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ASPECTS OF THE FATHER-CHILD RELATIONSHIP AND FATHER-AVAILABILITY DURING CHILDHOOD AND SEX-ROLE DEVELOPMENT AMONG COLLEGE STUDENTS FROM INTACT FAMILIES

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BY

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ABSTRACT

ASPECTS OF THE FATHER-CHILD RELATIONSHIP AND FATHER-AVAILABILITY DURING CHILDHOOD AND SEX-ROLE DEVELOPMENT AMONG COLLEGE STUDENTS FROM INTACT FAMILIES

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Six hypotheses were developed to test the effects of paternal nurturance and father-availability during childhood upon sex-role development among college students from intact families. First, college males having highly nurturant fathers during childhood were expected to have higher Masculinity scores than were college males with less nurturant fathers during childhood. Similarly, college females with highly nurturant fathers during childhood were expected to have higher Femininity scores than were college females with less nurturant fathers during childhood. Third, college males with highly nurturant and highly available fathers during childhood were expected to have higher Masculinity scores than were college males that had fathers with other combinations of nurturance and availability during childhood. Moreover, college females with highly nurturant and highly available fathers during childhood were expected to have higher Femininity scores than were college females that had fathers with other combinations

of nurturance and availability during childhood. Fifth, college males having less nurturant and highly available fathers during childhood were expected to have the lowest Masculinity scores among college males. Finally, college females having less nurturant and highly available fathers during childhood were expected to have the lowest Femininity scores among college females.

The subjects were sixty-eight males and seventy-two females that ranged from seventeen to twenty-three years of age and all of them were undergraduates at a large mid-western university. In order to control for a variety of variables that might affect the results, all of the participants were native American, White, first-born or only-children, middle or upper middle class, and resided with both of their natural parents from birth until age sixteen.

A retrospective method was used to ascertain the subjects' perceptions of their fathers' behavior and availability toward them as children and the instruments were several questionnaires. Siegelman and Roe's (1978) Parent-Child Relations Questionnaire II was used to assess the father-child relationship during childhood and the Love-Reject Factor score was used to measure the subjects' perceptions of paternal nurturance during childhood. Reuter and Biller's (1973) Paternal Availability Scale measured the subjects' perceptions of their fathers' availability during childhood. The Bem Sex-Role Inventory Scales

measured sex-role development. A Personal Background Questionnaire was administered to ascertain characteristics of the participants that might affect the results.

Several statistical procedures were followed. Two 2 x 2 analyses of variance were made. One analysis was for males Masculinity scores and the other analysis was for females Femininity scores. Post-hoc analyses were performed for some of the hypotheses. Additional analyses included several correlational analyses and analyses of variance for some other dependent measures of sex-role development.

The results of the statistical tests supported four of the six hypotheses. The findings indicated that both paternal nurturance and paternal availability during childhood were important for sex-role development among college students from intact families. Fathers that were both highly nurturant and highly available to their children druing childhood were more effective in facilitating sex-role development among their children as adults, than were fathers that were less nurturant and either highly available or less available to their children during childhood. Fathers that were both less nurturant and highly available to their children during childhood had negative effects upon the sex-role development of their children as adults.

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CHAPTER I

INTRODUCTION TO THE STUDY

There has been an increasing amount of scholarly inquiry on sex-role development. According to the literature, the masculine sex-role is usually characterized by instrumental or goal-oriented behaviors such as aggression, assertiveness, leadership, and self-reliance while the feminine sex-role is usually characterized by expressive behaviors such as being pleasing, solicitous, and understanding (Johnson, 1963). The literature indicates that sex-role development begins early in life, usually before age three (Brown, 1958; Kagan, 1958b; Maccoby and Jacklin, 1974).

A great deal of the literature on sex-role development has concentrated on the effects of the father. Generally, the literature states that the father plays a very important role in the development of children's sex-roles. According to a number of theorists, the father facilitates sex-role development by rewarding his male children for behaving in a masculine way and by rewarding

his female children for behaving in a feminine way (Cottrell, 1942; Parsons, 1955, 1958; Johnson, 1963). The father that rewards, encourages, and praises his children is called nurturant and the non-nurturant father is usually detached, cold, and discouraging of his children.

While the position of the role theorists has been supported by empirical studies, there has also been a substantial amount of research on the effects of father-absence upon sex-role development. Most of the research considers the effects of father-absence upon male sex-role development. There has also been some research on the effects of father-absence upon female sex-role development. These studies indicate that father-absence has an adverse effect upon male and female sex-role development. Moreover, the research indicates that father-absence in early childhood has a greater, adverse effect upon sex-role development than does father-absence during later life (Biller, 1970, 1974, 1976; Lynn, 1974).

There was a need for research that considered the combined effects of paternal nurturance and paternal availability during childhood upon sex-role development among adolescents and young adults from intact families. There was, in addition, a need to study the stability of the effects of the father upon sex-role development. This study considered the effects of combinations of paternal

nurturance and paternal availability during childhood upon sex-role development among college students from intact families.

REVIEW OF THE LITERATURE

Theories of Sex-role Development

The research on sex-role development has been stimulated by a variety of theories. The psychoanalytic, learning, social learning, and role theories consider sex-role development.

Freud has been a major proponent of the psychoanalytic point of view. According to Freud, the three to five year old boy desires to have an exclusive relationship with his mother, and, at the same time, fears his father as an aggressive competitor for maternal affection. The boy also fears castration. In order to attain a masculine identification, the boy must identify with his aggressive father and repress his desire for his mother. For Freud, the young girl initially rejects her mother and desires her father. Freud suggests that the daughter fears maternal rejection or loss of love from the mother and, thereafter, identifies with the mother. The girl's fear of loss of love is not as strong as the boy's fear of castration, and the girl does not completely identify with

the mother, nor does she completely resolve the oedipal complex (Biller, 1974).

Several authors have extended Freud's theory of identification. Whiting (1959, 1960), suggested a status envy theory. According to Whiting, a masculine identification in boys will result if the boy perceives that the father has access to more priviledges, attractive objects, and activities than does the mother. Leonard (1966) indicated that the girl must establish "a desexualized object relationship with the father" in order to accept a feminine role without guilt or anxiety. Leonard also suggested that paternal rejection may retard the development of a feminine identification.

The learning theorists have also presented a theory of the development of identification. Mowrer (1950) presented some Freudian concepts in terms of learning theory. Mowrer suggests that there are two types of identification. Defensive identification is similar to Freud's identification with the aggressor. Developmental identification is similar to Freud's anaclytic identification and is an attempt to imitate the beloved parent. Mowrer empahsizes the importance of parental nurturance in rewarding the child's sex appropriate behaviors. The child becomes dependent upon parents for supplying nurturance and learns to perform the behaviors that the parents reward. Thus,

parents can facilitate masculine behavior in boys and feminine behavior in girls by rewarding those behaviors. In addition, Mowrer suggests that early parental nurturance toward children is important for sex appropriate identification. A similar position was presented by Sears (1957).

While the social learning theorists' position is also based upon the premise that sex-roles are learned, these theorists emphasize that learning often takes place vicariously (Bandura & Walters, 1963; Mussen & Distler, 1959). That is, an individual observes the behavior of a model and learns to imitate that model without necessarily receiving reinforcement. In the case of sex-role learning, the child usually has male and female models available to him. Usually, while the most available models are the father and the mother, other individuals can serve as models. Thus, the child can imitate either the masculine or the feminine behaviors that he observes. Whether the child demonstrates masculine or feminine behavior depends upon which behaviors are rewarded and which behaviors are punished. While the boy will develop a masculine sex-role only if he is rewarded for demonstrating masculine behavior and punished for demonstrating feminine behavior, a girl will develop a feminine sex role only if she is rewarded for demonstrating feminine behaviors and

punished for demonstrating masculine behavior. While the parents are the most frequent administrators of reward and punishment, other individuals may dispense reward and punishment that affect sex role development.

Perhaps the most integrative approach is presented by the role theorists (Cottrell, 1942; Parsons, 1958). According to these theorists, the child's behavior is not necessarily identical to the parent with whom he identifies. Rather, it is a result of reciprocal role relationships of the child and the parent. Reciprocal roles differ for male and female children. According to Parsons (1955, 1958) and Johnson (1963), the father provides differential reinforcements in these relationships as a function of the sex of the child. While the father rewards the male children for demonstrating masculine behavior, he rewards female children for demonstrating feminine behavior. According to these authors, masculine behaviors included aggression, dominance, a preference for quantitative and mechanical tasks, self-reliance, assertiveness, and leadership. Feminine behaviors included being solicitous, affectionate, appealing, understanding, pleasing toward others, and submissive. The paternally administered differential reinforcements are responsible for sex-role learning in children.

Althouth the role theorists have stressed the role of the father as the primary transmitter of conceptions of

masculinity and femininity, they have not neglected the role of the mother. Johnson (1963) suggests that fathers and mothers differ in their relationships with their children and she states that while fathers reward their sons and daughters for masculine and feminine behaviors, respectively, mothers are generally rewarding and encouraging toward their children. Moreover, Johnson suggests that while mothers can facilitate their children's sex-role development by communicating positive feelings about their husbands to their children, the mothers can inhibit the effects of the fathers by communicating negative feelings about their husbands to their children.

The research will be considered as follows. First, there will be a discussion of the research on parental attitudes toward children's behavior. This is followed by a presentation and discussion of the research on the parent-child relationship and the degree of masculinity in males and the degree of femininity in females. Third, there will be a discussion of the literature on the relationship of identification with the father, adjustment of the child, and sex-role development of the child. Finally, there will be a discussion of the research on father absence.

Parental Attitudes Toward Children

Two major studies considered parental attitudes toward young children's behavior. Goodeneough (1957) studied parents' attitudes toward their male and female children. Interviews were used to assess mothers and fathers attitudes toward their children's behavior. The findings indicated that the fathers were more interested than were the mothers in facilitating appropriate sex-role development in their children. Fathers considered sex typed behaviors as a major difference between the sexes. (Sex typed behaviors are those behaviors that are socially acceptable for one's sex. A sex typed individual is simultaneously motivated to keep his behavior consistent with a standard that reflects social desirability and suppress any behavior that might be considered undesirable for an individual of his gender.) Fathers expressed restraint in showing affection for their sons while mothers indicated that they showed affection for both their sons and daughters. Fathers, moreover, were more concerned than were the mothers about masculinity in their sons. Similar findings were reported by Sears, Maccoby and Levin (1957). The later study used interviews of mothers of young children and reported that mothers expressed little to moderate concern over the masculinity of their sons. Sears et al, reported that mothers disliked

the idea of treating boys and girls differently. The study also suggested socioeconomic status differences. Working class mothers expressed more severity and less permissiveness in their child-rearing practices. Middle class mothers expressed more warmth than working class mothers toward their young children. In contrast, working class mothers were more critical of their husbands than were the middle class mothers.

Three additional studies considered fathers attitudes toward children of various ages and found that fathers' attitudes toward their male and female children differ as a function of the sex of the child. Tasch (1952) interviewed urban, middle-class fathers in the New York City area. While the fathers were between thirty and fifty years of age, their children ranged in age from infancy through adolescence. Several findings were reported. First, fathers indicated a preference for participating in the daily personal care of their daughters more than in the daily care of their sons. Second, the fathers indicated a preference for participating more often in the motor activities with boys than with girls from early childhood through adolescence. Third, the fathers reported assigning different chores to boys and girls as a function of gender. Girls were asked to iron and care for younger siblings. Boys were asked to remove garbage and help

their fathers with his work. Adolescent boys were often encouraged to find employment. Related findings were reported by Aberle and Naegele (1952). The latter authors interviewed middle class fathers at home and reported that fathers were more concerned about career planning for boys than they were for girls. In addition, while these fathers expressed concern for obedience, responsibility, school achievement, athletic ability, and an overall masculine role in their sons, they wanted their daughters to be nice, sweet, pretty, affectionate, and well liked. The findings are consistent with an earlier study by Gardner (1947). Gardner considered male and female pre-adolescents and adolescents and reported that although boys were given physical chores by their fathers, the girls were assigned to sedintary tasks.

In summary, the findings of Goodenough (1957), Sears et al., (1957), Tasch (1952), Aberle & Naegele (1952), and Gardner (1947) are consistent and support the role theorists' position.

Parent-Child Relationship and the Child's Sex-Role Development

A number of studies have considered the child's relationship with his parents and the child's sex-role development. Generally, the research indicates that the father is important for the development of masculinity in males and

femininity in females.

The research on young children indicates that fathers are important for the development of sex-roles in males and females. P.S. Sears (1953) used maternal interviews to gain information about the father-child relationship and a doll play projective test to measure the child's sex-role orientation. Her findings indicated that children with appropriate sex-role orientations also had warm relationships with their fathers. Similar findings were reported by Mussen & Distler (1959) and Mussen & Rutherford (1963). The former study used the It Scale to measure the boys sex-role orientation and a doll play projective test to measure the boy's perception of paternal nurturance, punishment, and power. Paternal power was measured by the number of situations in the doll play where a father was mentioned. Paternal punishment was determined by the number of situations where the subject described the father as punitive. Paternal nurturance was defined as the number of situations where the father was described as encouraging and warm. The finding indicated that highly masculine boys, as opposed to less masculine boys, perceived more paternal nurturance, more paternal power, and more paternal punishment. Mussen & Rutherford (1963) reported similar findings with males and females. The latter study used a questionnaire to measure paternal encouragement of sex

appropriate play. Examples of sex appropriate play include rough and tumble play for boys and doll play for girls. The results indicated that highly masculine boys and highly feminine girls received more paternal encouragement than did less masculine boys and less feminine girls, respectively.

Moreover, the research on older children indicates that the father continues to be important for sex-role development.

Bronson (1959) considered a sample of nine through thirteen year old boys. While the father-son relationship was measured by a combination of interviews with both parents and children, a projective test was used to measure the boy's masculinity. The findings suggested that boys with warm, non-stressful relationships with their fathers had higher masculinity scores than boys with stressful relationships with their fathers.

Mussen (1961) studied adolescent male sex-role orientation and reported that a positive father-son relationship was important for the development of masculinity in sons. He used seventeen and eighteen year old boys and found that highly masculine boys had more positive relationships with their fathers than did the less masculine boys. On the other hand, boys that scored low on masculinity had more negative relationships with their fathers than did boys that scored

high on masculinity.

While the research supports the notion that the father-child relationship is important for the development of sex-roles, there is some evidence that the effects of the mother-child relationship differ with the sex of the child. The research on young children by Mussen & Distler (1959) and Mussen & Rutherford (1963) indicated that while maternal warmth, power, and punishment had no effect upon the development of a masculine sex-role in males, the mother-child relationship seems to have an effect upon the development of a feminine sex-role in females. Mussen & Rutherford (1963) reported that maternal warmth and encouragement differentiated high femininity girls from low femininity girls, with the high femininity girls receiving more maternal warmth and encouragement than the low femininity girls. Among adolescent boys the research indicates that the mother-son relationship has little effect upon the development of a masculine sex-role (Mussen, 1961). Unfortunately, there is no evidence for the effects of the mother-child relations upon feminine sex-role development among adolescent females.

Identification, Sex-Role Development, and Adjustment

The research suggests that there is a relationship between identification with the father, appropriate sex-role

development, and adjustment. Most of the evidence comes from studies with adolescents and young adults. Sopchak (1952) studied male and female college students. He used the MMPI as a measure of adjustment, sex-role, and identification. While positive adjustment was defined as the lack of abnormal personality traits, negative adjustment was represented by the presence of those traits. Students were required to take the MMPI three times; in the usual manner, as father would answer, and as mother would answer. The MMPI that was taken in the usual manner was used to measure adjustment and sex-role. The students identification with each parent was measured by the degree of similarity between responses to the MMPI taken in the usual manner and the responses to the MMPI taken as the father or the mother would respond. The findings suggested that masculine men identified with their fathers more than did the less masculine men. The men that demonstrated high identification with their fathers were also better adjusted and more masculine than were the men that showed less identification with their fathers. Masculine women identified less with their fathers than did the less masculine women. Women who lacked identification with their fathers also tended to be less well adjusted than were women that were highly identified with their fathers. Similarly, Mussen (1961) reported that highly masculine boys scored higher on adjustment than did the less masculine boys. Studies

by Gray (1959) and Helper (1955) indicated support for the relationship among children and adolescents. Moreover, Osgood, Suci, & Tannenbaum (1957), reviewed the literature and gave additional support for the relationship.

Some evidence suggests that while paternal sex-role orientation is not related to boys identification with the father, the mother's sex-role orientation seems to be related to the son's identification with his father. Payne and Mussen (1956), administered a variety of personality tests to adolescent males, their fathers and their mothers. They found that there was no relationship between the boy's identification with his father and the father's masculinity score, although there was a negative relationship between maternal masculinity scores and the son's identification with his father. It seems that masculine mothers interfere with the relationships of their husbands and sons.

Paternal Nurturance During Childhood, Adjustment, and Sex-Role Development

The evidence indicates that paternal nurturance, in the form of encouragement and warmth during childhood, is important for the development of positive adjustment in late adolescence and adulthood. One study has examined college females perceptions of paternal nurturance in childhood and their personal adjustment. Fish & Biller (1973) considered father-absent college females. While the

authors used Schaeffer's Parent-Perception questionnaire as a measure of perceived paternal nurturance during childhood, they administered the Adjective Checklist as a measure of personal adjustment. The findings indicated that those females that perceived a high degree of paternal nurturance during childhood had higher adjustment scores than did the females perceived a lower degree of paternal nurturance during childhood.

A related study was conducted by Reuter & Biller (1973). These authors demonstrated that both paternal nurturance and paternal availability during childhood were important for positive adjustment in college males. These authors measured college males perceptions of paternal availability and paternal nurturance and college males' overall adjustment. The findings suggested that while paternal availability alone did not affect overall adjustment, nurturance and nurturance x availability affected adjustment. High paternal nurturance combined with at least moderate paternal availability and high paternal availability combined with at least moderate paternal nurturance were related to high scores on personal adjustment. On the other hand, high paternal nurturance combined with low paternal availability and high paternal availability combined with low paternal nurturance were associated with low scores on personal adjustment.

These studies indicate that paternal nurturance during childhood is important for positive adjustment in both male and female college students. While Reuter & Biller (1973) showed that paternal availability combined with paternal nurturance was necessary for positive adjustment among college males, there is a need for research that examines the effects of paternal availability combined with paternal nurturance upon female adjustment. Moreover, taken with the findings on the relationship of sex-role development and positive adjustment, the evidence suggests that paternal availability combined with paternal nurturance during childhood is important for the development of masculinity in males and femininity in females.

Father-Absence and Sex-Role Development

The findings of some of the research on father-child relationships suggest that paternal availability may affect sex-role development. While there has been little research that considers the effects of paternal availability upon sex-role development among children from intact families, a substantial number of studies have compared children from father-present and father-absent families. These comparisons have considered the sex-role development of males and females. The review that follows considers the research on father-absence and sex-role development. First, there will be a discussion of the research on males. This will

be followed by a discussion of the studies on females.

Father-Absence and Sex-Role Development in Males

Generally, the research on males indicates that father-absence has a negative effect upon the development of a masculine sex-role. Some of the early work considered young, male children. These studies compared father-present and father-absent males on sex-role development. While father-present males had fathers available in the home, the father-absent males had no father available. Sears, Pintler, and Sears (1946), and Bach (1946) used doll play tests to measure sex-role development in young boys, and in both studies aggression was the measure of masculinity. While a high level of aggression indicated high masculinity, a low level of aggression indicated low masculinity. In the former study, sex-role was measured by the number of aggressive acts that were demonstrated by the subject. The findings of Sears et al. (1946) indicated that father present boys were more aggressive than were the father-absent boys. Similar findings were reported by Bach (1946). In the latter study, subjects described a fantasy about the dolls. These stories were rated on aggression. Bach (1946) reported that the stories of the father-present boys included an aggressive father more often than did the stories of the father-absent boys. Moreover, the stories of the father-separated boys included descriptions

of an affectionate father more often than did the stories of the father-present boys.

The evidence indicates that the duration of father-absence is an important factor. Biller (1969b) examined kindergarten boys. He used Brown's It Scale as a measure of sex-role orientation. The findings indicated that father-absence of more than two years had a greater negative effect on sex-role development than did father-absence of less than two years. Those boys who were father-absent for more than two years had less masculine It scores than did the boys whose fathers were absent for less than two years. Moreover, as in the previous studies, boys with fathers available continuously had higher masculinity scores than did any of the father-absent boys.

The findings from the research on adolescents indicates that early father-absence has a greater negative effect upon sex-role development, than does late father-absence. Biller & Bahm (1971) compared early father-absent boys, late father-absent boys, and father-present boys. While early father-absence was defined as father-absence before age five, late father-absence was defined as separation from the father after age five. While the early father-absent boys had lower masculinity scores than did the late father-absent boys, there was no difference between father-present and late father-absent boys.

The conclusions of several literature reviews consistently support the fact that early father-absence has a greater negative impact upon male sex-role development, than does late father-absence (Herzog & Sudia, 1968; Biller, 1970, 1974, 1976; Lynn, 1974). These reviews indicated that early father-absence, before age five, had an especially damaging effect upon male sex-role development.

The evidence suggests that reason for father-absence does not affect male sex-role development. McCord et al. (1962) studied ten through fifteen year old males and used observations and interviews to measure aggression among the boys. They considered the effects of father-absence due to divorce, death, or legal separation and found that the reason for paternal separation did not contribute to the differences in male sex-role development. Furthermore, these authors also reported that the father-absent boys demonstrated less aggressive behavior than did the father-present boys.

In addition to onset and duration of father-absence, it appears that race is an important factor in male sex-role development. Biller (1968) compared black and white boys that ranged from five through six years of age. These boys were given a series of tests that were used to determine their abilities to discriminate male typed items from female typed items. While male typed items were items that were judged to be masculine by a group of raters,

female typed items were items judged to be feminine by a group of raters. Several findings were reported. First, white boys received higher masculinity scores than did black boys. Moreover, father-absent boys received lower masculinity scores than did the father-present boys. While father-absent whites received higher masculinity scores than did father-absent blacks, there were no differences between father-absent whites and father-present blacks.

Similar findings were reported by two studies on adolescents. Barclay & Cusumano (1967) used the Rod and Frame Test to measure field dependence. Field dependence is the degree to which an individual's judgment of an object are affected by the surrounding of the object. A field dependent individual's judgments of an object are affected to a greater degree than are the judgments of a field independent individual. Moreover, field dependence has been associated with females more often than with males. Field independence, on the other hand, has been associated with males more often than with females. Thus, a low field dependence was indicative of high masculinity while a higher field dependence score suggested that the individual was low on masculine orientation. The findings indicated that blacks were more field dependent than were whites. Furthermore, father-absent males were more field dependent than were father-present males. Comparable findings were

reported by Hartnagel (1970). In the latter study, the boys were asked to rate themselves on self-potency. Self-potency included power in social relations, self-reliance, and assertiveness. The findings indicated that the whites had higher self-potency ratings than did the blacks. Moreover, the father present group had higher self-potency scores than did the father-absent group.

The theoretical position of the role theorists indicates that maternal encouragement may effect sex-role development (Parsons, 1958; Johnson, 1963). This position is supported by empirical evidence. Biller & Bahm (1971) indicated that adolescent boys' perceptions of maternal encouragement of masculine behaviors was positively related to masculinity scores among early father-absent males. Masculine behavior was defined as aggression, assertiveness and self-reliance. Moreover, McCord et al. (1962) indicated that boys with rejecting mothers were more dependent than were boys with encouraging mothers. Thus, it seems that mothers can facilitate masculine behavior in their sons by encouraging such behavior.

Some evidence indicates that father-absent boys receive less maternal encouragement of masculine behavior than do father-present boys. Biller (1969b) used a questionnaire to assess maternal encouragement of masculine behavior among kindergarten boys. Masculine behavior included aggression and self-assertiveness. He found that

mothers of father-present boys encouraged masculine behavior more often than did the mothers of father-absent boys. Apparently, part of the difference between the father-present and the father absent boys sex-role development is accounted for by the differences between father-present and father-absent boys' mothers behaviors.

It appears that the availability of a surrogate father counteracts the effects of father-absence. The father surrogate is an older male that is available to the father-absent child. Santrock (1970) considered a sample of male, black pre-school children. While independence among the boys was indicative of a masculine sex-role, dependence suggested a lack of masculinity. This study showed that father-absent boys with an available surrogate father were more independent than were the father-absent boys without a surrogate father.

Father Absence and Sex-Role Development in Females

While there is less evidence on the effects of father absence upon female sex-role development, the research indicates that the absence of the father has a negative effect upon the girl's identification with her father. Bach (1946) considered father-absent and father-present girls and used the subjects' doll play stories to measure the girl's identification with her father. The findings indicated that the stories of the father-absent girls

contained a father less often than did the stories of the father-present girls. Similarly, Lynn & Sawrey (1959) reported less identification with the father among the father-absent girls as opposed to the father-present girls. The latter study also used a doll play task and indicated that the father-absent girls selected the father doll less often than did the father-present girls.

The research also indicates that father-absent girls are more dependent upon their mothers than are father-present birls. Lynn & Sawrey (1959), stated that the father-absent girls selected a mother doll more often than did the father-present girls. Hetherington (1972) considered adolescent girls and reported that father-absent firls showed a greater dependence upon their mothers than did the father-present girls.

Apparently, father-absent women have difficulty in their relationships with men. Jacobson & Ryder (1969) compared father-present and father-absent women on marital relationships. While the father-absent women were separated from their father during childhood, the father-present women reported an available father during childhood. The findings indicated that the father-absent women had less favorable relationships with their husbands than did the father-present women. The relationships of the father-

absent women were characterized by discord and difficulties in sexual relationships with their husbands.

The evidence indicates that both the time of father-absence and the reason may be important for female sex-role development. Hetherington (1972) considered adolescents using personality tests and observational ratings to measure aspects of sex-role development. She found that more daughters of divorcees, versus other father-absent girls, sought attention from male peers and contact with male peers. Second, daughters of widows avoided males and preferred females. Third, early father separated girls showed less preference for feminine activities, such as housework and child care, than did the late father separated girls. While early separation was defined as father-absence before age five, late separation was defined as father-absence after age five. Finally, the early father separated females spoke less to a male interviewer than did the late father separated females.

Some evidence indicates that the presence of older male siblings has a negative effect upon sex-role development in females. It appears that father-absent girls with older male siblings only are more aggressive than are father-absent girls with older female siblings only. Santrock (1970) considered father-absent girls with older male siblings only and father-absent girls with older female

siblings only. He found that father-absent girls with older male siblings only were more aggressive than the father-absent girls with older female siblings only. Possibly, the greater aggression that was demonstrated by the girls with the male siblings is a defensive reaction to their older brothers.

Taken together, the findings of the research on the effects of father-absence upon adolescent and adult females is consistent with the research on males. The research on females suggests that father-absence, especially during early life, has a negative effect upon the development of heterosexual relationships during adolescence and adulthood. The finding of differential effects for the reason for father-absence also provides support for the notion that paternal availability is important for female sex-role development. While daughters of divorcees sought male attention and contact, the daughters of widows avoided males and preferred females. Conceivably, the daughters of divorcees had more contact with their natural fathers during early life than the daughters of widows. It is possible that the greater paternal contact that was experienced by the daughters of divorcees facilitated the greater heterosexually oriented behavior of the divorcees' daughters. On the other hand, the limited paternal contact that was experienced by the daughters of the widows may have had a negative effect upon the development of

heterosexual interests among the daughters of widows. Finally, the effects of surrogate fathers and siblings are important. While surrogate fathers can counteract the effects of father-absence in males, older male siblings may have an negative effect upon female sex-role development.

Other Factors Affecting Sex-Role Development

Some authors have indicated that socioeconomic status may affect sex-role development. Biller (1974, 1976), along with Altus (1958), has stated that there are differences in sex-role development between middle and low socioeconomic status males and females. According to some authors, lower class fathers often assert less influence over the assignment of chores to his male and female children than does the middle class fathers. Other authors have suggested that children from lower class families often perceive their fathers as less dominant than their mothers in the family decision making process (Bowerman & Elder, 1964; Distler, 1964). Moreover, S.E.S. differences have been reported with respect to paternal punitiveness and affection. McKinley (1964) indicated that lower class fathers were more punitive and less affectionate than were middle class fathers. Apparently, the literature indicates that lower class children may experience more difficulty than middle class children in

their relationships with their fathers.

Some authors have suggested that race, father surrogates, and IQ may affect the development of sex-roles in males and females. Several studies have suggested that blacks often score lower on measures of masculinity than do whites (Barclay & Cusumano, 1967; Hartnagel, 1970; Biller, 1974, 1976). Furthermore, the presence of father surrogates in the form of older male siblings or older males residing in the home with the children may affect the development of sex-roles. Santrock (1970) suggested that father-absent boys with an available substitute father were less dependent than father-absent boys without a substitute. Dependency has often been associated with feminine sex-role (Maccoby & Jacklin, 1974). A number of authors have suggested that intelligence may affect sex-role (Kohlberg, 1966; Biller, 1970, 1974, 1976; Jones, 1975). Kohlberg (1966), among others, argued that individuals with lower IQs have more difficulty learning socially defined concepts of sex-role. Moreover, Kohlberg presented data that indicated that differences between father-present and father-absent boys were reduced when the subjects were matched on IQ. In addition, some studies have suggested that among blacks, father-absent boys scored lower on IQ and achievement tests than did father-present boys (Deutsch, 1960; Deutsch & Brown, 1964).

Summary

After considering the research that has been reported, several observations can be made.

1. Paternal warmth and encouragement during childhood is important for development of appropriate sex-roles in males and females.
2. Father-absence during childhood is detrimental to the sex-role development of males and females.
3. Father-absence during early childhood has a greater negative effect than does later father-absence upon sex-role development in males and females.
4. A highly available and highly nurturant father is most effective for positive adjustment among males and females. Furthermore, it seems that this kind of a father is most effective for appropriate sex-role development in males and females.
5. Similarly, an unavailable and non-nurturant father is least effective for positive adjustment in males and females. Moreover, it seems that this kind of a father is least effective in appropriate sex-role development in males and females.
6. While the mother may have either a positive or a negative effect upon the development of masculinity in males, there is a need for more research on the effects of the mother upon feminine sex-role development.

7. Maternal encouragement of masculine behavior may counteract the effects of father-absence.
8. There is some evidence that there are racial and possibly S.E.S. differences in sex-role development.
9. The effects of the father may be equally important for male and female sex-role development.
10. The presence of a surrogate father may compensate for the negative effects of father absence upon sex-role development in males.

Statement of the Problem and the Hypotheses

After considering the evidence, a problem for study was formulated and a discussion of this problem follows.

The research on the parent-child relationship and sex-role development indicates that paternal nurturance facilitates sex-role development in childhood and adolescence, but there was a need for research that considers the lasting effects of this nurturance into adulthood. The positive effects of paternal nurturance have been demonstrated among young children (Mussen & Distler, 1959; Mussen & Rutherford, 1963). There is also support for the relationship from studies with pre-adolescent and adolescent males (Payne & Mussen, 1956; Mussen, 1961).

While the research indicates that father-absence during childhood has a negative effect upon sex-role development, there was a need for research that examined

the effects of paternal availability during childhood upon sex-role development among adolescents and adults from intact families. The negative effects of early father-absence upon sex-role development have been shown among samples of males from early childhood through adulthood. While there is less evidence for females, the studies indicate that father-absence during early childhood has a negative effect upon sex-role development among adolescent and adult females (Hetherington, 1972; Jacobson & Ryder, 1969). Unfortunately, no previous study had systematically considered the effects of paternal availability during childhood upon the development of sex-roles among individuals from intact families. Moreover, no previous study considered the stability of the effects of paternal availability during childhood upon individuals from intact families, and there was a need to contribute to the study of the stability of the effects of this variable.

While the evidence indicates that high levels of paternal nurturance and availability during childhood have greater positive effects upon positive adjustment among young adult males and females, it was necessary to consider the effects of combinations of these variables upon sex-role development among adolescent and young adult individuals from intact families. Although Fish & Biller (1973) supported the relationship between paternal nurturance

during childhood and adjustment among father-absent college females and Reuter & Biller (1973) showed that both paternal nurturance and availability were important for positive adjustment among college males, no previous study considered the effects of combinations of paternal nurturance and availability during childhood upon sex-role development among adolescent and young adult individuals from intact families.

This study considered some of the issues that have not been studied in previous research. The study considered the effects of paternal nurturance and availability during childhood, upon sex-role development among adolescent and young adult college students from intact families. This research also contributed to the study of the stability of the effects of paternal nurturance and paternal availability.

Several hypotheses follow and these hypotheses considered some of the unresolved issues that were previously described.

Hypothesis 1:

Adolescent and young adult males with perceptions of having had a highly nurturant father during childhood will have higher Masculinity scores than will adolescent and young adult males with perceptions of having had a low nurturant father during childhood.

Hypothesis 2:

Adolescent and young adult females with perceptions of having had a highly nurturant father during childhood will have higher Femininity scores than will adolescent and young adult females with perceptions of having had a low nurturant father during childhood.

Hypothesis 3:

Adolescent and young adult males with perceptions of having had a combination of high paternal nurturance and high paternal availability during childhood will have higher Masculinity scores than will adolescent and young adult males with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

Hypothesis 4:

Adolescent and young adult females with perceptions of having had a combination of high paternal availability and high paternal nurturance during childhood will have higher Femininity scores than will adolescent and young adult females with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

Hypothesis 5:

Adolescent and young adult males with perceptions of having had low paternal nurturance and high paternal availability during childhood will have lower Masculinity

scores than will adolescent and young adult males with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

Hypothesis 6:

Adolescent and young adult females with perceptions of having had low paternal nurturance and high paternal availability during childhood will have lower Femininity scores than will adolescent and young adult females with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

Summary

This chapter contained the Introduction, Review of Literature, and the Statement of the Problem and the Hypotheses. The Review of Literature included the major theories of sex-role development and it considered the relevant empirical work on parent-child relationships and on father-absence, along with other research. The Problem considered some aspects of the father-child relationship and father-availability during childhood and sex-role development among college students from intact families. Finally, six hypotheses were presented.

CHAPTER II

METHOD

This chapter includes aspects of the methodology that were used for this study. First, there is a discussion of the subjects that participated in the study and this is followed by descriptions of the instruments. The sections on procedure, statistics, and research design follow thereafter.

Subjects

The subjects of the study were 68 male and 72 female undergraduates at a large midwestern university. These individuals ranged from 17 through 23 years of age and all of them were from intact families. It was indicated that there was a need for research on individuals with these characteristics.

Earlier it was reported that a variety of variables affected sex-role development and some of these variables included socioeconomic status, race, siblings, and surrogate fathers.

These variables were controlled by restricting the sample and while this method of control had the effect of

restricting the generalization of the findings, it had the advantage of being more efficient than other procedures. In order to control for socioeconomic status, all subjects were from middle and upper-middle class families. Paternal occupations and paternal education were used to assess socioeconomic status. The United States Department of Labor's Dictionary of Occupational Titles was used to code paternal occupations. While numerically low codes indicated professional or high socioeconomic status occupations, the numerically high codes were characteristic of manual or low socioeconomic status occupations. The subjects reported their parents' occupations and educational attainments. Since the literature indicated that differences were apparent between low and middle socioeconomic status families, the low socioecnoomic status subjects were eliminated from the analysis. In this study, low socioeconomic status individuals were defined as those individuals that reported having fathers with no more than a high school education and having fathers that were employed in low status occupations or unemployed. In order to control for race, all subjects were White. Moreover, restricting the sample to first-born and only children insured that older sibling surrogates were unavailable to the subjects. Finally, the study controlled for some surrogate father figures by restricting the sample to individuals without older males (aside from

fathers) living with them.

Descriptions of the Instruments

Personal Background Questionnaire

In order to control for a variety of variables that affect sex-role development, it was necessary to collect information about the backgrounds of the participants. To this end, a revision of Jones (1975) questionnaire was used (See Appendix C). While the participants did not provide their names, they were asked to respond to a number of items related to racial, academic, socio-economic status, and family variables, among others. The questionnaire required less than ten minutes for completion.

A Parent-Child Relations Questionnaire (PCR)

The PCR II is used to measure parental behavior towards young children, as experienced by the child. The instrument is usually administered to adolescents and young adults who complete the instrument with reference to their own childhood. The original questionnaire, the PCR I, was described by Roe & Siegelman (1963) and consisted of two forms that were used to measure perceptions of paternal and maternal behavior. In addition, the original instrument consisted of 10 subtests. A revised instrument, PCR II, was described by Siegelman & Roe (1978) and consists of

four forms, Father-Son, Father-Daughter, Mother-Son, and Mother-Daughter. Each of these forms measures the son's or daughter's perceptions of the mother's or father's behavior. The PCR II consists of five scales including Loving, Rejecting, Casual, Demanding and Attention. These categories relate to parent behavior as perceived by the child. The Loving and the Rejecting scales were used in this study. Loving parents were characterized by warmth, affection, helpfulness, reasoning with the child, and encouragement. Rejecting parents were described as unavailable, ridiculing, inattentive to children, and not helpful.

A factor analysis performed by the authors on the original PCR I considered undergraduate college students from CCNY and Harvard. The results of the factor analysis indicated that the five scales could be combined into three factors including Loving-Rejecting (LR), Casual-Demanding (CD), and Attention (AT).

The PCR II is easily scored and administered. Each scale contains 10 items. Respondents are given four choices for each item including "Very true", "Tended to be true", "Tended to be untrue", and "Very untrue". These four choices are assigned point values including 4, 3, 2, and 1, respectively. The score for a variable is the total number of points on the items that correspond with the variable. Factor scores are computed by subtracting one variable

from its polar opposite and adding 50. For example, the score for factor I (LR) is equal to the LOV score minus the REJ score plus 50. Administration time averages approximately 15 minutes.

Siegelman & Roe (1978) also reported normative data on the PCR II. The data was collected in different geographic regions of the United States, for black and white, males and females. The authors reported that overall test-retest reliabilities for each of the variables and factors was high with r ranging from approximately .77 to .95.

For the purposes of this study, Factor I (LR) was used. This factor closely approximates the study's definition of nurturance-non-nurturance. The factor LR is preferred over either of the simple variable scores since the factor score has a higher test-retest reliability than either LOV or REJ scores (LR, r=.95; LOV, r=.94; REJ, r=.89).

Paternal Availability Scale (PAS)

Reuter & Biller's (1973) paternal availability scale was used to ascertain the subjects' perceptions of the degree of paternal availability during childhood. The scale is a revision of one of the sub-scales of Winch's (1962) Family Life Inventory. The subjects were presented with ten items that related to paternal availability

during childhood and were asked to rate each item on a five point scale, ranging from very frequently to very seldom. The total score indicates the subjects' perception of the degree of paternal availability during childhood. Unfortunately, there is no information regarding the reliability and validity of this instrument.

Bem Sex Role Inventory (BSRI)

The BSRI was described by Bem (1974). The instrument contains both a masculinity and a femininity scale. Each of these scales contains twenty personality characteristics. These items were selected as masculine or feminine based upon sex typed social desirability. In other words, a characteristic was judged to be masculine if it was judged to be more desirable in American society for a man than for a woman, while a characteristic was selected to be feminine if it was judged to be more desirable for a woman than for a man. In addition, the BSRI contains an Androgyny scale. Androgyny is the degree to which an individual is both masculine and feminine. That is, the degree to which an individual is both instrumental and expressive, both assertive and yielding. The BSRI Androgyny scale is useful in measuring the degree to which an individual is sex-typed or androgynous. A sex-typed individual behaves in a manner that is consistent with an internalized sex-role standards. Sex-typed individuals usually suppress

behavior that is considered undesirable for his/her gender. The BSRI characterizes an individual as sex-typed or Androgynous as a function of the difference between his endorsement of masculine or feminine items. Thus, a sex-typed individual is characterized by a high difference score while an Androgynous individual is characterized by a difference score that is low. Finally, the BSRI contains a Social Desirability Scale that is neutral with respect to sex.

Bem (1974) presents the method of item selection for the BSRI. Initially a list of 200 items was formulated by the author and several students. Items that were thought to be both positive in value and either masculine or feminine were included in the list. Items for the Social Desirability scale were selected in a similar fashion, with a total of 200 items being chosen on the basis of their gender specific independence or neutrality with respect to sex. Half of these Social Desirability items were positive in value while the remaining half were negative in value. The final list of items for the Masculinity and Femininity scales were selected on the basis of judgments of their desirability in American society for one sex as opposed to the other. The judges were Stanford University students. The judges were asked to rate each of the items on a seven-point scale ranging from 1 ("Not at all desirable") to 7 ("Extremely desirable"). Each

judge rated the desirability of each of the items for males or for females. Masculine characteristics were identified as those that were judged independently by both males and females to be significanlty more desirable for a man than for a woman ($p < .05$). Feminine items were identified as those that were judged independently by both males and females to be significantly more desirable for a woman than for a man ($p < .05$).

From those characteristics that satisfied the criteria, 20 were chosen for the Masculinity scale, while 20 were selected for the Femininity scale. Neutral items were those that were judged independently by males and females to be no more desirable for one sex than for the other, and if male and female judges did not differ significantly in their overall desirability judgements of that item. Ten positive and ten negative items were selected from the list of items that satisfied the criteria for neutrality. These final twenty items composed the Social Desirability scale.

The BSRI yields a Masculinity, Femininity, Androgyny and Social Desirability score for each respondent. The Masculinity and Femininity scores suggest the degree to which an individual endorses masculine and feminine characteristics as self-descriptions. The Masculinity score is the mean self-rating for all endoresed masculine items, while the Femininity scores equal the mean self-rating for

all endorsed feminine items. Both means can range from 1 to 7. The Androgyny score is the difference between a respondent's Masculinity and Femininity scores. The greater the absolute value of the Androgyny score, the more the person is sex-typed or sex-reversed with high positive scores indicating femininity and high negative scores indicating masculinity. Thus, a masculine sex-role represents simultaneous endorsement of masculine characteristics and rejection of feminine attributes,while a feminine sex-role is represented by endorsement of feminine characteristics and rejection of masculine characteristics. Androgyny, on the other hand, increases as the absolute value approaches zero. Thus, an Androgynous individual is characterized by equal endorsement of both masculine and feminine characteristics. The Social Desirability score indicates the degree to which an individual describes himself in a socially desirable direction on items that are neutral with respect to gender. The Social Desirability score is computed by reversing the self raings on the ten undesirable items and then calculating the respondent's mean score over all twenty items. Thus, Social Desirability can range from 1 to 7, with 1 representing a tendency to describe one's self in a socially undesirable direction and 7 representing a tendency to describe one's self in a socially desirable direction.

Bem (1974) reported the results of the psychometric analyses of the BSRI. The BSRI was administered to approximately 1000 students enrolled at either Stanford University or Foothill Junior College during the Spring, 1973. Measures of internal consistency indicated that all three scales were highly reliable. Coefficient alpha was computed separately for Masculinity, Femininity, and Social Desirability scores of the subjects in each of the two normative samples using the procedure outlined by Nunnally (1967). In the Stanford sample: Masculinity ∂=.82; Femininity ∂=.80; Social Desirability ∂=.75. In the Foothill sample: Masculinity ∂=.86; Femininity ∂ =.82; and Social Desirability ∂=.70. The reliability of the Androgyny difference score was .85. In addition, the author reported that Masculinity and Femininity were empirically independent. In other words, the structure of the BSRI does not constrain these indices and they are free to vary independently. The following correlation coefficients were reported for Masculinity and Femininity scales. Stanford male r=.11; female r=-.14; Foothill male r=-.02; female r=-.07. Thus, there was no apparent relationship between Masculinity and Femininity.

Bem (1974) also investigated the relationship of Masculinity, Femininity, and Androgyny with Social Desirability. She found that while both Masculinity and

Femininity were correlated with Social Desirability, Androgyny was not correlated with Social Desirability. Thus, Androgyny was not measuring a general tendency to respond in a socially desirable direction. Instead, Androgyny was measuring a specific tendency to describe oneself in a manner that was consistent with sex-typed standards of desirable behavior for both men and women.

Several test-retest reliability coefficients were also computed. Twenty-eight males and twenty-eight females were tested twice with a four week interval between testings. The findings indicated that all four scores were highly reliable over the four week period (Masculinity r=.90; Femininity, r=.90; Androgyny, r=.93; Social Desirability r=.89).

Bem (1974) also computed norms for each of the scales. Males scored significantly higher than females on the Masculinity scale, while females scored significantly higher on the Femininity scale in both samples. In addition, with respect to androgyny, males scored on the masculine side while females favored the feminine side. While Stanford females scored significantly higher on Androgyny than Stanford Males, there was no significant difference between males and females at Foothill.

A number of other studies have considered the BSRI. In general, the studies support Bem's (1974) finding of the independence of the Masculinity and Femininity scales.

Low intercorrelations between the Masculinity and Feminity scales have been reported by Gaudreau (1975), Waters & Pincus (1976), and Waters, et al., (1977).

BSRI Masculinity and Femininity scores will be used in the proposed study. The Masculinity and Femininity scores will represent the dependent variables for the hypotheses in this study.

Procedure

The procedure that follows was approved by the University Committee for Research on Human Subjects and the University Committee on Institutional Research granted permission for the use of University student records. This insured the protection of the rights of the participants and of the author.

The instruments that were previously described were distributed to the subjects that were students in undergraduate classes at a large midwestern university. Prior to the distribution of the instruments, a letter of introduction and a statement of qualifications for participation in the study was read by the author or instructor. Those individuals that volunteered to participate and met the qualifications for participation were given a packet of materials which included:

1. A letter of introduction and instructions.
2. A 3x5 card including spaces for name and student

number along with a numerical code. (Completion of this information was optional.)

3. A consent form.
4. A Personal Background Questionnaire.
5. A Parent-Child Relations Questionnaire.
6. A Paternal Availability Scale.
7. A Bem Sex-Role Inventory

Copies of all the above mentioned materials that were given subjects are contained in Appendix C.

The subjects took the materials with them, completed them at a convenient time, and returned them to their instructors.

Each page in the packet of materials was numerically coded so that each participant had a unique code. While these codes were used to identify and collate responses, the codes also protected the privacy of the individual participatns since no participant was required to indicate a name or a student number on any of the test materials.

Many of the participants indicated their names and student numbers on the 3x5 cards, as requested, and this information was used to ascertain their ACT Composite scores from the University's records. When this information was not provided, the student's self-report of his ACT Composite score was used. When no ACT score was available for a participant and when a SAT score was available, a conversion table was used to equate the SAT score with the

corresponding ACT Composite score.

Statistics and Research Design

Before discussing the specific designs and statistical tests for each of the hypotheses, it is necessary to identify the independent and the dependent variables. The independent variables included paternal nurturance during childhood and paternal availability during childhood. Paternal nurturance had two levels, high and low. The subjects that scored above the median on the PCR were considered high on paternal nurturance during childhood, while those subjects that scored below the median were considered low on paternal nurturance during childhood. Paternal availability also had two levels, high and low. While subjects that scored above the median on the PAS scale were considered high on paternal availability during childhood, those subjects that scored below the median on the PAS scale were considered low on paternal availability during childhood. The dependent variables were Masculinity and Femininity. These variables were measured by the BSRIM scale and the BSRIF scale, respectively.

Some of the research has indicated that intelligence affects sex-role development. In order to control for intelligence, the analysis of covariance was employed. This procedure effectively removes the error variance that is due to intelligence before the statistical test is

performed on the data. In this case, intelligence was the covariate (X) while sex-role score was the dependent measure (Y). While the ACT Composite scores were used as measures of intelligence, the sex-role scores, Masculinity for males and Femininity for females, were the dependent measures. The major weakness of the analysis of covariance is that its effects are reduced as the relationship between the variables declines and for this reason the analysis of variance procedure is used when the relationship between the variables is small (Cox, 1958; Kerlinger, 1973).

Pearson correlation coefficients were calculated for the relationships between ACT scores and BSRIF scores; ACT scores and BSRIM scores; and, ACT scores and BSRIA scores among males and females, and these correlation coefficients are reported in Tables I and II. Since all of the correlation coefficients were small and non-significant, the analysis of covariance procedure was disregarded in favor of the analysis of variance procedure.

The hypotheses and the statistics and research design follow. The discussions of the assumptions and procedures for the power computations, analyses of variance, and the post-hoc tests, can be found in Glass & Stanley (1970), Kerlinger (1973), McSweeney & Busk (1976), and Runyon & Haber (1968).

TABLE I

Pearson correlation coefficients and significance levels for ACT scores and BSRIF, BSRIM, and BSRIA scores for males.

(Note: Since some subjects did not have ACT scores, N=64.)

	BSRIF	BSRIM	BSRIA
ACT	0.0080	-0.0923	0.0813
	S=0.475	S=0.234	S=0.262

TABLE II

Pearson correlation coefficients and significance levels for ACT scores and BSRIF, BSRIM, and BSRIA scores for females.

(Note: Since some subjects did not have ACT scores, N=64.)

	BSRIF	BSRIM	BSRIA
ACT	-0.0962	-0.0373	-0.0628
	S=0.225	S=0.385	S=0.311

Hypothesis 1:

Adolescent and young adult males with perceptions of having had a highly nurturant father during childhood will have higher Masculinity scores than will adolescent and young adult males with perceptions of having had a low nurturant father during childhood.

The test of this hypothesis required a comparison of the means of the Masculinity scores for the high and the low paternal nurturance groups for males. The two-way, fixed effects analysis of variance was appropriate and the appropriate test was for the Nurturance main effect. Since a difference of one-half unit between the means for the high and the low paternal nurturance groups was meaningful, and since there were 34 subjects in each group for a total of 68 subjects with alpha equal to .05, the power was .90. The analysis of variance F statistic (df = 1, 64) was used and the decision to reject the null hypothesis in favor of Hypothesis 1 occurred when the obtained F-ratio exceeded 4.00.

Hypothesis 2:

Adolescent and young adult females with perceptions of having had a highly nurturant father during childhood will have higher Femininity scores than will adolescent and young adult females with perceptions of having had a low nurturant father during

childhood.

The second hypothesis required similar statistical procedures as Hypothesis 1, but instead of using Masculinity scores as the dependent measures, the Femininity scores for females were used. Moreover, since a difference of one-half unit between the means for the high and the low paternal nurturance groups was meaningful, and since there were 36 subjects in each group for a total of 72 subjects with alpha equal to .05, the power was .91. The analysis of variance F statistic (df= 1,68) was used, and the decision to reject the null hypothesis occurred when the obtained F-ratio exceeded 4.00.

Hypothesis 3:

> Adolescent and young adult males with perceptions of having had a combination of high paternal nurturance and high paternal availability during childhood will have higher Masculinity scores than will adolescent and young adult makes with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

The test of this hypothesis requires the comparison of the mean of the high paternal nurturance-high paternal availability group with the average of the means for the remaining three groups. The hypothesis was directional and indicated that the mean Masculinity score for the

high paternal nurturance-high paternal availability group was meaningfully and statistically significantly greater than the average of the means for the remaining three groups. A difference of one-half unit between the largest and smallest means was meaningful and the statistical significance level was set at .05.

The two-way analysis of variance was appropriate. Assuming that a difference of one-half unit between the smallest and the largest cell mean was meaningful since there were 17 subjects in each cell for a total of 68 with alpha equal to .05, the power was .90. In this case the test of the Nurturance by Availability interaction was important. If the interaction was significant, then the Scheffe test was applied to the contrast $\psi = -\bar{X}_1 - \bar{X}_2 - \bar{X}_3 + 3\bar{X}_4$. If zero does not fall within the confidence interval, then it will be concluded that the high paternal nurturance-high paternal availability group differs significantly from the average of the remaining three groups.

Hypothesis 4:

Adolescent and young adult females with perceptions of having had a combination of high paternal availability and high paternal nurturance during childhood will have higher Femininity scores than will adolescent and young adult females with

perceptions of having had other combinations of paternal nurturance and paternal availability.

The statistical procedures for testing Hypothesis 4 were similar to those that were discussed for Hypothesis 3. In the case of Hypothesis 4, the Femininity scores for females were used instead of the Masculinity scores for males. Since there were 18 subjects in each cell, for a total of 72 subjects with alpha equal to .05, the power was .91.

Hypothesis 5:

Adolescent and young adult males with perceptions of having had low paternal nurturance and high paternal availability during childhood will have lower Masculinity scores than will adolescent and young adult makes with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

The test of this hypothesis required the comparison of the means for the low paternal Nurturance - high paternal Availability group with the average of the means for the remaining three groups. Moreover, the hypothesis was directional and indicated that the mean Masculinity score for the low paternal Nurturance - high paternal Availability

group was meaningfully and statistically significantly smaller than the average of the mean Masculinity scores for the other three groups. A difference of one-half unit between the largest and the smallest means was meaningful, the statistical significance was set at the .05 level.

The two-way analysis of variance for fixed effects was appropriate. Assuming that a difference of one-half unit between the smallest and largest cell means was meaningful, and since there were 17 subjects in each cell, the power was .90. In this case, if the test of the Nurturance by Availability interaction was significant, the Scheffé test was applied to the contrast $\Psi = -\bar{X}_1 + 3\bar{X}_2 - \bar{X}_3 - \bar{X}_4$. If zero does not fall within the confidence interval, then it will be concluded that the low-paternal Nurturance - high paternal Availability group mean differs significantly from the average of the means of the other three groups.

Hypothesis 6:

> Adolescent and young adult females with perceptions of having had low paternal nurturance and high paternal availability during childhood will have lower Femininity scores than will adolescent and young adult females with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

The statistical procedures for testing this hypothesis were similar to those that were used in Hypothesis 5. In this case, females' Femininity scores were used instead of males Masculinity scores. Since there were 18 subjects in each cell, for a total of 72 subjects with alpha equal to .05, the power was .91.

Summary

Chapter II considered the components of the research methods that were used in this study. There were descriptions of the subjects, the instruments, and the procedure, along with a final section that considered the statistics and research design that were used in this study. There were also descriptions of the research design and statistics for each of the six hypotheses.

CHAPTER III

RESULTS

This chapter contains the results of the statistical analyses of the data that was collected for this dissertation study. Each hypothesis that was presented earlier was tested and the results of the tests are described. Following the descriptions of the tests of the hypotheses, there are descriptions of several additional analyses and these include some correlational analyses and analyses of other dependent measures of sex-role development. Finally, there is a summary of the chapter.

Results of the Tests of the Hypotheses

Hypothesis 1:

Adolescent and young adult males with perceptions of having had a highly nurturant father during childhood will have higher Masculinity scores than will adolescent and young adult males with perceptions of having had a low nurturant father during childhood.

The 2 X 2 analysis of variance for males' BSRIM scores was used with N=68 and n=17.

An examination of Table III indicates that the Nurturance by Availability interaction was significant and this finding cast doubt on the significance of the Nurturance main effect. According to Cox (1958) and Lindquist (1956), a main effect is not testable when the interaction is significant because the source of the apparent effect is uncertain. Hypothesis 1, therefore, was not testable.

TABLE III

Analysis of variance for males Masculinity (BSRIM) scores. (N=68, n=17)

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	Significance
Main Effects					
Nurturance	9.774	1	9.774	21.997	.001
Availability	0.188	1	0.188	0.424	.517
Two-way Interaction					
Nurturance X Avail.	2.440	1	2.440	5.491	.002
Error	28.436	64	0.444		
Total	40.838	67	0.610		

TABLE IV

Descriptions of the sub-samples for males' BSRIM scores (N=68, n=34).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		4.9629	0.7807	0.6095	68
Nurturance	Low	4.5838	0.7182	0.5159	34
Nurturance	High	5.3421	0.6523	0.4255	34

Hypothesis 2:

Adolescent and young adult females with perceptions of having had a highly nurturant father during childhood will have higher Femininity scores than will adolescent and young adult females with perceptions of having had a low nurturant father during childhood.

The 2 x 2 analysis of variance for females BSRIF was used with N=72 and n=18.

As in Hypothesis 1, the interaction effect was significant and the main effects were not testable. Hypothesis 2, therefore, was not testable.

Hypothesis 3:

Adolescent and young adult males with perceptions of having had a combination of high paternal nurturance and high paternal availability

TABLE V

Analysis of variance for females Femininity (BSRIF) scores (N=72, n=18.)

Source of Variation	Sum of Squares	df	Mean Square	F-Ratio	Significance
Main Effects					
Nurturance	7.821	1	7.821	20.196	.001
Availability	0.104	1	0.104	0.267	.607
Two-way interaction					
Nurturance X Availability	2.057	1	2.057	5.312	.014
Error	26.333	68	0.387		
Total	36.315	71	0.511		

TABLE VI

Descriptions of the sub-samples for females BSRIF scores (N=72, n=36)

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		5.0607	0.7152	0.5115	72
Nurturance	Low	4.7311	0.6754	0.4561	36
Nurturance	High	5.3903	0.5983	0.3580	36

during childhood will have higher Masculinity scores than will adolescent and young adult males with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

Once again, the analysis of variance procedure was used for males, Masculinity (BSRIM) scores with N=68 and n=17, and favorable results were obtained. The test for the Nurturance by Availability interaction effect was applied (df=1, 64) and the obtained F-ratio was 5.491. This F-ratio was significant with $p<.022$. (See Table III for the results of the analysis of variance for males Masculinity scores.) Moreover, Scheffé's test for complex comparisons was applied to the specified contrast; $\psi = -\bar{X}_1 - \bar{X}_2 - \bar{X}_3 + 3\bar{X}_4$ with df=1, 64 and the result indicated that the hypothesis was supported at the $\partial=0.05$ level. (See Table VII for the results of the Scheffé tests.)

Hypothesis 4:

Adolescent and young adult females with perceptions of having had a combination of high paternal nurturance and high paternal availability during childhood will have higher Femininity scores than will adolescent and young adult females with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

The test of Hypothesis 4 required the application of the analysis of variance procedure and the Scheffē procedure for females' Femininity scores with N=72 and n=18. The test for the Nurturance by Availability interaction effect was applied (df=1, 68), and the obtained F-ratio was 5.312. This F-ratio was significant with $p<.024$. Scheffē's test for complex comparisons was applied to the specified contrast $\Psi = -\bar{X}_1 - \bar{X}_2 - \bar{X}_3 + 3\bar{X}_4$ with df=1, 68 and the result indicated that the hypothesis was supported at the $\partial=0.05$ level. (See Table VII for the results of the Scheffē tests.)

Hypothesis 5:

> Adolescent and young adult males with perceptions of having had low paternal nurturance and high paternal availability during childhood will have lower Masculinity scores than will adolescent and young adult males with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

In the case of Hypothesis 5, the analysis of variance procedure for males' Masculinity scores was used in conjunction with the Scheffē test for complex comparisons and favorable outcomes were obtained. Previously, it was reported that the Nurturance by Availability interaction was significant and the Scheffē test was applied to the

contrast $\Psi = -\bar{X}_1 + 3\bar{X}_2 - \bar{X}_3 + 3\bar{X}_4$. The Scheffē test indicated that the Masculinity scores of the males in the low-Nurturance - high Availability group were significantly lower than were the Masculinity scores of the other three males groups combined and this result was supported at the $\partial = 0.05$ level. (See Table VII for the results of the Scheffē tests.)

Hypothesis 6:

> Adolescent and young adult females with perceptions of having had low paternal nurturance and high paternal availabiltiy during childhood will have lower Femininity scores than will adolescent and young adult females with perceptions of having had other combinations of paternal nurturance and paternal availability during childhood.

The test of Hypothesis 6 required the use of the analysis of variance procedure for females' Femininity scores in conjunction with the Scheffē test for complex comparisons and the results indicated support for Hypothesis 6. It was reported in Table V that the Nurturance by Availability interaction effect was significant and Scheffē's procedure was performed using the specified contrast $\Psi = -\bar{X}_1 + 3\bar{X}_2 - \bar{X}_3 - \bar{X}_4$. The difference between the mean for the low-Nurturance-high-Availability group and the mean for the other three groups combined was significant

at the ∂=0.05 level. (Table VII includes the result of this test.)

TABLE VII

Results of the Scheffé tests for the complex comparisons that were used in Hypotheses 3 through 6.

Hypothesis	Effect (Units)	Significance Level
3	2.4847	0.05
4	2.1461	0.05
5	-2.0634	0.05
6	-1.8428	0.05

Additional Analyses

Pair Comparisons for BSRIM Scores Among Males

Previously, it was reported that there was a significant Nurturance by Availability interaction effect for BSRIM scores and it was necessary to make a number of post-hoc comparisons to interpret the meaning of the interaction. To this end, six pair comparisons of cell means were formulated and tested by the Tukey procedure at the ∂=0.05 level and the results of these tests indicated that while

three of the tests of the pair comparisons were significant, the remaining three tests of pair comparisons failed to reach statistical significance at the ∂=0.05 level. The findings showed that males in the high-Nurturance-high-Availability group were significantly higher on Masculinity scores than either the males in the low-Nurturance-low-Availability group. Moreover, males in the high-Nurturance-low-Availability group scored significantly higher on Maculinity than did males in the low-Nurturance-high-Availability group. The results of these post-hoc analyses are reported in Table VIII.

Pair Comparisons for BSRIF Scores Among Females

Similarly, the finding of a significant Nurturance by Availability interaction effect for BSRIF scores among females required additional tests for interpreting the meaning of the interaction and Tukey tests were performed on six pair comparisons. The results of these Tukey tests indicated that while three of the differences were significant, the remaining three were not significant at ∂=.05 and while the significant comparisons among the females corresponded with the significant comparisons among the males, the non-significant comparisons among the females corresponded with the non-significant comparisons among the males. The results of the pair comparisons for the BSRIF

scores among females appear in Table IX.

TABLE VIII

Results of the Tukey Tests of BSRIM Scores Among Males (N=68, n=17).

Comparison*	Difference (Units)	Difference (SD)	Result
$\bar{X}_1 - \bar{X}_2$	0.2736	0.3504	Not Sig., ∂=.05
$\bar{X}_3 - \bar{X}_1$	0.3794	0.4859	Not Sig., ∂=.05
$\bar{X}_4 - \bar{X}_3$	0.4841	0.6200	Not Sig., ∂=.05
$\bar{X}_3 - \bar{X}_2$	0.6529	0.8363	Sig., ∂=.05
$\bar{X}_4 - \bar{X}_1$	0.8635	1.1060	Sig., ∂=.05
$\bar{X}_4 - \bar{X}_2$	1.1131	1.4257	Sig., ∂=.05

* These are comparisons of cell means. $\bar{X}_1$ relates to low-Nurturance-low-Availability. $\bar{X}_2$ is low-Nurturance-high-Availability. $\bar{X}_3$ is high-Nurturance-low-Availability and $\bar{X}_4$ is high-Nurturance-high-Availabiltiy.

Correlational Analyses

The correlational analyses were performed to ascertain the relationships among all of the variables in the study and the results of these analyses indicated that a number of significant relationships existed among several of the variables. The Pearson correlation coefficients were calculated for all of the possible pair relationships of variables and these results are reported for males and females

TABLE IX

Results of the Tukey Tests of BSRIF Scores Among Females (N=72, n=18).

Comparison	Difference (Units)	Difference (SD)	Result
$\bar{X}_1 - \bar{X}_2$	0.2622	0.3666	Not Sig., at ∂=.05
$\bar{X}_3 - \bar{X}_1$	0.3211	0.4489	Not Sig., at ∂=.05
$\bar{X}_4 - \bar{X}_3$	0.4319	0.6038	Not Sig., at ∂=.05
$\bar{X}_3 - \bar{X}_2$	0.5833	0.8155	Sig., ∂=.05
$\bar{X}_4 - \bar{X}_1$	0.7350	1.0276	Sig., ∂=.05
$\bar{X}_4 - \bar{X}_2$	0.9972	1.3942	Sig., ∂=.05

in Tables X and XI, respectively.

Among males, four significant Pearson correlation coefficients were obtained ($p<.05$). Significant relationships were found between Nurturance (PCR) and Masculinity (BSRIM) and between Nurturance (PCR) and Androgyny (BSRIA). In the former case, $r=0.6627$ ($p<.001$) while in the later case $r=-0.6293$ ($p<.001$). Two additional findings indicated that Femininity (BSRIF) was significantly, positively correlated with Androgyny, with $r=0.5548$ ($p<.001$) and that Masculinity was significantly, negatively correlated with Androgyny with $r=-0.9076$ ($p<.001$). None of the other correlation coefficients approached significance.

TABLE X

Pearson Correlation Coefficients for Males

(Coefficient/Cases/Significance)

	ACT	PCR	PAS	BSRIF	BSRIM	BSRIA
ACT	1.0000 0 .001					
PCR	-.1953 64 .061	1.0000 0 .001				
PAS	.0538 64 .336	.1144 68 .176	1.0000 0 .001			
BSRIF	.0080 64 .475	-.1652 68 .089	.0052 68 .483	1.0000 0 .001		
BSRIM	-.0923 64 .234	.6627 68 .001	.0920 68 .228	-.1627 68 .092	1.0000 0 .001	
BSRIA	.0813 64 .262	-.6293 68 .001	-.0816 68 .254	.5548 68 .001	-.9076 68 .001	1.0000 0 .001

Five significant relationships were found for females. There were significant positive relationships between Nurturance and Femininity with r=0.5328 (p<.001) and between Nurturance and Masculinity with r=0.5252 (p<.001). Moreover, significant positive relationships existed between Femininity and Masculinity with r=0.6319 (p<.001) and between Femininity and Androgyny with r=.4635 (p<.001). Finally, there was a significant negative relationship

between Masculinity and Androgyny with r=-0.3923 (p<.001). None of the other correlation coefficients for females were significant.

TABLE XI

Pearson Correlation Coefficients for Females.

(Coefficient/Cases/Significance)

	ACT	PCR	PAS	BSRIF	BSRIM	BSRIA
ACT	1.0000 0 .001					
PCR	.1320 64 .149	1.0000 0 .001				
PAS	.0827 64 .258	.0459 72 .351	1.0000 0 .001			
BSRIF	-.0962 64 .225	.5328 72 .001	-.0720 72 .274	1.0000 0 .001		
BSRIM	-.0373 64 .385	.5252 72 .001	-.1803 72 .065	.6319 72 .001	1.0000 0 .001	
BSRIA	-.0628 64 .311	.0345 72 .387	.1194 72 .159	.4635 72 .001	-.3923 72 .001	1.0000 0 .001

Descriptive Statistics for Variables

The SPSS subprogram Condescriptive was used to obtain the descriptive statistics such as means, minimums,

maximums, variances, and standard deviations for variables PCR, PAS, BSRIF, BSRIM, and BSRIA for both males and females and these values are presented in Tables XII and XIII, respectively.

TABLE XII

Descriptive Statistics for Variables Among Males (N=68).

Variable	Minimum	Mean	Maximum	Variance	Standard Deviation
PCR	41.000	65.897	79.000	89.736	9.473
PAS	21.000	34.956	50.000	57.088	7.556
BSRIF	3.200	4.619	5.400	0.159	0.398
BSRIM	3.000	4.963	6.600	0.610	0.781
BSRIA	-2.300	-0.357	2.350	0.899	0.948

TABLE XIII

Descriptive Statistics for Variables Among Females (N=72).

Variable	Minimum	Mean	Maximum	Variance	Standard Deviation
PCR	43.000	68.403	80.000	89.737	9.473
PAS	18.000	35.319	50.000	55.882	7.475
BSRIF	3.000	5.061	6.550	0.511	0.715
BSRIM	2.500	4.577	6.250	0.483	0.695
BSRIA	-0.800	0.481	1.650	-0.378	0.615

Self-Ratings of Males and Females on BSRI Masculine and Feminine Items, Respectively

Tables XIV and XV show the mean self-ratings of males and females, respectively, on BSRI Masculine and Feminine items, respectively, and these self-ratings indicate that there were differences among the groups as a function of paternal nurturance and paternal availability during childhood. For example, males differed most on items such as 'acts as a leader', 'aggressive', 'athletic', 'competitive', 'dominant', 'forceful', and 'has leadership capabilities', with high-Nurturance-high-Availability males having substantially higher mean self-ratings than low-Nurturance-high-Availability group on items such as 'affectionate', 'compassionate', 'eager to soothe hurt feelings', 'feminine', 'sensitive to the needs of others', 'sympathetic', and 'understanding'.

Analyses of Variance and Post-Hoc Procedures for Other Dependent Measures

In addition to the previously reported analyses of variance, four additional analyses of variance and a number of post-hoc tests were performed on the data to measure the effects of paternal nurturance and paternal availability during childhood upon other measures of sex-role development. While the dependent measures for males

TABLE XIV

Mean Self-Ratings of Males on Masculine Items As A Function of Father-Nurturance and Father-Availability (N=68).

Masculine Items	Lo Nurt. Lo Avail.	Lo Nurt. Hi Avail.	Hi Nurt. Lo Avail.	Hi Nurt. Hi Avail.
Acts as a Leader	4.0	3.4	5.4	5.7
Aggressive	4.3	4.0	5.3	5.8
Ambitious	4.8	4.5	5.0	5.5
Analytical	4.9	4.3	5.0	5.4
Assertive	4.8	4.5	5.0	5.7
Athletic	4.8	3.9	5.2	5.8
Competitive	4.4	4.1	5.2	5.9
Defends own Beliefs	4.9	4.9	5.0	5.5
Dominant	4.3	3.4	5.2	6.0
Forceful	4.5	3.4	5.2	5.9
Has Leadership Abilities	4.5	3.6	5.3	5.5
Independent	4.9	4.9	5.0	5.5
Individualis-tic	4.9	5.4	5.0	5.2
Makes Decisions Easily	4.8	4.8	5.0	5.3
Masculine	4.8	4.4	5.2	5.6
Self-Reliant	4.8	4.4	5.0	5.7
Self-Sufficient	4.8	4.7	5.0	5.3
Strong Personality	4.8	4.3	4.9	5.5
Willing to Take a Stand	4.9	4.3	5.1	5.7
Willing to Take Risks	5.0	4.8	5.0	5.5

TABLE XV

Mean Self- Ratings of Females on Feminine Items As A Function of Father-Nurturance and Father-Availability (N=72).

Feminine Items	Lo Nurt. Lo Avail.	Lo Nurt. Hi Avail.	Hi Nurt. Lo Avail.	Hi Nurt. Hi Avail.
Affectionate	5.1	4.4	5.3	5.7
Cheerful	4.8	4.3	5.4	5.5
Childlike	4.7	4.9	5.0	5.5
Compassionate	5.4	4.3	5.3	5.8
Does not use harsh language	4.4	4.4	5.0	5.3
Eager to soothe hurt feelings	5.1	4.4	5.4	5.9
Feminine	5.1	4.6	5.4	5.7
Flatterable	4.8	4.8	5.1	5.5
Gentle	4.9	4.7	5.2	5.5
Gullible	4.7	4.7	5.0	5.5
Loves Children	4.9	4.6	5.4	5.6
Loyal	4.8	4.8	5.1	5.5
Sensitive to the needs of others	5.1	4.4	5.4	5.9
Shy	4.8	4.9	5.1	5.4
Soft spoken	4.8	4.8	5.0	5.5
Sympathetic	5.2	4.4	5.3	5.8
Tender	4.8	4.7	5.0	5.6
Understanding	5.3	4.5	5.6	5.8
Warm	5.0	4.7	5.3	5.6
Yielding	4.5	4.7	5.1	5.4

included BSRIF scores and BSRIA scores, the dependent measures for females were BSRIM scores and BSRIA scores and the results of these analyses are reported and tabled in the two sections that follow.

Analyses of Variance and Post-Hoc Procedures for BSRIF Scores and BSRIA Scores Among Males

Two analyses of variance were performed for males' BSRIF scores and BSRIA scores and the results indicated that while there were no significant differences for the main effects or for the interaction effect in the case of the BSRIF scores, there were some significant findings for the BSRIA scores and these results are reported in Tables XVI and XVII. The analysis of variance for the BSRIA scores showed that the Nurturance by Availabiltiy interaction was significant with an obtained F-ratio of 5.953 ($df=1, 64$; $p<.017$). Since the interaction was significant, the apparent significance of the Nurturance effect was doubtful. Tables XVI and XVII follow and these tables summarize the results of the analyses of variance for BSRIF scores and BSRIA scores, respectively, among males.

In order to determine the meaning of the significant interaction of Nurturance and Availability for BSRIA scores among males, it was necessary to perform several post-hoc procedures including Tukey tests of the six pair

TABLE XVI

Analysis of Variance of BSRIF Scores for Males (N=68, n=17).

Source of Variation	Sum of Squares	df	Mean Square	F-ratio	Significance
Main Effects					
Nurturance	0.017	1	0.017	0.105	0.747
Availability	.000	1	.000	0.001	0.971
Two-way interaction Nurt.X Avail.	0.204	1	0.204	1.250	0.268
Error	10.415	64	0.163		
Total	10.636	67	0.159		

TABLE XVII

Analysis of Variance of BSRIA Scores for Males (N=68, n=17).

Source of Variation	Sum of Squares	df	Mean Square	F-ratio	Significance
Main Effects					
Nurturance	9.488	1	9.488	13.134	0.001
Availability	0.235	1	0.235	0.326	0.570
Two-way interaction Nurt.X Avail.	4.300	1	4.300	5.953	0.017
Error	46.233	64	0.722		
Total	60.256	67	0.899		

comparisons of means and two Scheffē tests of complex comparisons of means and the results of these post-hoc procedures indicated that while two pair comparisons of means were significant, the two complex comparisons of means were also significant. The low-Nurturance-low-Availability group by 0.8647 unit and this difference was significant at ∂=.05. The low-Nurturance-high-Availability group differed significantly (∂=.05) from the high-Nurturance-high-Availability group by 1.2500 units. Scheffē's procedure was used to test the significance of the two complex comparisons and both of the complex comparisons were significant at ∂=.05. The first contrast compared the mean for the high-Nurturance-high-Availability group with the average of the means of the other three groups. The contrast was $\Psi = -\bar{X}_1-\bar{X}_2-\bar{X}_3+3\bar{X}_4$ and the result indicated that the mean for the high-Nurturance-high-Availability group was significantly greater than the average of the means of the other three groups. The second contrast compared the mean for the low-Nurturance-high-Availability group with the average of the means of the remaining three group. The contrast was $\Psi=-\bar{X}_1+3\bar{X}_2-\bar{X}_3-\bar{X}_4$ and the result indicated that the mean for the low-Nurturance-high-Availability group was significantly less than the average of the means for the remaining three groups. A summary of the results of the post-hoc procedures is reported in Table 18.

TABLE XVIII

Results of the Post-Hoc Procedures for BSRIA Scores Among Males (N=68, n=17).

Comparison	Difference	Test	Result
$\bar{X}_2 - \bar{X}_1$	0.3853	Tukey	Not Sig., at ∂=.05
$\bar{X}_3 - \bar{X}_2$	0.2441	Tukey	Not Sig., at ∂=.05
$\bar{X}_4 - \bar{X}_1$	0.8647	Tukey	Significant at ∂=.05
$\bar{X}_4 - \bar{X}_2$	1.2500	Tukey	Significant at ∂=.05
$\bar{X}_3 - \bar{X}_2$	0.6294	Tukey	Not Sig., at ∂=.05
$\bar{X}_4 - \bar{X}_3$	0.6206	Tukey	Not Sig., at ∂=.05
$\bar{X}_1-\bar{X}_2-\bar{X}_3+3\bar{X}_4$	-2.7353	Scheffé	Significant at ∂=.05
$\bar{X}_1+3\bar{X}_2-\bar{X}_3-\bar{X}_4$	2.2647	Scheffé	Significant at ∂=.05

Analyses of Variance and Post-Hoc Procedures for BSRIM Scores and BSRIA Scores Among Females

The results of the analysis of variance for BSRIM scores and BSRIA scores among females indicated that there were some significant effects in both analyses. While the analysis of variance of BSRIM scores resulted in a significant Nurturance main effect, none of the other sources of variation in this analysis approached significance. Moreover, the test for the Nurturance main effect (df=1,68) yielded an F-ratio of 24.782 ($p<.001$) and this indicated that the difference of 0.7122 unit or 1.0247 standard

deviations between the high and the low Nurturance groups that favored the high-Nurturance group was meaningfully significant. While the analysis of variance of the BSRIA scores showed that the test of the Nurturance by Availability interaction yielded an F-ratio of 6.315 (df=1,68; $p<.014$), none of the other sources of variation were significant. In order to interpret the meaning of the interaction of Nurturance and Availability a number of post-hoc procedures were performed on the BSRIA data and the results of these analyses indicated that there was one significant complex comparison of cell means. Scheffé's procedure was applied in conjunction with the contrast $\Psi = \bar{X}_1 - \bar{X}_2 - \bar{X}_3 - 3\bar{X}_4$ and this contrast compared the mean BSRIA score for the high-Nurturance-high-Availability group with the average of the mean BSRIA scores for the remaining three groups. The finding indicated that the mean BSRIA score for the high-Nurturance-high-Availability group was significantly higher than the average of the BSRIA score means for the remaining three groups and the difference was 0.8989 unit or 1.4629 standard deviations. Tables XIX,XX, and XXI follow and these tables contain the results of these tests.

TABLE XIX

Analysis of Variance for BSRIM Scores Among Females (N=72, n=18).

Source of Variation	Sum of Squares	df	Mean Square	F-ratio	Significance
Main Effects					
Nurturance	9.138	1	9.138	24.782	.001
Availability	0.083	1	0.083	0.226	.636
Two-way interaction Nurt.X Avail.	0.000	1	0.000	0.001	.977
Error	25.073	68	0.369		
Total	34.295	71	0.483		

TABLE XX

Analysis of Variance for BSRIA Scores Among Females (N=72, n-18).

Source of Variation	Sum of Squares	df	Mean Square	F-ratio	Significance
Main Effects					
Nurturance	0.032	1	0.032	0.090	.765
Availability	0.344	1	0.344	0.968	.329
Two-way interaction Nurt.X Avail	2.247	1	2.247	6.315	.014
Error	24.197	68	0.356	0.356	
Total	26.821	71	0.378		

TABLE XXI

Results of the Post-Hoc Tests for BSRIA Scores Among Females (N=72, n=18).

Comparison	Difference	Test	Results
$\bar{X}_2-\bar{X}_1$	0.2150	Tukey	Not Sig., at ∂=.05
$\bar{X}_3-\bar{X}_1$	0.3955	Tukey	Not Sig., at ∂=.05
$\bar{X}_1-\bar{X}_4$	0.0962	Tukey	Not Sig., at ∂=.05
$\bar{X}_4-\bar{X}_2$	0.3112	Tukey	Not Sig., at ∂=.05
$\bar{X}_2-\bar{X}_3$	0.1805	Tukey	Not Sig., at ∂=.05
$\bar{X}_4-\bar{X}_3$	0.4917	Tukey	Not Sig., at ∂=.05
$-\bar{X}_1-\bar{X}_2-\bar{X}_3+3\bar{X}_4$	0.8989	Scheffē	Significant at ∂=.05
$-\bar{X}_1+\bar{X}_2-\bar{X}_3-\bar{X}_4$	-.3456	Scheffē	Not Sig., at ∂=.05

Additional Descriptive Statistics

The tables that follow contain the descriptive statistics for BSRIF, BSRIM, and BSRIA scores for males and for females.

TABLE XXII

Descriptive Statistics for BSRIF Scores Among Males (N=68, n=17).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Group		4.6188	0.3984	0.1588	68
Nurturance	Low	4.6029	0.4589	0.2106	34
Availability	Low	4.5500	0.4724	0,2231	17
Availability	High	4.6559	0.4531	0.2053	17
Nurturance	High	4.6347	0.3335	0.1112	34
Availability	Low	4.6912	0.2313	0.0535	17
Availability	High	4.5782	0.4112	0.1691	17
Availability	Low	4.6206	0.3732	0.1393	34
Availability	High	4.6171	0.4278	0.1830	34

TABLE XXIII

Descriptive Statistics for BSRIM Scores Among Males (N=68, n=17).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		4.9629	0.7807	0.6095	68
Nurturance	Low	4.5838	0.7182	0.5159	34
Availability	Low	4.7206	0.4157	0.1728	17
Availability	High	4.4471	0.9227	0.8514	17
Nurturance	High	5.3421	0.6523	0.4255	34
Availability	Low	5.1000	0.4161	0.1731	17
Availability	High	5.5841	0.7615	0.5799	17
Availability	Low	4.9103	0.4526	0.2048	34
Availability	High	5.0156	1.0134	1.0270	34

TABLE XXIV

Descriptive Statistics for BSRIA Scores Among Males (N=68, n=17).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		-0.3574	0.9483	0.8993	68
Nurturance	Low	0.0162	0.9973	0.9947	34
Availability	Low	-0.1765	0.6897	0.4757	17
Availability	High	0.2088	1.2235	1.4969	17
Nurturance	High	-0.7309	0.7374	0.5438	34
Availability	Low	-0.4206	0.5365	0.2878	17
Availability	High	-1.0412	0.7932	0.6291	17
Availability	Low	-0.2985	0.6209	0.3855	34
Availability	High	-0.4162	1.1972	1.4333	34

TABLE XXV

Descriptive Statistics for BSRIF Scores Among Females (N=72, n=18).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Group		5.0607	0.7152	0.5115	72
Nurturance	Low	4.7311	0.6754	0.4561	36
Availability	Low	4.8622	0.5976	0.3571	18
Availability	High	4.6000	0.7386	0.5456	18
Nurturance	High	5.3903	0.5983	0.3580	36
Availability	Low	5.1833	0.3581	0.1282	18
Availability	High	5.5972	0.7198	0.5181	18
Availability	Low	5.0228	0.5121	0.2622	36
Availability	High	5.0986	0.8788	0.7724	36

TABLE XXVI

Descriptive Statistics for BSRIM Scores

Among Females (N=72, n-18).

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		4.5771	0.6950	0.4830	72
Nurturance	Low	4.2208	0.6191	0.3833	36
Availability	Low	4.2528	0.5183	0.2687	18
Availability	High	4.1889	0.7200	0.5184	18
Nurturance	High	4.9333	0.5792	0.3354	36
Availability	Low	4.9694	0.4612	0.2127	18
Availability	High	4.8972	0.6893	0.4751	18
Availability	Low	4.6111	0.6049	0.3659	36
Availability	High	4.5431	0.7820	0.6116	36

TABLE XXVII

Descriptive Statistics for BSRIA Scores

Among Females

Group	Code	Mean	Standard Deviation	Variance	N
Entire Sample		0.4804	0.6146	0.3778	72
Nurturance	Low	0.5019	0.4532	0.2054	36
Availability	Low	0.6094	0.4517	0.2041	18
Availability	High	0.3944	0.4409	0.1944	18
Nurturance	High	0.4597	0.7483	0.5600	36
Availability	Low	0.2139	0.5625	0.3164	18
Availability	High	0.7056	0.8417	0.7085	18
Availability	Low	0.4117	0.5413	0.2930	36
Availability	High	0.5500	0.6808	0.4634	36

Summary

This chapter contained the results of the tests of the hypotheses and of several additional analyses. The findings indicated support for most of the hypotheses. A number of correlation coefficients were reported and some of these indicated that significant relationships existed among several of the variables. Additional analyses of variance of other dependent variables demonstrated that there were some significant main effects and interactions.

CHAPTER IV

DISCUSSION

Chapter IV includes the discussions of the results that were presented in Chapter III along with some discussions of other issues. The results supported four of the hypotheses with some more support from the additional findings and this information is included in separate discussions of each of the main effects and the two-way interaction. The information in Chapter III indicated that intelligence had little relationship with sex-role development among college students and this finding is discussed following the discussion of the interaction. These discussions are followed by sections that consider the limitations of the study, the conclusions, and some recommendations for future research.

Paternal Nurturance During Childhood and Sex-Role Development

Although it was not possible to test the first two hypotheses, this study indicated that paternal nurturance is necessary for sex-role development among male and female college students. Males and females that reported having

highly nurturant fathers during childhood scored higher on measures of Masculinity and Femininity, respectively, than did males and females that reported having less nurturant fathers during childhood. Additional support is provided by the findings of significant positive relationships between PCR Love-Reject factor scores and BSRIM scores for males and between PCR Love-Reject factor scores and BSRIF scores for females. Moreover, males in the high-Nurturance group had more negative BSRIA scores than did the males in the low-Nurturance group. This result indicates that the males that reported having highly nurturant fathers during childhood had more masculine scores than did the males that reported having less nurturant fathers during childhood.

The results of this study have supported the role theorists' position that while fathers facilitate instrumental behaviors in their sons, they encourage the development of expressive behaviors in their daughters and this effect is apparent upon observing and comparing the BSRIM responses of the high-Nurturance males with the BSRIM responses of the low-Nurturance males and after making similar observations and comparisons for BSRIF scores among females. Males in the high-Nurturance groups made higher self-ratings on all but one of the twenty Masculinity scale items with the high-Nurturance males scoring substantially higher than the low-Nurturance males on such

instrumental items as leadership, aggression, ambition, athletism, competition, dominance, and forcefulness. It is interesting that there was a small difference favoring the low-Nurturance males on 'individuality' and this suggests that the low-Nurturance males are at least as, and perhaps more individualistic than the high-Nurturance males. Females in the high-Nurturance groups rated themselves higher on all Femininity scale items than did females in the low-Nurturance groups with the high-Nurturance females scoring substantially higher than the low-Nurturance females on such expressive items as affection, compassion, sensitivity, and sympathy.

There is evidence for the stability of the effects of paternal nurturance during childhood upon sex-role development. The previously discussed research indicated that paternal nurturance during early childhood facilitated masculinity in young males and femininity in young females and the present study has shown that adult males and adult females with perceptions of having a highly nurturant father during childhood had higher Masculinity and Femininity scores, respectively, than did males and females that reported having less nurturant fathers during childhood. Apparently, early paternal behavior toward the child has a lasting effect upon the child's sex-role development.

Paternal Availability During Childhood and Sex-Role Development

The results of this study indicated that father availability alone during childhood did not affect sex-role development among college students. While there were no significant differences between the high-Availability and low-Availability male groups on Masculinity scores there were also no significant differences between the high-Availability and the low-Availability female groups on Femininity scores. Moreover, while there were no significant differences between the high-Availability and the low-Availability male groups on BSRIF scores and on BSRIA scores, there were also no significant differences between the high-Availability and the low-Availability female groups on BSRIM scores and on BSRIA scores.

While the finding of no differences in sex-role development as a function of paternal availability alone during childhood seems to conflict with the findings of the research on the effects of father-absence upon sex-role development, the apparent conflict is resolved after considering the differences in the early family environements of the populations. The father-absence studies compared individuals from intact families with individuals from single parent families and these two kinds of families provide different environments for children. Moreover,

the research on father-absence usually compares the sex-role development of individuals from homes where the father is usually present from birth until the time of the study with the sex-role development of individuals whose fathers terminally departed at some time before the collection of the data.

The present study considered only individuals from intact families and these individuals had access to both parents from birth until at least age sixteen. Conceivably, the differences in sex-role development between father-present and father-absent individuals reflect differences between intact families and single parent families while the lack of differences among individuals with highly available fathers and individuals with less available fathers reflects the inefficacy of the father's availability alone in facilitating sex-role development.

Paternal Nurturance and Paternal Availability During Childhood and Sex-Role Development

The results indicated that a father who is both highly nurturant and highly available will be more effective in facilitating sex-role development among his children than will a father with any other combination of Nurturance and Availability. Apparently, fathers that are both highly nurturant and highly available provide both a high quality and a high quantity of nurturance toward their children.

Moreover, the higher availability of these fathers during childhood serves to compliment the effects of paternal nurturance during childhood and this has the most enhancing effects upon sex-role development among their children as adults.

On the other hand, a less nurturant and highly available father will have the most damaging effects upon the sex-role development of his children. The fathers that are both less nurturant and highly available provide a higher quantity of non-nurturant relationships for their children during childhood and these experiences have a negative effect upon sex-role development which is apparent among their children as adults. Moreover, the higher availability of these fathers serves to intensify the effects of paternal non-nurturance during childhood and this has the most damaging effects upon sex-role development among their children as adults.

The significant differences of several of the pair comparisons for males and females on Masculinity and on Femininity scores, respectively, provides additional support for the interaction effect and also demonstrates the differences in the magnitudes of the effect for varing combinations of paternal nurturance and paternal availability during childhood for both males and females. The greatest difference was for the comparison of the high-Nurturance-high-Availability group with the low-Nurturance-high-

availability group. Although there was less difference between the high0Nurturance-high-Availability group and the low-Nurturance-low-Availability group, the least significant difference was found for the comparison of the high-Nurturance-low-Availability group with the low-Nurturance-high-Availability group.

The results of the tests among the Androgyny scores indicated a significant Nurturance by Availability interaction effect for both males and females and the results of several post-hoc tests reflect differences in the magnitudes of the effects in some cases. The significance of two complex comparisons for males were consistent with the results of two hypothesized comparisons and these results supported the hypotheses that highly nurturant and highly available fathers are more effective in facilitating Masculinity in their sons than are fathers with other combinations of Nurturance and Availability. Moreover, while the comparisons for males of the high-Nurturance-high-Availability group with the low-Nurturance-high-Availability was significant and yielded the greatest effect, the comparison of the high-Nurturance-high-Availability group with the low-Nurturance-low-Availability group was also significant and produced the second largest effect. Although none of the other differences for the pair comparisons among males were significant, differences were apparent and the magnitudes of the effects were in the same order as the magnitudes of the effects for the Masculinity pair comparisons. Among females, the tests for

effects upon Androgyny produced a significant difference for one complex comparison and this showed that highly nurturant and highly available fathers were more effective in facilitating the development of a feminine sex-role among their daughters than were fathers with different combinations of Nurturance and Availability during their children's early years of life. Although the remaining complex comparisons were not statistically significant, differences were apparent and the order of magnitudes of these differences were dissimilar to the order of the magnitudes of the corresponding differences among males.

The dissimilarity between the results for the male and for the female groups on Androgyny may be attributed to the differences between the male group and the female group with respect to the results of the analyses of variance for Femininity and for Masculinity scores. There were no effects on Femininity scores among males, but females Femininity scores were affected by both Nurturance and by the interaction of Nurturance and Availability. Males' Masculinity scores were affected by Nurturance and the interaction of Nurturance and Availability; females' Masculinity scores were affected by Nurturance. The differential trends with respect to the effects of Nurturance and the interaction of Nurturance and Availability upon males' and females' Masculinity and Femininity scores and

the fact that the Androgyny measure is a difference score between one's Femininity score and one's Masculinity score may be responsible for the dissimilar trends that were observed for Androgyny.

Intelligence and Sex-Role Development

The results of this study indicated that there was little relationship between ACT Composite scores and any of the measures of sex-role development for both males and females and these findings are consistent with some of the previous research. Kohlberg (1966) reported that there was a small negative relationship between IQ and measures of sex-role among college students and this study demonstrated a similar relationship with a similar sample.

Apparently, while intelligence has little effect upon sex-role development among college students, this study does not permit any generalizations beyond this group. College students are not representative of the population of late adolescents and young adults since college students must meet an admissions standard and this standard usually assures that most college students are at least of average intelligence. Moreover, college students differ from the population of late adolescents and young adults on a number of other relevant characteristics such as race and socio-economic status.

Limitations of the Study

Although the results of this study supported the hypotheses and the role theorists' position, there were some limitations and criticisms that apply to the study and the first limitation is a result of the study's sample. The participants in the study included undergraduates from one large midwestern university and these individuals are not representative of the population of adolescents and young adults. A number of qualifications which were necessarily imposed upon the sample had the effect of restricting the external validity or the generalizability of the findings. As a result of this procedure, the results of the study are generalizable to white, middle and upper-middle class, first-born, American, college students. Judging from the response rate that was obtained during the collection of the data, fewer than twenty percent of the college population meet all of these qualifications.

The findings of this study may also be restricted to the population of individuals that were reared during the 1950's and the 1960's. The participants' perceptions of their relationships with their fathers and their fathers' availability represented reports of experiences that occurred during those two decades.

The accuracy of adults as reporters of their early childhood experiences must be questioned. The present study used a retrospective method to ascertain information about

some aspects of the father-child relationship during early childhood among adolescent and young adult college students. It is possible that these individuals may not have accurately reported their fathers' behaviors toward them as children. These possible inaccuracies may be attributed to the participants' memories of early childhood experiences which may have been affected by the passage of time.

One must also consider the instrumentation of the study. The series of questionnaires that were used were restricted in the nature and in the number of items that were available and although the items in the quesionnaires required numerical ratings, checks, or short answers, these brief responses may not accurately represent the father-child relationship, and the father's availability. Moreover, since the amount of time that was available for responding was limited, the number of items that were included in the questionnaires were limited and this may have affected the reliability of the scores.

The final criticism concerns the study's failure to control for a variety of surrogate father figures outside the home that may have been available to the participants. While the study effectively controlled for the presence of surrogate fathers within the home by restricting the sample to first born and only children and by not considering individuals with older males (aside from the father) at

home, it was not possible to control for the effects of older adult males that many of the participants may have contact with throughout their lives.

Conclusions

A number of conclusions can be made on the results of this study and these conclusions follow.

1. Paternal nurturance during childhood is important for sex-role development among adults.

2. The effects of paternal nurturance toward children during childhood are intensified by high paternal availability during childhood.

3. Fathers that are both highly nurturant and highly available to their children during childhood are more effective in facilitating sex-role development among their children than are fathers that are low on nurturnace and either highly available or low on availability.

4. Fathers that are low on nurturance and highly available to their children during childhood have a damaging effect upon sex-role development among their children.

Recommendations for future research

The previous research and the findings of this dissertation indicate that there is a need for additional research.

Longitudinal research could consider the stability of the effects of the father-child relationship and father availability during childhood upon sex role development. The research could examine a wide group of individuals at several times over their life spans and assess the effects of early father-child relations and father availability upon sex-role development.

Future research should treat gender as an independent variable. Studies could form groups on combinations of paternal nurturance and paternal availability during childhood and compare males' sex-role development with females sex-role development.

Recently, the concept of androgyny has been discussed in the literature, but there have not been any studies that consider the effects of the father upon the development of androgyny. Future research could consider the effects of paternal nurturance and paternal availability upon the development of androgyny.

There is also a need for studies that consider the effects of surrogate father-child relationship and surrogate father availability during childhood upon

sex-role development. These studies should consider surrogate fathers in the forms of older siblings, other relatives, or any other male adults that are available to children.

The roles of parents and particularly the role of the mother in the family may be changing and these changes indicate that researchers should examine the effects of both parents upon sex-role among children growing up today. While the earlier research indicated that fathers usually had greater influence than did mothers upon the sex-role development of their children, these findings are based upon data for an earlier period and the research on contemporary families may provide different findings.

It is also necessary to study the utility of the existing instruments that measure parent-child relationship, parent availability, and sex-role development. These variables are affected by social changes and the instruments that are designed to assess these variables may not be accurate in the future.

APPENDICES

APPENDIX A

Letters of Permission

MICHIGAN STATE UNIVERSITY

OFFICE OF INSTITUTIONAL RESEARCH
ADMINISTRATION BUILDING

EAST LANSING • MICHIGAN • 48824

August 11, 1978

Mr. Edward T. Manzitti
Doctoral Candidate
Educational Psychology
Desk 4MM - Erickson Hall
Campus

Dear Mr. Manzitti:

As Chairman of the University Committee on Release of Confidential Information, I am responding to your letter of August 1, 1978 in which you request access to students' SAT quantitative and verbal scores or ACT scores in connection with a research study conducted as part of your doctoral requirements. You will note that copies of this letter to you are going to Assistant Registrar Phyllis Wilkie and to Prof. Arvo Juola as well as to your adviser. I am sending these two persons a copy of your letter so that they will be able to relate my response to your original request.

Acting for the Committee, I approve of your request for the use of these test scores. The conditions which you have set up for their use seem adequate to safeguard the information and the approval is contingent upon your following these procedures.

I believe that Prof. Juola can arrange for you to have access to these scores when you reach that stage. However, it is probable that in getting to the combination of data that you need you will need to talk with both Assistant Registrar Wilkie and Prof. Juola.

Sincerely yours,

Paul L. Dressel

Paul L. Dressel, Chairman
Committee on Release of Confidental
Information

cc: Phyllis Wilkie
Arvo Juola
Louise Sause

MICHIGAN STATE UNIVERSITY

UNIVERSITY COMMITTEE ON RESEARCH INVOLVING
HUMAN SUBJECTS (UCRIHS)
238 ADMINISTRATION BUILDING
(517) 355-2186

EAST LANSING • MICHIGAN • 48824

August 15, 1978

Dr. Louise Sause
Educational Psychology
459 Erickson Hall

Dear Dr. Sause:

Subject: Project by Edward T. Manzitti Entitled "Father-Child Relationship & Father-Availability During Childhood & Sex-Role Development Among College Students From Intact Families"

The above referenced project was recently submitted for review to the UCRIHS.

We are pleased to advise that this review indicated that the rights and welfare of the human subjects appear to be adequately protected and the Committee, therefore, approved this project at its meeting on August 14, 1978. In approving this proposal, however, you should be advised that a condition of approval is that the consent form specifically identifies the project by title so that the limits of the subjects' participation are clearly defined.

Please provide this office with a copy of the revised consent form so that our records can be completed.

Thank you for bringing this project to our attention. If we can be of any future help, please do not hesitate to let us know.

Sincerely,

Henry E. Bredeck
Chairman, UCRIHS

jms

cc: Edward T. Manzitti

APPENDIX B

Instructions for Instructors and for Subjects

To the Instructors:

Here are the questionnaires that relate to the study that considers the ways that fathers behave toward their children, the amount of time that fathers spend with their children, and the self-descriptions of these children as adults.

In order to control for a variety of variables that may affect the results it is necessary to restrict the sample. Please distribute the questionnaires only to students that meet all of the following qualifications:

1. Between 16 and 25 years of age.
2. White and a native of the U.S.A..
3. First-born or an only-child.
4. From an intact family. (Must have lived with both natural parents from birth until age 16.)

Please note that there are two forms, one for females and one for males. The female form is marked 'F' and the male form is marked 'M'.

The students should follow the instructions that are included with the questionnaires and they should complete the questionnaires whenever they have the time. The questionnaires can be completed within twenty minutes and should be returned to you during the following class.

Please hold both the completed and the spare questionnaires for me. I will get them at a time that is convenient for both of us.

If you have any questions you can contact me at 349-5264.

Thank you for helping me.

Sincerely,

Edward T. Manzitti

Edward T. Manzitti
Doctoral Candidate
Educational Psychology

To the Prospective Subjects:

This study is being conducted by Edward T. Manzitti, a doctoral candidate in Educational Psychology at Michigan State University. The study considers the ways that fathers behave toward their young children, the amount of time that fathers spend with their young children, and the self-descriptions of these children as adults.

In order to control for a variety of variables that may affect the results, it is necessary to restrict the sample. If you want to participate in the study, you must meet all of the following qualifications:

1. You must be between 16 and 25 years of age.
2. You must be White and a native of the U.S.A..
3. You must be first-born or an only-child.
4. You must be from an intact family. That is, you must have lived with both of your natural parents from birth until the time you were 16.

As a subject in this study, you will be asked to answer a variety of questions that appear in the questionnaires that are supplied to you. The questions require short answers, checks, or numerical ratings, as the instructions specify. Take as much time as you need to respond, but you probably won't need more than twenty minutes to finish. All responses will be confidential. Please do not write your name on any of the question sheets, but write your name and student number on the 3x5 card. Notice that there are two forms, one for males and one for females. Males should use the form marked 'M' and females should use the form marked 'F'. Be sure to read, sign, and date the Consent Form. When you are finished, please return all of the materials intact to your instructor or the investigator, as directed. You can find out more about the study by contacting the investigator at the Dept. of Ed. Psych. office, fourth floor, Erickson Hall, M.S.U.. A summary of the results of the study will be available at the same office when the study is completed sometime in the winter.

Thank you for your help.

Sincerely

Edward T. Manzitti

Edward T. Manzitti
Doctoral Candidate
Educational Psychology

APPENDIX C

Consent Form and Instruments

Michigan State University

Consent Form

Project: Father-child relationship and father-availability during childhood and aspects of affective development among college students

1. I have freely consented to take part in a scientific study being conducted by: Edward T. Manzitti

   under the supervision of: Louise Sause

   Academic Title: Professor

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time without penalty.

4. I understand that the results of the study will be treated in strict confidence and that I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

5. I understand that my participation in the study does not guarantee any beneficial results to me.

6. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed _____

Date _____

PERSONAL BACKGROUND QUESTIONNAIRE

1. Name (Not required) _____ 2. Age_____

3. Date of birth_____ 4. Place of birth_____

5. Have you ever lived outside the USA?_____ How long?____
   Your age then_____

6. Year in college ___Fresh. ___Soph. ___Jr. ___Sr.

7a. Grade point average_____ 7b. SAT scores: Verb.____
Quant._____

7c. ACT total score _____

8. Your marital status ___Single ___Married ___Divorced/Separated
___Widowed

9. Race or ethnic group

___White

___Black (non-Spanish surname)

___Black (Spanish surname)

___Chicano

___Oriental

___American Indian

___Other (Explain) _____

10. Marital status of parents

Mother (check all that apply)

___Divorced or separated

___Married to your father

___Remarried (year remarried_____)

___Widowed (year husband died_____)

___Single (never married)

___Other (Explain)_____

Father (check all that apply)

___Divorced or separated

___Married to your mother

___Remarried (year remarried _____)

___Widowed (year wife died_____)

___Single (never married)

___Other (Explain) _____

11. Father's Occupation (Please be specific) _____

12. Mother's Occupation (Please be specific)_____

13. Father's Education (Mark last grade completed)

___4-8 ___9-11 ___Completed H.S. ___Some college

___Bachelor's degree ___Some graduate work

___Master's degree ___Doctoral degree

14. Mother's Education (Mark last grade completed)

___4-8 ___9-11 ___Completed H.S. ___Some college

___Bachelor's degree ___Some graduate work

___Master's degree ___Doctoral degree

15. If you have any brothers or sisters, please indicate sex and ages below: (oldest to youngest)

1. Sex ____M ____F Age _____

2. ____ ____ _____

3. ____ ____ _____

4. _____M _____F Age _____

5. _____ _____ _____

6. _____ _____ _____

7. _____ _____ _____

(If you need additional space, please use the back of this page.)

16. Are there any other adults living with you?

___Yes ___No

If yes, indicate the sex and ages below:

1. Sex ____M ____F Age ____

2. ____ ____ ____

3. ____ ____ ____

(If you need additional space, please use the back of this page.)

17. If your parents are married to each other, please answer the following. Do not answer if your parents are divorced or separated.

A. Was your father in the home all the time (except for short trips for no more than two weeks at a time for vacation or business purposes) when you were growing up?

___Yes ___No

If your answer is "no," please explain on the back of this page.

B. If your father was not in the home consistently, how old were you when he left home? Age _____

C. How much contact did you have with your father after he left home?

____daily ___weekly ____monthly ___every 3 months

____every 6 months ____once a year

____other (explain _____)

Number_____

Age _____

Date _____

PCR QUESTIONNAIRE II FATHER-DAUGHTER

Siegelman-Roe

Here are 50 statements which describe different ways that fathers act towards their daughters. Read each statement carefully and think how well it describes how your father acted while you were growing up. Think especially about the time before you were 12.

Before each statement there are four lines. These are labelled VERY TRUE; TENDED to be TRUE; TENDED to be UNTRUE; VERY UNTRUE. Put an X on the line that indicates how true you think each statement was of your father.

For example, if your memory is that your father often let you off easy when you did something wrong, you would mark the item as follows:

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
____	____	____	X	1. never let me off easy when I did something wrong

PCR QUESTIONNAIRE II FATHER-DAUGHTER

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	1. was genuinely interested in my affairs
___	___	___	___	2. punished me hard enough when I misbehaved to make sure I would not do it again
___	___	___	___	3. spoiled me
___	___	___	___	4. let me know I was not wanted
___	___	___	___	5. set very few rules for me
___	___	___	___	6. discussed what was good about my behavior and helped to make clear the desirable consequences of my actions
___	___	___	___	7. made it clear that he was boss
___	___	___	___	8. relaxed rules and regulations as a reward
___	___	___	___	9. was too busy to answer my questions
___	___	___	___	10. gave me as much freedom as I wanted
___	___	___	___	11. made me feel wanted and needed
___	___	___	___	12. never let me get away with breaking a rule
___	___	___	___	13. rewarded me by letting me off some of my regular chores
___	___	___	___	14. did not spend any more time with me than he had to
___	___	___	___	15. let me off easy when I did something wrong
___	___	___	___	16. made me feel what I did was important
___	___	___	___	17. spanked or whipped me as punishment
___	___	___	___	18. gave me candy or ice cream as a reward
___	___	___	___	19. did not take me into consideration in making plans

PCR QUESTIONNAIRE II FATHER-DAUGHTER

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	20. did not want me to play rough outdoor games for fear I might be hurt
___	___	___	___	21. talked to me in a warm and affectionate way
___	___	___	___	22. demanded unquestioning respect
___	___	___	___	23. made others give in to me
___	___	___	___	24. ridiculed and made fun of me
___	___	___	___	25. let me stay up as late as I liked
___	___	___	___	26. tried to help me when I was scared or upset
___	___	___	___	27. punished me by sending me out of the room or to bed
___	___	___	___	28. gave me special attention as a reward
___	___	___	___	29. acted as if I did not exist
___	___	___	___	30. let me do pretty much what I wanted to do
___	___	___	___	31. respected my point of view and encouraged me to express it
___	___	___	___	32. punished me by being more strict about rules and regulations
___	___	___	___	33. let me go to parties or play with others more than usual as a reward
___	___	___	___	34. complained about me
___	___	___	___	35. did not object to my loafing or daydreaming
___	___	___	___	36. tried to help me learn to live comfortably with myself
___	___	___	___	37. wanted to have complete control over my actions

PCR QUESTIONNAIRE II FATHER-DAUGHTER

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	38. rewarded me by giving me money or increasing my allowance
___	___	___	___	39. ignored me as long as I did not do anything to disturb him
___	___	___	___	40. did not object when I was late for meals
___	___	___	___	41. encouraged me to bring friends home and tried to make things pleasant for them
___	___	___	___	42. taught me that he knew best and that I must accept his decisions
___	___	___	___	43. wanted me to have at least as large an allowance as my friends
___	___	___	___	44. did not try to help me learn things
___	___	___	___	45. was easy with me
___	___	___	___	46. made it easy for me to confide in him
___	___	___	___	47. expected prompt and unquestioning obedience
___	___	___	___	48. gave me new things as a reward, such as toys
___	___	___	___	49. believed a child should be seen and not heard
___	___	___	___	50. did not bother much about enforcing rules

Number_____

Age _____

Date _____

PCR QUESTIONNAIRE II FATHER-SON

Siegelman-Roe

Here are 50 statements which describe different ways that fathers act towards their sons. Read each statement carefully and think how well it describes how your father acted while you were growing up. Think especially about the time before you were 12.

Before each statement there are four lines. These are labelled VERY TRUE; TENDED to be TRUE; TENDED to be UNTRUE; VERY UNTRUE. Put an X on the line that indicates how true you think each statement was of your father.

For example, if your memory is that your father often let you off easy when you did something wrong, you would mark the item as follows:

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
____	____	____	X	1. never let me off easy when I did something wrong

PCR QUESTIONNAIRE II FATHER-SON

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	1. was genuinely interested in my affairs
___	___	___	___	2. punished me hard enough when I misbehaved to make sure I would not do it again
___	___	___	___	3. tried to get me everything I wanted
___	___	___	___	4. let me know I was not wanted
___	___	___	___	5. let me spend my allowance any way I liked
___	___	___	___	6. made me feel what I did was important
___	___	___	___	7. took away my toys and playthings when I was bad
___	___	___	___	8. spoiled me
___	___	___	___	9. was too busy to answer my questions
___	___	___	___	10. set very few rules for me
___	___	___	___	11. made me feel wanted and needed
___	___	___	___	12. made it clear that he was boss
___	___	___	___	13. gave me new books or records as rewards
___	___	___	___	14. did not spend any more time with me than he had to
___	___	___	___	15. gave me as much freedom as I wanted
___	___	___	___	16. talked to me in a warm and affectionate way
___	___	___	___	17. would not let me play with other children when I was bad
___	___	___	___	18. praised me before my playmates
___	___	___	___	19. paid no attention to what I doing in school

PCR QUESTIONNAIRE II FATHER-SON

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	20. let me off easy when I did something wrong
___	___	___	___	21. tried to help me when I was scared or upset
___	___	___	___	22. spanked or whipped me as punishment
___	___	___	___	23. gave me candy or ice cream as a reward
___	___	___	___	24. did not take me into consideration in making plans
___	___	___	___	25. gave me a choice of what to do whenever it was possible
___	___	___	___	26. respected my point of view and encouraged me to express it
___	___	___	___	27. frightened or threatened me when I did wrong
___	___	___	___	28. made others give in to me
___	___	___	___	29. complained about me
___	___	___	___	30. let me do pretty much what I wanted to do
___	___	___	___	31. made me feel proud when I did well
___	___	___	___	32. demanded unquestioning respect
___	___	___	___	33. gave me special attention as a reward
___	___	___	___	34. did not try to help me learn things
___	___	___	___	35. did not tell me what time to be home when I went out
___	___	___	___	36. reasoned with me and explained possible harmful consequences when I did wrong
___	___	___	___	37. punished me by being more strict about rules and regulations

PCR QUESTIONNAIRE II FATHER-SON

VERY TRUE	TENDED to be TRUE	TENDED to be UNTRUE	VERY UNTRUE	My father
___	___	___	___	38. hugged me, kissed me, petted me when I was good
___	___	___	___	39. ignored me as long as I did not do anything to disturb him
___	___	___	___	40. did not object when I was late for meals
___	___	___	___	41. was willing to discuss regulations with me, and took my point of view into consideration in making them
___	___	___	___	42. taught me that he knew best and that I must accept his decisions
___	___	___	___	43. gave me new things as a reward, such as toys
___	___	___	___	44. paid no attention to me
___	___	___	___	45. was easy with me
___	___	___	___	46. made it easy for me to confide in him
___	___	___	___	47. expected prompt and unquestioning obedience
___	___	___	___	48. hated to refuse me anything
___	___	___	___	49. avoided my company
___	___	___	___	50. did not bother much about enforcing rules

For the following question please check the rating that indicates to what extent each item applied to your father during the years when you were a child growing up.

	Very Frequently	Frequently	Sometimes	Seldom	Very Seldom
Home for lunch.					
Away from home and children on the weekends.					
Out in the evening at least two nights a week.					
Home afternoons when children come home from school.					
Away from home and children for weeks and months at a time.					
Had breakfast with family and children.					
Missed supper with children at least two nights a week.					
Away from home for days at a time.					
Home all day with family and children.					
Out in the evening at least four nights a week.					

On the following page, you will be shown a large number of personality characteristics. We would like you to use those characteristics in order to describe yourself. That is, we would like you to indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

Example: sly

Mark a 1 if it is NEVER OR ALMOST NEVER TRUE that you are sly.

Mark a 2 if it is USUALLY NOT TRUE that you are sly.

Mark a 3 if it is SOMETIMES BUT INFREQUENTLY TRUE that you are sly.

Mark a 4 if it is OCCASIONALLY TRUE that you are sly.

Mark a 5 if it is OFTEN TRUE that you are sly.

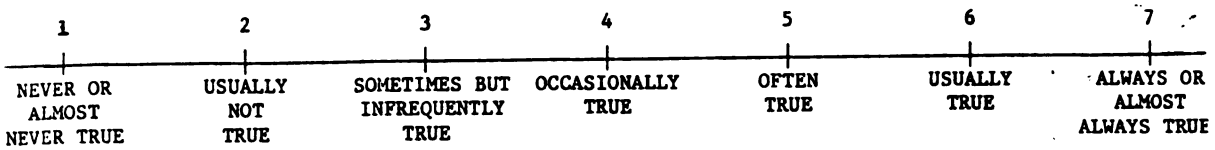
Mark a 6 if it is USUALLY TRUE that you are sly.

Mark a 7 if it is ALWAYS OR ALMOST ALWAYS TRUE that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly," never or almost never true that you are "malicious," always or almost always true that you are "irresponsible," and often true that you are "carefree," then you would rate these characteristics as follows:

Sly	3
Malicious	1

Irresponsible	7
Carefree	5



Self reliant	
Yielding	
Helpful	
Defends own beliefs	
Cheerful	
Moody	
Independent	
Shy	
Conscientious	
Athletic	
Affectionate	
Theatrical	
Assertive	
Flatterable	
Happy	
Strong personality	
Loyal	
Unpredictable	
Forceful	
Feminine	

Reliable	
Analytical	
Sympathetic	
Jealous	
Has leadership abilities	
Sensitive to the needs of others	
Truthful	
Willing to take risks	
Understanding	
Secretive	
Makes decisions easily	
Compassionate	
Sincere	
Self-sufficient	
Eager to soothe hurt feelings	
Conceited	
Dominant	
Soft-spoken	
Likable	
Masculine	

Warm	
Solemn	
Willing to take a stand	
Tender	
Friendly	
Aggressive	
Gullible	
Inefficient	
Acts as a leader	
Childlike	
Adaptable	
Individualistic	
Does not use harsh language	
Unsystematic	
Competitive	
Loves children	
Tactful	
Ambitious	
Gentle	
Conventional	

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