your spouse in the presence of your child?
- ___31. Help your child to recognize another person's point of view?
- ___32. Take your child with you when you visit friends?
- ___33. Tell your child when you are in agreement with him or her?
- ___34. Cry if you feel like crying when your child is present?
- ___35. Work together with your child on household and yard cleaning tasks?
- ___36. Hold, pat, and/or hug your child when other children are watching?

Please continue and answer the questions on the next two pages with your marital relationship in mind. Please do not compare your answers with those of your spouse.

IOWA PARENT BEHAVIOR INVENTORY (FATHER FORM)

CHILD'S NAME _____

We are interested in learning more about how parents and children interact. The following statements represent a variety of ways that parents may interact with their children. Before you begin, have firmly in mind the child you are rating. Please respond to the statements in the way which you feel best represents your behavior toward the child. Base your ratings on your own experiences with this child over the last month.

Consider each statement separately. There are no "right" or "wrong" responses. In the space provided to the left of each statement, place the number (1 to 5) that best describes how you see your behavior toward your child. Respond "5" if you think you always behave as described and "1" if you think you never behave that way. Use numbers larger than "3" to show you behave that way more than half the time, and numbers smaller than "3" to show you behave that way less than half the time. This means the more you behave as described, the larger the numbers should be, and the less you behave as described, the smaller the numbers should be.

If you are uncertain you behave that way, your response should be "3". If an item does not apply to your home situation, place a "3" in the rating column. Please make use of the full range of the scale.

I almost never behave this way	I seldom behave this way	I behave this way about half the time or I'm not sure how often I behave this way	I often behave this way	I almost always behave this way
--------------------------------------	--------------------------------	--	-------------------------------	---------------------------------------

1	2	3	4	5
---	---	---	---	---

TO WHAT EXTENT DO YOU

Rating	Item
___ 1.	Require your child to remain seated in the car while you are driving?
___ 2.	Give your child things he or she especially likes when he or she is ill?
___ 3.	Go to your child quickly when you see his or her feelings are hurt?

I almost
never behave
this way

I seldom
behave
this way

I behave this
way about half
the time or I'm
not sure how often
I behave this way

I often
behave
this way

I almost
always
behave
this way

1 2 3 4 5

TO WHAT EXTENT DO YOU

Rating

Item

- ___ 4. Find children's books, reference books or records that you and your child can share together?
- ___ 5. Suggest to your child outdoor games that you and he or she might play together?
- ___ 6. Explain to your child the consequences related to his or her behavior?
- ___ 7. Help your child select items that interest him or her at the store?
- ___ 8. Express your appreciation when your child carries his or her dishes to the sink?
- ___ 9. Enforce rules for your child concerning pushing or shoving of other children?
- ___ 10. Find crafts such as painting, coloring, woodworking or needlework you and your child can do together on cold, rainy days?
- ___ 11. Maintain the limits you set for your child's behavior in public places like basketball games, church, or grocery stores?
- ___ 12. Listen without interrupting when your child tells you reasons for his or her misbehavior?
- ___ 13. Require your child to put away his or her clothes?
- ___ 14. Enforce your child's established bedtimes when he or she ignores them?
- ___ 15. Listen to your child when he or she is upset even though you feel he or she has nothing to be upset about?
- ___ 16. Tell your child that you are unhappy when he or she tracks mud into the house?
- ___ 17. Participate with your child in storytelling and reading?
- ___ 18. Insist your child speak politely to you as opposed to being sassy?
- ___ 19. Have rules about the places your child can go alone?

I almost
never behave
this way

I seldom
behave
this way

I behave this way
about half the
time or I'm not
sure how often
I behave this way

I often
behave
this way

I almost
always
behave
this way

1

2

3

4

5

TO WHAT EXTENT DO YOU

Rating

Item

- ___20. Remind your child when he or she forgets to do daily household chores?
- ___21. Hold, pat or hug your child?
- ___22. Point out to your child the acceptable choices of behavior when he or she misbehaves?
- ___23. Talk with your child about his or her fears of the dark, of animals, or of school failures?
- ___24. Change plans to attend a night meeting so you can be with your child if he or she becomes ill?
- ___25. Go immediately to your child when you see him or her hurt from a fall off a bicycle?
- ___26. Ask your child for his or her reasons when he or she misbehaves?
- ___27. Go to your child quickly when you hear him or her sobbing?
- ___28. Ask your child for his or her opinion in family decisions?
- ___29. Get out of bed at night to go to your child as soon as you hear him or her crying?
- ___30. Make special efforts to stay with your child when he or she is ill?
- ___31. Hug or kiss your spouse in the presence of your child?
- ___32. Consider suggestions made by your child?
- ___33. Suggest to your child indoor games that you and he or she might play together?
- ___34. Tell your child why you are angry, irritable or impatient when he or she is not to blame?
- ___35. Help you child to recognize another person's point of view?
- ___36. Hold, pat and/or hug your child when other children are watching?

Please continue and answer the questions on the next two pages with your marital relationship in mind. Please do not compare your answers with those of your spouse.

RELATIONSHIP INVENTORY

Please indicate the extent to which you AGREE or DISAGREE with the following statements. (Circle your choices)

	Strongly Disagree	Disagree	Mixed	Agree	Strongly Agree
1. My spouse nearly always knows exactly what I mean.	SD	D	?	A	SA
2. I feel that my spouse is real and genuine with me.	SD	D	?	A	SA
3. My spouse expresses his/her true impressions and feelings with me.	SD	D	?	A	SA
4. My spouse respects me as a person.	SD	D	?	A	SA
5. My spouse usually senses or realizes what I am feeling.	SD	D	?	A	SA
6. My spouse feels a true liking for me.	SD	D	?	A	SA
7. My spouse cares for me.	SD	D	?	A	SA
8. My spouse usually understands the whole of what I mean.	SD	D	?	A	SA
9. My spouse is willing to express whatever is actually on his/her mind with me, including any feelings about himself/herself or about me.	SD	D	?	A	SA
10. My spouse realizes what I mean even when I have difficulty in saying it.	SD	D	?	A	SA
11. My spouse is friendly and warm with me.	SD	D	?	A	SA
12. There are times when I feel my spouse's outward response to me is quite different from the way he/she feels underneath.	SD	D	?	A	SA
13. My spouse is openly himself/herself in our relationship.	SD	D	?	A	SA
14. My spouse appreciates exactly how the things I experience feel to me.	SD	D	?	A	SA
15. My spouse feels deep affection for me.	SD	D	?	A	SA

The following items concern your opinion of your marriage and family life.
Please indicate your response to the questions by circling the number which
expresses your feelings.

	Extremely Dissatisfied	Very Dissatisfied	Somewhat Dissatisfied	Mixed	Somewhat Satisfied	Very Satisfied	Extremely Satisfied
1. How satisfied are you with your marriage?	1	2	3	4	5	6	7
2. How satisfied are you with your relationship with your spouse?	1	2	3	4	5	6	7
3. How satisfied are you with your husband/wife as a spouse?	1	2	3	4	5	6	7
4. How satisfied are you with your family life?	1	2	3	4	5	6	7
5. How satisfied are you as a parent?	1	2	3	4	5	6	7

SPOUSAL RELATIONSHIP AND PARENTAL BEHAVIOR AS
RELATED TO GIRL'S INTELLIGENCE AND MOTIVATION

by

THOMAS MICHAEL WHITSITT

B. A., Oklahoma Baptist University, 1978

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Family and Child Development

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1981

ABSTRACT

Spousal regard, empathy and congruence of the parents of 4 to 5 year old girls were hypothesized to affect their daughters' motivation to achieve and verbal intelligence. The parents completed questionnaires which included a measure of spousal regard, empathy, congruence and parental behavior as well as marital satisfaction and marital conventionalization questions. Their daughters were given a test of motivation to achieve and a test of verbal intelligence. The correlational analysis did not support the hypothesis that mother's self-reported parental behavior would be associated with her report of her husband's regard, empathy and congruence. Father's self-reported parental behavior was associated with his report of his wife's regard and empathy. The self-reported parental behavior of neither parent was related to either child measure. Partialing out marital conventionalization did not alter the results. The child's achievement motivation was significantly correlated with the child's verbal intelligence. The daughter's intelligence was positively correlated with mother's educational level and daughters of mothers who were full-time homemakers scored higher on the motivational measure than daughters of employed mothers. The lack of supportive evidence for the primary hypotheses is discussed.