This is to certify that the

thesis entitled

PARENTAL INFLUENCES AND THE DEVELOPMENT
OF ACTIVITY PREFERENCES AND
PERCEIVED COMPETENCE IN PRESCHOOLERS

presented by

Kathy Ann Durda

has been accepted towards fulfillment
of the requirements for

M.A. degree in Psychology

Ellen A. Strommen

Major professor

Date June 20, 1979

PARENTAL INFLUENCES AND THE DEVELOPMENT OF ACTIVITY PREFERENCES AND PERCEIVED COMPETENCE IN PRESCHOOLERS

By

Kathy Ann Durda

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1979

ABSTRACT

PARENTAL INFLUENCES AND THE DEVELOPMENT OF ACTIVITY PREFERENCES AND PERCEIVED COMPETENCE IN PRESCHOOLERS

By

Kathy Ann Durda

The present study examined various dimensions of the parent-child relationship, specifically: if parents' values were related to children's activity preferences; if parents' values were more highly related to children's activity preferences than were parents' own activities; and if parents' reported childrearing behavior was related to children's feelings of competence.

Preschool children's responses to two picture tests, the Activity Preference test (developed by the author) and the Perceived Competence test (modified version of Harter's (1978) "Pictorial Perceived Competence Test") were recorded. Parents' (both mothers and fathers of each family) responses to three questionnaires, Parent Values, Parent-Child Situations, and Parent Activity (developed by the author) were also obtained.

The stepwise multiple regression analyses showed minimal support for the three predicted relationships. In one of three activity categories, parents' values and parents' reported behavior were found to be significantly correlated with child activity preference and perceived competence, respectively.

Kathy Ann Durda

Problems with reliability and validity of the measures and suggestions for more appropriate item construction were discussed. Implications for future research were given.

To my parents, Irene and Paul

for their love and support.

ACKNOWLEDGMENTS

First I wish to thank the members of my committee for their patience over the past two years.

To Ellen Strommen, who served as the Chairperson of my thesis committee. I wish to express my profound appreciation for her supervision and support throughout the course of my graduate school experience and in every aspect of this research. Her contribution to my deeper understanding of the theoretical implications of ideas I would consider has been invaluable. Equally valuable has been her support and understanding during the completion of this thesis, a task which at times seemed never-ending.

To Gary Stollak, who served as a committee member, I wish to express my gratitude most for the inspiration I have drawn from him over the past three years. The model which Gary has provided of a scholar who combines both the practical and philosophical in his approach to the study of human behavior is one from which I can continually learn. Such an approach has been a valuable contribution to my understanding of this research.

To Helen Benedict, who also served as a committee member, I wish to express my sincere respect for her scholarly contributions to all aspects of this research. Her

criticisms and suggestions were most valuable to my conceptualization and understanding of this research.

Further, I wish to express my appreciation to the children, parents and teachers of the following day care centers, who helped make this study possible: The Laboratory Preschool, Spartan Cooperative Nursery School and MSAU Daycare Center, (all of Michigan State University), Christian Child Day Care Center, Little People's Day Care Center, Michigan Early Childhood Center, People's Church Preschool Nursery and Edgewood Village Children's Center.

Finally, I wish to thank my "alternative committee," those friends who have supported, counseled, encouraged, and inspired me throughout various stages of this endeavor, in particular, Melissa J. Knauer and Brandi Norman.

Lastly, my thanks to the "committee-at-large"--all those people from computer center consultant to fellow grad student who have supported my belief in the importance of a cooperative approach to the analysis and attempted solution to problems we face both individually and communally.

TABLE OF CONTENTS

Chapter Page

LIST OF TABLES

CHAPTER I

INTRODUCTION AND REVIEW OF THE LITERATURE

Various theories have addressed the issue of the nature of competence. The traditional drive model of Hull posited the reduction of deficit motives and secondary reinforcement as explanations of motivation. The psychoanalytic instrict theory explained motivation on the basis of anxiety reduction. However, more recent theorists view drive theories as being incomplete motivational models of both human and animal behavior. There theorists present evidence suggesting that such behaviors as exploration, curiosity, mastery, and play are a general attempt to deal competently with one's environment. As such, the motivation for such behaviors is seen as having an intrinsic rather than an extrinsic basis.

White (1959) and Hunt (1965) present the most complete models of intrinsic motivation. White (1965) presents a detailed model of "effectance motivation," his term describing the motive of efficacy which leads the organism toward competence. The physical and particularly the social environment are presented as playing quite an influential role in the development of effectance motivation. Differentiation of intrinsic motivation is seen to occur through differing patterns of reinforcement, availability of experiences, as

well as innate abilities.

While White's model considered effectance motivation as a unitary concept, Harter (1978) presents a component model of effectance motivation which includes several motivational domains such as mastery attempts, the nature of reinforcement, self-esteem (perceived competence) and failure or success. The construct of effectance motivation as presented by White was seen as too global and imprecise, while a component model was seen to allow more precise developmental questions to be asked.

Harter emphasized the socializing environment as playing an extremely important role in the differentiation of motivation and competence. Parental values and patterns of reinforcement are seen to affect not only the child's particular interests and mastery goals, but also to affect what methods the child will utilize to reach those goals in relation to the strengths of his/her motivation.

In line with Harter's conception of a component model of competence, the present study focused upon the relationship between the socializing environment (specifically parents' values and reported behavior in interaction with their child) and children's attitudes (specifically their activity preferences and self-perceptions of competence). Research into parents' values as well as self-esteem, in, general, has looked at such constructs as unitary. The present research adopts Harter's component approach in an attempt to gain a

clearer understanding of the development and differentiation of various dimensions of effectance motivation.

Theories of Intrinsic Motivation

Hunt (1965) has postulated an information based concept of intrinsic motivation to explain such activities as play and curiosity. His formulation employs the principle of adaptation to repeatedly encountered events or inputs. By virtue of this principle, each level of complexity repeatedly encountered comes to fall below the optimal level, and the organism seeks therefore an increasing level of complexity. Hunt points out that the opportunity to encounter a wide variety of situations, objects, and people very likely constitutes an essential kind of experience leading to competence. This seems especially true if the problems encountered are such that the individual must persist in his/her accommodative groping to achieve an end result but can ultimately succeed. Such experiences foster confidence in one's capacities. Hunt suggests that such repeated experiences probably lead to a trait-like second order "learning-set" that is perceived by adults as independence, confidence, and/or competence. This interest in the novel (more complex) provides a motive (of curiosity) for psychological growth that appears to continue throughout like. Individuals differ in the degree of their curiosity and their interest in novelty. Such differences are probably partially based upon

genotypic constitutions, but are also likely to be a function of the range of experiences an individual has had, and the skills which s/he has developed.

White's (1963) model is more global in scope than that of Hunt. He regards behaviors such as exploration and mastery as manifestations of the "urge to competence." He labels this as "effectance," that motive which leads the organism toward competence and is satisfied by a feeling of efficacy. White considers the need to deal effectively with the environment as intrinsic; gratification of this need produces inherent pleasure. A similar conceptualization of competence is implicit in the theories of both Piaget and Erikson.

Intrinsic motivation, the need for being competent and self-determining, is viewed as being inherent to the individual. What forms such motivation takes, and what developmental changes it undergoes are questions which have been addressed more adequately by a number of researchers who have examined the environmental influences upon the child. As a result of the interaction between individual and environment, intrinsic motivation becomes expressed in various ways.

Differentiation of Intrinsic Motivation

White (1959) points out that in young children, effectance motivation may be quite undifferentiated, whereas with additional experience it becomes differentiated into

more specific motives of mastery, cognizance, or achievement. These specific motives would be learned through experiences which emphasize different aspects of effective functioning in relation to the environment, yet effectance motivation is the source of these later differentiated motives. These motives are complex in that they may be influenced by anxiety, extrinsic reward, or unconscious processes.

The differentiation of intrinsic motivation has been discussed by others as well. Elkind (1971) suggests that preferences for stimulus inputs arise out of experiences with various inputs. Kagan (1972) posited that the need to reduce uncertainty is one of the basic motives in humans. The way one attempts to reduce this uncertainty depends on what strategies have been learned. Kagan further suggests that secondary motives (such as autonomy or achievement) become established as the individual interacts with the environment.

Other discussions of differentiation center on more specific components of intrinsic motivation. Deci (1971) views "need for achievement" as a specific motive which differentiates out of the basic need for feelings of competence and self-determination. Environmental influences on achievement motivation are well documented in the literature (Horner, 1968, 1972; McClelland, 1961; Rosen and D'Andrade, 1959; and Winterbottom, 1958).

Rotter's (1954) concept of locus on control can also be seen in terms of the differentiation hypothesis. If a child experiences success and positive reinforcement in his/her interactions with the environment, an internal locus of control becomes established, which further enhances intrinsic motivation. An external control person believes s/he cannot affect the environment, and therefore does not engage in competent and self-determining behaviors. Interactions with the environment affect the way intrinsic motivation develops and changes.

Maddi (1970) in his theory of personality, discusses a core personality common to all humans, and peripheral personalities different for each person. The peripheral personality is a complex mix of core personality and environmental factors. Humans are seen to have an innate intrinsic motivation (search for meaning) which differentiates into various needs for approval, achievement, autonomy, and so on.

Common to the above formulations of intrinsic motivation, we find the view that children are born with a basic, undifferentiated intrinsic motivation, the need for being competent and self-determining in relation to the environment. As a result of interactions with the environment, this motivation becomes differentiated into specific intrinsic motives such as achievement, autonomy and particular mastery goals. Such factors as variety of experience, reinforcement patterns, supportiveness of environment, and success or failure

experiences are seen as important in the process of differentiation. Harter (1978), adopting White's (1959) term "effectance motivation," is the first to offer a comprehensive and empirically useful model for examining the process through which such differentiation takes place.

Effectance Motivation: A Developmental Model

Harter's paper refines and extends White's model of effectance motivation. She deals extensively with the component nature of effectance motivation, the role of social agents and the reinforcing environment, and other correlates of the motive system such as perceived competence and self-esteem. While a complete discussion of Harter's model is beyond the purpose and scope of this review, her emphasis on the developmental process and the role of socializing agents is of central importance to the discussion here. She writes:

> . . . the refinement and extension of White's formulation requires a consideration of the following factors; (a) We must not be content to consider effectance motivation as a global and unitary construct but must move to a consideration of the possible components of this motive system. Furthermore, we must consider the interrelationships among these dimensions, (b) We must view these components within a developmental framework, charting ontogenetic change. Such a procedure would seem to dictate not only a description of changes in both the structure as well as the content of this motive system, but also an examination of the actual process through which developmental change is brought about. That is, we must begin to search for the antecedents of the various components, (c) A search for antecedents will necessarily involve a careful consideration of the role of the socializing agents in one's environment and their effect in

> maintaining, enhancing, or attenuating the effectance motivation components. Such an examination will also highlight individual differences in the strength and structure of this motive system, and hopefully point to their causes, something to which White does not address himself fully . . . (5)

Harter points out that the present effectance motivation construct is simply too global, too imprecise. White did not go beyond speculating that later in life various motives such as cognizance, construction, mastery, and achievement become differentiated. Harter extracted several motivational domains from White's formulation of effectance, although he did not specify particular dimensions. These components of effectance motivation include mastery attempts (behavioral components); the nature of reinforcement; locus of control; dependency vs. internalization of self-reward systems and mastery goals; self-esteem (perceived competence); and failure or success. An examination of the inter-relationships among these components can provide a better understanding of the structure of effectance motivation. More precise developmental questions can be asked as well, such as whether components change in strength with age, whether motivation becomes more differentiated, and whether transformations of components are also involved.

In addition to elaborating the concept of effectance motivation, Harter is concerned with the role of the socializing environment, the omission of which she feels is critical in White's treatment of effectance motivation. She

writes further:

> . . . it would seem that an adequate model must address itself to the role that child-rearing agents play in influencing the developmental course of the components of effectance motivation. To what extent do their actions vis-a-vis the child serve to maintain, enhance, or attenuate these components? What is the nature of this process, and what developmental parameters should be considered?

Harter specifically addresses the influence of the socializing environment, and outlines the dimensions of childcare-giving which seem to be particularly important in the socializing process.

The Socializing Environment

In a refinement of What's position, Harter points out that there are two sources of "intrinsic" motivation. One source is very similar to White's notion of the organism's tendency to attempt to interact with the environment and to experience the resulting feelings of efficacy. This is biologically built into the organism. The second source of intrinsic motivation does have experiential roots to the extent that ". . . (a) the particular mastery goals which the child internalizes are determined in large part by the values of his socializing agents, and (b) the nature and strength of the self-reward system the child develops are a function of the amount and type of social reinforcement he receives" (p. 26). Here we see that it is the parental values and patterns of reinforcement which affect not only the child's

particular interests and mastery goals, but also affect what methods the child will utilize to reach those goals in relation to the strengths of his/her motivation.

Socialization's impact on the child can better be understood when we realize that the very young child must rely primarily on feedback and reinforcement in order to learn appropriate ways of interacting with the social and physical environment. The child is incapable of that level of cognition and behavior which would allow the self-direction of behavior in situationally appropriate ways. Meid (1971) examined the question of developmental differences with respect to the responsiveness of children to different sources of information regarding their performance. Three levels of objective success were included, and three levels of adult-verbal reinforcement or feedback. Of interest was the effect of these conditions on the children's evaluation of their performance and their expectancy of success on a subsequent learning task. For younger (6 yrs.) children it was found that their judgments of future success were based entirely on the social feedback dimension, such that how they performed had no influence on their self-evaluations. Older (10 yr. olds) children took both dimensions into account. We see that for younger children, external and internal control systems are one and the same thing, whereas older children become more capable of utilizing their own self-reward system. Further, we can see this reinforcement process leading to the establishment of preferences.

Walls and Divesta (1970) in an examination of the cognitive factors involved in conditioning children's preferences, found that frequency of association of rewards with a critical stimulus was clearly related to the development of preferences. Parents (and other socializing agents) find one expression for their values and expectations through the use of reinforcement. Thus, the development of preferences and the child's internal reward system cannot be examined outside of the context of the socializing experience.

Theories of Socialization

To explain the processes underlying socialization, theories of imitation, identification, and social learning have been empirically examined. (Bandura, Ross and Ross, 1963; Sears et al., 1965). The concept of internalization has been used to describe the child's achievement of self-direction which develops by learning the appropriateness of behaviors and responses through interaction with others. Children internalize the values, attitudes and expectations of their parents, especially if the parent-child relationship is characterized by warmth and psychologically oriented control (Baumrind, 1967; Hoffman, 1960; Maccoby, 1961). However, internalization of expectations is not seen as identical to imitation or identification. Children can learn and internalize quite different patterns of behavior than their parents display or expect. Concerning sex-role development, Sears et al. (1965) point out that sex-role development is more

influenced by parental attitudes toward control of the child than by any aspect of the availability of a masculine or feminine model. However, research does suggest that a parent who models those behaviors which are being reinforced and expected from the child will be more successful than a non-modeling parent (Bandura and Mischel, 1965). Expectations of the parent as expressed in specific parental actions directed toward the child are suggested to play a more influential role in child development than actual modeled parental characteristics. Role theory, in the field of social psychology, addresses itself to this issue (Brim, 1960; Mead, 1934; Johnson, 1963).

Role theory is primarily oriented to performance, to ongoing interactions rather than response acquisition. The focus is on parental expectations for a particular child's behavior as opposed to general parental characteristics. Parents may sanction certain behaviors in the child without performing them themselves. In the course of interactions over time, the child develops an understanding of what is expected of him/her. Hill (1967) offers support for the role theory of socialization. He found a stronger relationship between parental expectations for their 7th grade sons and the sons' attitudes toward mathematics (parent-son accordance) than the relationship between parents' and sons' attitudes toward math (parent-son similarity). Hill discussed these findings in terms of their lack of fit with traditional

identification theories of sex-role learning. Results suggesting quite different patterns of parent-child interactions for mothers and fathers are also found in research reported by Aberle and Naegele (1952) and Tasch (1952). Fathers reported different expectations for sons than for daughters. Goodenough (1957) found that mothers were less concerned about the child's appropriate sex-typed behaviors than were fathers. Fathers also reported they were actively involved in implementing sex-typing of their children, while mothers reported they did not consciously attempt to influence sex-typing. Brim (1960) points out that behaving in accord with internalized expectations of significant others is particularly likely when interaction is frequent and when the other has the power to dispense sanctions (positive reinforcement and punishment) contingent upon whether behaviors are in accord with expectations. In general, it is clear that parental expectations may be quite influential in shaping the child's self-image, interests, and behavior. Parents clearly have expectations regarding appropriate dress, behavior and interests of their child. The success of their influence upon the child is mediated, however, by the general quality of the parent-child relationship, as mentioned above (Baumrind, 1967).

The importance of parental expectations can clearly be seen in the achievement motivation literature. Rosen and D'Andrade (1959) report that parents of high achieving boys had higher achievement expectations for their sons.

Winterbottom (1958) reports that mothers who expected various behaviors indicative of independence and achievement had sons who developed these characteristics. Baumrind (1967, 1971) found high achievement behavior to be associated with explicit maternal training of such behaviors. Other studies of achievement (Horner, 1969, 1972) found sex differences in willingness to achieve, the suggestion being that success and competitiveness are not part of the feminine role, hence it is not part of the expectation set for a woman to be achieving.

Mellon and Crano (1978) investigated the causal relationship between teachers' expectations and children's academic performance. In a four-year longitudinal study, cross-lagged panel correlational analyses indicated that teachers' expectations influenced children's achievement to an extent appreciably exceeding that to which children's performance impinged on teachers' attitudes. Here is partial support, then, that expectations are not necessarily based upon the child's actual capabilities. We might hypothesize that particular values and attitudes of parents directly affect the child in a similar manner to that of teachers.

Harter (1978) also addresses this issue of a mismatch between children's performance and the reinforcement they receive for such behavior. She points out that typically positive reinforcement co-occurs with success, lack of reinforcement or punishment co-occurs with failure. However,

there may also be situations in which a child's independent mastery attempts are not rewarded, but ignored or punished, as well as situations in which the child's mastery attempts have objectively failed, but adults praise and encourage these strivings. Hess and Shipman (1965) point out that parental instruction can lead to a reduction in effective functioning. They discuss the importance of self-esteem, suggesting that the child who starts out with a low level of self-esteem will get caught up in a vicious cycle of failure and increasingly lower levels of self-esteem. Parents who foster low self-esteem for any particular area of competence in their children may be fostering just such a cycle. The potentially detrimental effect of parental socialization is also discussed by Bannister and Agnew (1976). They point out that varying patterns of family relationships and differing modes of formal education may help or hinder the child's developing sense of self. They write that the child may ". . . develop notions of self which are too specialized, too designed to fit the family, so that when he moves to school he may be faced with interpersonal events that are entirely outside the range of concurrence with his constructs" (p. 123).

Intrinsic motivation can be further undermined by "overjustification," the addition of external rewards. An increasing body of literature demonstrates that overjustifying performance, or adding of an external reward, shifts the attribution about performance from intrinsic to extrinsic

motivation. Anderson et al. (1976) found that external rewards, expected to be perceived as sufficient to justify performance, reduced subsequent intrinsic motivation during a free play period. Harter (1978), in a study examining children's motivation in an anagram task, found differences between children who were told the anagram task was a game and children who were told they were working for a grade. Children working for grades (external reward) chose significantly easier anagrams to perform.

Above and beyond the child's abilities, then, is the importance of the socializing environment's response. This is not to suggest a uni-directional pattern of causation (cf. Bell, 1968). In a simulation of parent-child interaction, Marcus (1975) found that children were quite effective in eliciting parental sanctions for independent and dependent behavior. There exists a complex relationship between parent and child: parental values and expectations are expressed partially as a function of the child's abilities and behaviors and vice versa. However it seems clear that a major function of the socialization process is differentiation. The parents are the young child's primary socialization agents who differentially reinforce their children in accord with their own values and expectations. A search for variables which mediate the process by which parents' expectations become expressed may be fruitful. Harter (1975) suggests that "perceived motivation" (self-esteem) may be one such mediator.

Harter (1975, 1975a, 1976a, 1978) reports an interesting pattern of findings from her studies of intrinsic motivation. On those types of tasks where either the literature (Maccoby & Jacklin, 1974) reveals sex differences in favor of boys, or where the tasks seem to be somewhat sex-stereotyped and preferred by boys, boys have demonstrated more intrinsic motivation than have the girls. However, on tasks of verbal ability, e.g., anagrams, where girls have been found to be equally, if not more, competent than boys, no sex differences in intrinsic motivation have been obtained (Harter, 1976a). For girls, the need for adult approval was found to be a more important motivational determinant of intrinsic motivation than was ability on the task. Considerable research support exists for the proposition that young girls accept the demands of socialization more readily than boys (Minton, Kagan, & Levine, 1971; Sears, et al., 1965; Baumrind, 1971). Harter's findings seem to be interpretable in light of such research. One question in need of consideration is how such differences in motivation develop.

In order to examine the lack of correspondence between actual performance on a task and the child's intrinsic motivation, Harter suggests the need for an additional mediation variable to be taken into account in predicting motivation on a task. The child's view of his/her abilities (perceived competence) is viewed as "an important correlate and mediator of the child's intrinsic motivation to be effective,

to engage in independent mastery attempts in the anticipation of a competent outcome" (p. 1; Harter, 1978).

Perceived Competence

Harter (1978) writes that White did not discuss self-esteem in his general theory of competence paper (1959) but he did refer to it later (White, 1963), expressing the view that the roots of self-esteem lie in the early competence experience of the child. In Harter's model, the concept of self-esteem is relatively specific, and is referred to as "perceived competence."

Harter (1977) presents the "Perceived Competence Scale for Children" which she devised in order to further examine this and other antecedents of motivation. In line with her emphasis on the components of a construct such as competence, she also adopts a differentiated view of perceived competence. The focus is on the possible skill domains which would be relevant to the child. Three general competence areas seemed appropriate: (a) cognitive competence, (b) social competence and (c) physical competence, primarily in athletics. In addition, a fourth subscale assessing general feelings of worth or self-esteem is included.

The purpose of this type of scale structure is to permit one to examine the profile of a child's perceived competence scores across these different domains. Thus it is not expected that subscale scores will necessarily correlate highly. Harter points out that the relationship among these

four subscales will depend on the value which both the individual as well as the social mileu places on a particular activity. In order to understand a child's perceived competence, and the particular profile which emerges, other variables will need to be taken into account, such as the relevant peer culture, and the primary adult culture in which the child must function.

The "Perceived Competence Scale for Children" is devised for use with a grade school population. Harter (personal communication) is also working concurrently on the construction and validation of a pictorial version for younger children (Pictorial Perceived Competence Scale). The pictorial version of the perceived competence scale seems to be a potentially valuable measure in an examination of the antecedents of effectance motivation. Such an examination would require looking at a preschool population considerably younger than the target population of the verbal version of the scale. An understanding of the development of intrinsic motivation (effectance motivation), perceived competence (self-esteem) and the differentiation of these factors will require the study of the young child. The present study is directed to just such an examination.

Summary and Statement of Hypotheses

Early development of motivation, competence, and self-esteem (perceived competence) is affected by the nature of

reinforcement which the child receives as well as the general quality of the parent-child relationship. This brings us back to the central question of the process of socialization and its effect on development. Parents, through their patterns of reinforcement and punishment, and their definition of what is expected of the child, are important agents in the development of the child's sense of competence (perceived competence), effectance motivation to perform in various areas of competence, and their actual performance. Similarly, children elicit particular responses from their parents and the socializing environment through their own behavior, abilities and needs.

Any comprehensive understanding of perceived competence depends on the examination of a number of factors, both internal to the child, and external (the socializing environment). Further, any understanding of competence and effectance motivation depends on understanding those factors that mediate "mastery" (competence) and the "motivation to master" (effectance motivation). The socializing environment has been presented in this review as extremely important in the development of the young child. An attempt was made in this study to examine the relationship between some childrearing factors and various dimensions of children's attitudes in an attempt to understand more clearly the role which socialization (parental) plays in the development and differentiation of mastery goals and perceived competence.

Specifically, the following childrearing variables were examined through the use of questionnaires: (a) parents'

expectations for child's competence in the three areas defined by Harter (1978); (b) parents' own preferred areas of activity; (c) parents' report of behavior directed toward children in situations involving the three competence areas.

The following variables in regard to the child were examined: (a) preferred competence area, and (b) child's perceived competence.

The relationship between these childrearing and child variables was examined in relation to the following hypotheses:

H_1: Parental expectations of the child's competence (as measured by the Parent-Values test) will be positively related to the child's activity preferences (as measured by the Activity Preference test) in each of three activity areas.

H_2: Parents' reported childrearing behavior (as measured by the Parent-child Situations test) will be positively related to the child's perceived competence (as measured by the Perceived Competence test) in each of three activity areas.

H_3: Parent-child accordance (child preferences matching parental expectations) will be greater than parent-child similarity (match of child's preference with parent preferences).

CHAPTER II

METHOD

Subjects

Sixty-one children (30 female, 31 male) and their parents served as subjects in the present study. Criteria for inclusion in the study were that the children be between the ages of 2 1/2 and 6 years old, and that both parents participated in the study.

The subjects were obtained from the Early Childhood Laboratories of Michigan State University, and five area childcare centers and preschools. Approval for the study was obtained from the University Committee for Research Using Human Subjects; the Preschool Research Committee at Michigan State University; the Parent Board of the MSAU Daycare Center; and the directors and/or parent boards of the remaining centers. Parents were contacted by letter (see Appendix A) to enlist their cooperation. All further contact and transferral of materials occurred through the aid of the staff.

Demographic information was not obtained in the present study. However general statements can be made as to the representativeness of the sample reported on here. Two of the eight childcare centers drew from predominantly student

populations. The remaining six centers, all located within a short distance of Michigan State University, provided services for predominantly middle- to upper middle-class families. Parents from these families were likely to be engaged in professional pursuits either within or outside of the university. Thus, the sample reported here represents a relatively homogeneous group of parents, closely associated with the university community.

Procedure

Parents who responded affirmatively to the introductory letter were sent a packet of questionnaires which they were asked to return to the school office.

Children of volunteering parents were given two picture tests, administered to each child individually in an unused room or quiet area in his/her preschool. The experimenter (present author) spent considerable time in each day-care center in order to become acquainted with the children and their daily routine, and to insure cooperation. Only two children had to be left out of the study due to their lack of interest in participating. One additional child was left out because he failed to respond in an attentive way to the materials and situations.

Each child was told that the E had some pictures that she wanted to show the child. The subject was then taken to a quiet room (sometimes a corner in the room off from main

areas of activity), and given the picture tests. Total testing time ranged from 10-20 minutes. Children who were restless were encouraged to continue, although they were told they could stop at any time. Fifty-nine children completed both tests within a single session. The remaining two finished during a second session.

Test Measures

Two tests were administered to the children: the Perceived Competence test and the Activity Preference test. The parents completed three questionnaires: Parent-Values; Parent-Child Situations; and Parent Activity measures.

Activity Preference Test

Picture stimuli used in this test were adapted from materials designed by Educational Design Associates (1972). In this test, children were presented with 15 pairs of pictured activities (see Appendix B). They were asked to choose their favorite activity of each pair. The 15 pairs of activities consisted of pictures of a child (same sex as the subject) engaged in various activities. The picture sets were identical for both female and male subjects except for simple changes of hair length or style.

Each of three competence areas (physical [P], cognitive [C], social [S]) was represented by three activities. Pair construction involved placing the different competence areas together an equal number of times, resulting in five

pairs of the P-C, C-S, and S-P comparisons.

Each activity (or picture) was explained before the child was asked to make a choice. For example, in one trial a child was told, "Here is a picture of a girl reading a book, and this is a picture of a girl riding a bicycle. Would you rather read a book, or ride a bicycle? Which is more fun?" Scoring of this measure consisted of taking the total number of times a child preferred each item of an activity category.

The present measure was a shortened version of the Activity Preference test originally devised by the author. In order to represent all possible pairs of nine activities (excluding same category pairs), 27 trials were required. Given the attention span and interest level of the young child, it was decided that this would possibly result in a testing session which would be too long for the child to remain attentive. Pilot testing of this version of the test revealed that it would have to be shortened in order to insure that all children would be able to complete the test. Criteria for construction of the final test version reported above were as follows: paired items must be from different categories; no pairs must be repeated; and an equal number of pairs in each of the possible activity category combinations (P-C, C-S, S-P) must be used.

Perceived Competence

The Perceived Competence test used in this study was modeled upon Harter's "Pictorial Perceived Competence Scale."

In Harter's version (still in construction) children are shown pictures of a child performing at various levels of competency in a particular skill. A sample item of her version consists of four pictures of a child in various activities on a "jungle gym." In the low competence scene, a child is seen sitting and watching others climb. In the high competence scene, a child is seen standing on one foot at the top of the bars. This picture format was adapted for use in the construction of the present Perceived Competence test (see Appendix B).

Nine activities, each depicted by three competency levels, were presented on an 8 1/2 x 15" card. Children were told by the experimenter, "Now I am going to tell you some stories about children, and you can tell me which child you are most like." The stories consisted of a simple description of a child in each of the three competency levels, and the subject responded by choosing the pictured child that was most like him/herself.

Scores for this measure were the competency levels chosen by the child (low level = 1, middle level = 2, high level = 3). Competence category scores were obtained by summing across items in each category.

Parent Values

This measure was constructed by the author in order to examine parents' expectations for their children in

various areas of competence. The measure consisted of a 15 item list of activites or skills which the parents were to rate in terms of how much importance they place on each for their child (see Appendix C). A one-to-six Lickert type scale was used to rate the items. The items were adapted from the items which Harter (personal communication) reports in her "How important is it to you" questionnaire, which is directed toward 3rd to 6th grade children. There are three competence areas represented in Harter's scale: physical, social, and cognitive competence. An attempt was made to preserve the content domain as much as possible when adapting the items for this study. Harter's social competence subscale tapped interpersonal competence with regard to one's peers. The social subscale used here preserved this orientation. However, items involving interaction with adults were also included to better fit the age group being studied. Harter's cognitive subscale includes school as well as non-school performance, examples being "doing well at schoolwork" and "remembering things easily." A similar orientation was maintained in the selection of cognitive items for this measure. In the area of physical competence, however, there was some divergence in content and item selection from Harter's scale items. She focused primarily on athletic skills, whereas the focus in this study was on physical activities such as climbing a tree, jumping, and participation in outdoor activities. Such itmes were seen to be more in

keeping with the activities of preschoolers.

Parents were asked to rate each item in terms of how important they felt it was for their child to exhibit or achieve competency in that activity. All of these items refer to positively valued skills. Therefore, parents were first requested to read through the list and then to rate these items' relative importance. To make this relative comparison more concrete, an example was presented in which three positively valued skills were shown to be none-the-less differentially important to a hypothetical rater (see Apprendix C: Instructions for Parent Values).

Subtotal scores for the Parent Values measure are the total of ratings given to items in each of the three competence areas. Thus each parent obtained a category score ranging from 5 to 30 for each of the three competence areas.

The scale reported here was revised once, based upon the reactions and suggestions of the Early Childhood Studies Research Committee. This group consisted of the preschools' coordinators, who therefore were familiar with the subject population which was tested.

Parent-Child Situations

This measure was designed by the author to assess more directly the parents' actual behaviors with their child rather than their attitudes as measured by the previous instruments. The format followed for the measure was reported in Stollak et al. (1973). They used a projective measure

which confronts individuals with a series of hypothetical problem situations and then asks them to write their exact reactions to such situations. Stollak et al. point out that there have been few observational or experimental studies in the important area of adult reactions to problem situations with children, even though such situations are frequently encountered in the parent-child relationship. It is the treatment and/or resolution of these problem interactions that affect the child's feelings toward him/herself and others; and it is here that specific parental attitudes and messages get expressed.

Research on parent-child interactions has suggested that certain parental characteristics play an important role of influence on the child's development in such areas as self-image, achievement motivation, and locus of control among others. It has generally been found, for example, that in childhood, a "positive parent" cluster (parents who are warm, positive, and protective, and less critical) is associated with internality (Chance, 1965; Katkovsky, Crandall, and Good, 1967). However, not all data are consistent with these findings. Katkovsky, et al. (1967) also found that some degree of mild hostility and stress on the father's part is related to female internality.

In addition to the influence of such factors on the development of locus of control, they are also found to be related to overall competency in young children (Baumrind,

1967, 1971). Baumrind discusses the optimal parent as being "authoritative," described as highly nurturant and warm, with high maturity demands and a firm enforcement policy. Parental control, warmth, and reinforcement responses are generally seen as influential agents in fostering optimal development in the child.

Also of concern in any parent-child problem area is the importance of specific problems to either the parent or the child (Stollak et al., 1973). If parents view the problem as relatively trivial, or less important than others, they may communicate this to their child by the way the problem is handled. Thus, children may receive less guidance and support for development in this area. The problem situation is one area in which parental interests and preferences are expressed for the child to perceive. Parents both indirectly and directly make such preferences known to their child. Parents' involvement with the specific problem area then, is an additional variable in need of examination.

The questionnaire used in the present study consisted of three situations describing a parent and child interacting (see Appendix C). In each of these situations, the child is portrayed as having some difficulty in coping competently with that situation. The parent was asked to respond by writing down exactly what s/he would do and say in each situation should it occur to them. Again, the parallel of three competence areas of concern in this study is maintained: the

three situations portrayed physical, cognitive, and social areas of activity.

Ratings of Parent-Child Situations. Parental responses were rated by four trained undergraduates. (The training procedure is discussed further in the Results section.) Rating scales were adapted from Truax and Carkhuff (1967). They presented three rating scales designed to assess the therapist's effectiveness in producing patient personality and behavioral change. The scales were designed primarily for use with live observations or tape recordings of counseling or therapy interview. However, only slight loss in reliability was reported for typescripts of psychotherapeutic interaction. The three scales reported by Truax and Carkhuff were: Accurate Empathy; Nonpossessive Warmth; and Genuineness. Truax et al. report results from a number of studies which indicated moderate to high reliabilities for each of these scales. For Accurate Empathy, the reliabilities ranged from .43 to .89 with an average reliability of .67. For Nonpossessive Warmth and Genuiness, respectively, reliabilities ranged from .48 to .70, and .40 to .83, with average reliabilities of .57 and .55.

In the Parent-Child Situations test, parents were placed in a somewhat similar role to that of the therapist. They were asked to respond to situations in which their child was having some difficulty with competent behavior, such as with liking school. The scales reported above were seen as

offering a useful measure of assessing the parent-child interaction in problem situations as well as the therapeutic interaction which they were specifically designed for. However, adaptation of the scale items to fit the nature of the parent-child interaction was obviously needed.

In the present study, the scales adapted from Accurate Empathy, Nonpossessive Warmth, and Genuiness were called Acknowledgment, Control, and Importance to Parent, respectively (see Appendix D). For each of the three situations, these three dimensions were rated using a five point scale. Low ratings on each dimension were represented by low scores on the scales. Thus, each parent obtained a possible score ranging from one to five for each rating dimension of each of the three situations. The total rating scores for each situation category (obtained by summing across scales) were used as the dependent measures of the Parent-Child Situations test in subsequent analyses. (Rationale and justification of this procedure can be found in the Results section.)

Parent Activity

This measure was designed by the author to assess the parents' interest areas outside of their occupations. Parents were asked to list in rank order six of their most common free-time activities or pastimes (see Appendix C).

This information was used in comparison with the data on parents' expectations for their children's behavior, in an attempt to address the "internalization-identification"

question discussed above. If the identification model holds, children's preferences will resemble their parents' actual activities; if the internalization model holds, children's preferences will be in accord with what their parents expect of them.

Ratings of Parent Activity. Parental responses were rated by the experimenter and one trained undergraduate. (The training procedure is discussed further in the Results section.) In line with the focus on the three areas of physical, social, and cognitive competence, parental responses were scored in terms of their fit into one of these activity categories (see Appendix D for description of rating categories). Those activities which did not clearly fall into one of the rating categories were left uncoded. This included such activities as shopping, watching t.v., listening to music, playing a musical instrument, cooking and acting. While some of these activities were simply recreational or relaxing in nature, most could only be described as a complex mixture of all three categories. The total rating scores obtained for each activity category were used as the dependent measures of the Parent Activity test in subsequent analyses.

Design and Statistical Analysis

To examine relationships among the parent and child measures, correlational analysis was employed. In order to examine the relationships between specific parent and child

measures, step wise multiple regression analysis was used. Step wise multiple regression was also used in order to determine whether sex or age of child was related to different patterns of parental responses.

CHAPTER III
RESULTS

The Dependent Measures

Since the results of the tests of the main hypotheses of this study are affected by the performance of the individual measures, the reliabilities, summary statistics, correlations, and factor analyses for individual test measures will be presented first.

Activity Preference

Reliability. Part-whole correlations were used to assess the internal consistency of the three categories of the Activity Preference measure. Table 1 presents the part-whole correlations, and category scale alphas. Correlations as well as alphas were quite low; alphas ranged from .10 to .41. This was partially a function of the small number of items in each test (9) and the number in each category (3).

Correlations Among Categories. Due to the fact that this measure uses forced choice, all intercorrelations between categories were found to be negative. The choice of one category item ruled out the choice of the other item of the pair presented. Cognitive preference correlated -.66 and -.52 with the social and physical categories respectively, while social preference correlated -.30 with physical preference.

TABLE 1

Part-Whole Correlations and Reliabilities for Activity Preference and Perceived Competence Classified by Category

Category	Item	Part-Whole Correlation	Alpha
Activity Preference			
Physical	1	-.09	.10
	2	.18	
	3	.08	
Social	1	.12	.20
	2	.18	
	3	.05	
Cognitive	1	.47	.41
	2	.13	
	3	.20	
Perceived Competence			
Physical	1	.23	.45
	2	.41	
	3	.19	
Social	1	.36	.21
	2	.11	
	3	-.06	
Cognitive	1	-.03	.06
	2	.28	
	3	-.12	

Item Means and Standard Deviations. The low part-whole correlations can be better understood by an examination of the mean responses for items. Table 2 presents the mean frequency and standard deviations for Activity Preference.

TABLE 2

Means and Standard Deviations for Activity Preference Scores

Classified by Category and Sex

Item #	Category	Girls Mean	Girls SD	Boys Mean	Boys SD	Combined Mean	Combined SD	Significance
	Physical							
1)	Riding a bicycle	2.07	.94	2.80	1.00	2.43	1.03	.018
2)	Climbing a tree	1.93	.79	2.17	.87	2.05	.83	
3)	Climbing through a tunnel	1.67	.96	1.77	.77	1.72	.87	
	m	1.56		2.24		2.07		
	Cognitive							
4)	Reading a book	1.27	.98	1.27	1.02	1.27	.99	
5)	Playing with puzzles at school	1.60	1.13	1.50	1.08	1.55	1.10	
6)	Coming to school with favorite toy to tell friends about	1.23	.90	1.33	.99	1.28	.94	
	m	1.37		1.37		1.37		
	Social							
7)	Playing with a friend	1.47	.78	1.33	.84	1.40	.81	
8)	Taking a walk with a friend	2.27	1.11	1.37	.99	1.82	1.14	.004
9)	Sharing toys with two friends	1.50	1.01	1.47	1.01	1.48	1.00	
	m	1.74		1.39		1.57		

Note: The significance values refer to results of T-Tests for the difference between girls' and boys' mean scores.

Only two significant differences in mean item scores between boys and girls were found. These were for item 1 and 8. Girls chose item 1, "riding a bicycle," less often ($p < .02$) and chose item 8, "walking with a friend," more often ($p < .004$) than boys chose those items. Both of these differences appear to be in accord with sex-role stereotypes. Boys chose the more "masculine" physical activity while girls chose the activity more in accord with the role socially defined as "feminine."

While only two of the mean differences for boys and girls were found to be significant, the pattern of these differences across categories indicated that there may be more of a sex difference than is apparent in the pattern of significant results. For the social category, all three item means were higher for girls than for boys. Girls' scores were higher for one item of the cognitive category and no different from boys' score mean on second item, while boys' score mean was higher on the third item. Finally, for the physical category, all three item means were higher for boys. Thus, we see a clearer pattern of results emerging from this analysis: girls' preferences for social activities are consistently higher than boys' scores while the opposite is true for the physical activities. These areas of activity can be seen to be in accord with sex-role stereotypes: physical activity is seen as appropriate for the male role and social activity is seen as appropriate for the female role.

Although few sex differences were found, a significant source of variance was found in an examination of the homogeneity of item variance within a category. Three one-way analyses of variance were performed to test for the significance of the differences among items within each of the three categories (see Table 3). Heterogeneity of variance was evident in significant main effects for the physical category ($p < .001$) and for the social category ($p < .02$). In addition to the small number of test items, this heterogeneity of item variance contributed to the less than optimal reliabilities of this measure.

TABLE 3

Analysis of Variance Summary Table for Activity Preference and Perceived Competence

Test	Category	Sum of Squares	DF	Mean Square	F	Significance
Activity Preference						
	Physical	16.60	2	8.30	9.74	.001
	Cognitive	3.57	2	1.78	1.82	.165
	Social	8.08	2	4.04	4.12	.018
Perceived Competence						
	Physical	3.81	2	1.91	4.99	.008
	Cognitive	13.85	2	6.92	15.70	.001
	Social	2.00	2	1.00	1.56	.212

Perceived Competence

Reliability. Part-whole correlations were again used to assess the internal consistence of the Perceived Competence measure (see Table 1). Correlations and reliabilities were low overall (alphas ranged from .06 to .45) for the three competence categories. Part of the reason for the low reliabilities was the low number of items used for this measure. Again, an examination of the means and the within-category variance will offer some explanation of these results.

Means and Standard Deviations. Clear differences between the mean scores for boys and girls were found for only one of three categories. The pattern of means for the perceived cognitive competence category showed clear differences between boys and girls with girls obtaining higher scores than boys on all three items. Boys and girls had an approximately equal number of higher mean scores on the social and the physical category items.

While no significant differences in mean item scores between girls and boys were found (see Table 4), one-way analyses of variance did indicate significant main effects for the physical category ($p < .008$) and the cognitive category ($p < .001$). Table 3 presented the results of this analysis of variance. For these two categories (physical and social) items which appeared to be of the same activity category may have been tapping different underlying dimensions of competence. Further research is needed in order to develop a test

TABLE 4

Means and Standard Deviations of Perceived Competence Scores

Classified by Category and Sex

Scale	Item	Girls Mean	Girls SD	Boys Mean	Boys SD	Combined Mean	Combined SD
Physical	1) Jumping	2.33	.71	2.40	.68	2.37	.69
	2) Climbing on a slide	2.67	.61	2.67	.66	2.67	.63
	3) Climbing a "jungle gym"	2.77	.43	2.70	.54	2.73	.48
	m	2.59		2.59		2.59	
Social	1) Choice of play partner	2.03	.72	1.93	.69	1.98	.70
	2) Friends	2.13	.61	2.33	.80	2.23	.85
	3) Mode of play	1.87	.82	2.07	.83	1.97	.82
	m	2.01		2.11		2.06	
Cognitive	1) Reading (or looking at pictures)	2.07	.74	2.00	.74	2.03	.74
	2) Puzzles	2.53	.57	2.30	.65	2.42	.62
	3) Counting Blocks	2.77	.57	2.67	.71	2.72	.64
	m	2.46		2.32		2.39	

Note: No significant differences were found.

which provides an accurate and valid measure of perceived competence in specific areas of activity. Again, the small number of items and the heterogeneity of items within a category contributed to the low reliabilities of the Perceived Competence measure. One further concern is that the items may have had differential values to the children such that one item of a category may have been high on children's hierarchy of preferred activities, while another item may have been somewhat lower on the hierarchy. Again, further research is needed to evaluate the saliency and importance of each item used in the construction of such a test.

Correlations Among Categories. Correlations among the three categories for perceived competence were low, ranging from .05 for the social-cognitive category correlation, to .26 for the physical-cognitive relationship. The physical category correlated .17 with the social category. Only one of these correlations (physical-cognitive r) was significant ($p < .02$), indicating that these three categories were relatively independent of each other. This low degree of intercorrelations among competence categories was also found by Harter (1979) who found correlations ranging from .26 to .48 for the three categories of physical, cognitive, and social perceived competence. As Harter pointed out, the purpose of this type of scale structure is to "permit one to examine the profile of a child's perceived competence across different domains" (Harter, 1977). It seems reasonable to assume that

children will see themselves as more competent in some domains than in others. This type of scale allows a closer examination of the possible correlates and antecedents of such differential development of competence perceptions.

Summary of Findings for the Children's Measures

In general, the usefulness of both the Activity Preference test and the Perceived Competence test can be expected to be limited by the low reliabilities reported above. The small number of items as well as the variance among items within a category contributed to less than optimal reliabilities of the measures. Few differences were found between mean responses for girls and for boys. Where such differences were found, they appeared to be in accord with sex-role stereotypes.

Parent Values

Reliability. Part-whole correlations and category scale alphas were moderately high for the Parent Values measure (see Table 5). The physical category, containing the highest part-whole correlations, had an alpha of .74. The cognitive category had the next highest reliability coefficient (alpha = .69), while the social category had the lowest reliability (alpha = .58). Part-whole correlations were consistently lower for mothers (average correlation = .26) than for fathers (average $\underline{r}$ = .42), indicating that the items were less reliable for mothers in general. An examination of the

TABLE 5

Reliabilities and Part-Whole Correlations for Parent-Values Classified by Competence Category and Parent

Competence Category Items	Part-whole Correlations Mother	Father	Category Reliability (Coefficient Alpha)
Physical			
1. Participates in many outdoor activities	.33	.42	.74
2. Can make and build things	.37	.26	
3. Self-confident in physical ability	.23	.53	
4. Coordinated	.38	.50	
5. Challenges self to improve in physical skills	.59	.35	
Cognitive			
1. Shows curiosity about things	.07	.47	.68
2. Figures out answers for self	.42	.56	
3. Expresses thoughts well, says what s/he means	.18	.51	
4. Interested in books and stories	.33	.45	
5. Asks questions and seems to learn from answers	.12	.42	
Social			
1. Makes friends easily	.15	.29	.58
2. Affectionate toward friends and adults	.13	.41	
3. Shares readily with others	.25	.45	
4. Aware of, concerned with others' feelings	-.00	.24	
5. Works out conflicts in mutually accepted way	.33	.39	

mean item responses offers some explanation for the differences in reliability between categories as well as between parents.

Means and Standard Deviations. Mean responses for items classified by category and parent are presented in Table 6. Significant differences in category mean response between mothers and fathers were found for two categories: cognitive values ($p < .05$) and social values ($p < .01$). Means for mothers and fathers in the cognitive category were 5.44 and 5.28 respectively, and 5.10 and 4.86 respectively in the social category. As six was the highest item score possible, a ceiling effect may have been responsible for a restriction in range and the corresponding low level of reliability for the social and cognitive categories. Means for fathers and mothers were relatively lower for the physical category (4.40 and 4.30 respectvely).

An examination of individual item means indicates that scores were quite high on a number of items, particularly for mothers. For example, in the cognitive category, item 5, "asks questions and seems to learn from answers," had the highest mean of any item (5.66) as rated by mothers, but it also received a 5.48 rating from fathers. Both of these scores were close to the upper limit of the 6 point scale. The item, "aware of and concerned about others' feelings," (social item 4) had the next highest mean of any item (5.57) as rated by mothers while receiving a rating of 5.23 from fathers. Mothers had higher mean responses than fathers for 10 of 15 items. Four of the 5 items for which fathers had higher scores were from the physical competence area, and none of the five mean

TABLE 6

Means and Standard Deviations for Parent-Values Classified by Category and Parent

Category - Item	Mothers Mean	Mothers SD	Fathers Mean	Fathers SD	Significance
Social (Summed over items)	5.10	.06	4.86	.08	.01
1) Makes friends easily	4.79	.93	4.41	.80	.01
2) Affectionate toward friends/adults	5.11	.88	4.87	.94	.08
3) Shares readily with others	4.66	.96	4.70	.82	.74
4) Aware of and concerned about others' feelings	5.57	.74	5.23	.82	.01
5) Able to work out conflicts with children in mutually acceptable way	5.32	.72	5.03	.89	.03
Cognitive	5.44	.06	5.28	.08	.05
1) Shows curiosity about things	5.56	.56	5.34	.75	.09
2) Figures out answers for self	5.23	.80	5.18	.72	.67
3) Expresses thoughts well	5.49	.74	5.30	.74	.13
4) Interested in books and stories	5.31	.72	5.08	.76	.08
5) Asks questions, learns from answers	5.66	.57	5.48	.72	.157
Physical	4.30	.08	4.36	.10	.64
1) Participates in outdoor activities	4.16	1.00	4.26	.99	.56
2) Can make and build things	3.95	.97	4.08	1.00	.40
3) Self-confident in physical ability	4.74	.93	4.67	.89	.69
4) Coordinated	4.39	1.08	4.44	.96	.77
5) Challenges self to improve physical skills	4.26	.91	4.33	1.01	.67

differences on these items were statistically significant. Four of the 10 mean differences on items for which mothers had higher scores were significant ($p < .05$) while an additional three mean differences were marginally significant ($p < .09$).

To summarize, parent responses in general were quite high. Mothers rated the competence items as more important than did fathers. Scores in some instances approached the upper limit of the range possible. This restriction of range probably contributed to some extent to the lower reliability of scores for mothers as well as for the overall category reliabilities for both parents.

Correlations Among Values Categories. Intercorrelations among mothers' and fathers' scores on the parent values measure are presented in Appendix E, Table 3-1. High correlations were found among the three value category scores for mothers (average $r = .37$) as well as among the three value category scores for fathers (average $r = .41$). All of these correlations were significant at least at the .01 level, indicating a moderate degree of relatedness among the three categories of values. Fathers and mothers did not agree with each other in their ratings, however, as no significant correlations were found between their scores on this measure. This finding indicates that while all three categories are seen as being important by both parents, mothers and fathers differ in terms of their relative weighting of the importance of specific activities.

Factor Analysis of Parent Values Category Scores. Relations between the 15 items of the Parent Values measure were explored via a principal components factor analysis; three factors were rotated to a varimax solution. Table 7 presents a summary of the factor loadings for the 15 items. Since each of the 15 items had been selected *a priori* to represent one of the three values categories (physical, cognitive and social) the purpose of the factor analysis was to evaluate the empirical validity of the three-scale structure intended. The results indicated three relatively distinct scales loading on the three factors and accounting for 40% of the total variance. The category label applied to each factor represents that values category whose items load most heavily upon that particular factor.

Factor I (the "physical" factor) was the strongest factor, accounting for 25% of the variance. The five items of the physical scale had loadings from .53 ("can make and build things"- item 2) to .69 ("challenges self to improve in physical skills"- item 5). The highest loading on another factor for any of these five physical items was .28 (item 5 loading on the social factor). The highest loading on this factor of any item from another category was .39 (item 1 of the cognitive category). Thus, as examined by within-factor loadings and cross-factor loadings, it appears that the physical competence category formed a distinct cluster within factor I and loaded more heavily upon this factor than any other group of items.

TABLE 7

Summary of Factor Loadings for Parent-Values

(Vari-Max Rotation, Three Factors Defined)

	Factor I	Factor II	Factor III
Physical			
1) Participates in outdoor activities	.62	-.02	.06
2) Can make and build things	.53	.19	-.03
3) Self confident in physical ability	.62	.00	.27
4) Coordinated	.61	.25	.08
5) Challenges self to improve physical skills	.69	.11	.28
Cognitive			
1) Figures out answers for self	.39	.39	.15
2) Expresses thoughts well	.24	.54	.24
3) Interested in books, stories	.08	.80	.04
4) Shows curiosity about things	.15	.58	.14
5) Asks questions, learns from answers	.27	.39	.37
Social			
1) Makes friends easily	.03	.05	.32
2) Affectionate toward friends, adults	.32	.14	.45
3) Shares readily with others	.19	.06	.50
4) Aware of, concerned with others' feelings	-.29	.47	.33
5) Works out conflicts acceptably	-.02	.33	.69
Proportion Variance	25%	10%	5%

Factor II (the "cognitive" factor) accounted for 10% of the variance. The five items of the cognitive category loaded most heavily on this factor although they formed a less distinct cluster than did the physical items. Factor loadings ranged from .39 ("figures out answers for self"- item 1) to .80 ("interested in books and stories"- item 3). For items 2, 3, and 4, .30 was the smallest difference between loadings on the cognitive factor and loadings on any other factor (item 2 loading on the "physical" factor). This indicated that these three items formed a relatively distinct cluster on the "cognitive" factor II. However, the remaining two cognitive category items each loaded moderately on a second factor. Item 1 ("figures out answers for self") loaded .39 on the "physical" factor I in addition to loading .39 on the "cognitive" factor II. Item 5 ("asks questions learns from answers") loaded .37 on the "social" factor III, and loaded .39 on the "cognitive" factor II. It may be that "figuring out answers for self" taps also into an "independence" dimension of competence which might be the underlying dimension of the physical category items. Further, it may also be the "asking questions and learning from answers" measures a "social" dimension, that of being able to communicate with others effectively. Additional research is needed to clarify the scale structure of this measure. One final determination of the distictiveness of the cluster of cognitive items on factor II is whether any items from other

categories load on this factor. It was found that the highest loading of this nature was .47 for item 5 of the social category ("aware of, concerned with others' feelings"). The speculation here might be that "awareness" is a cognitive ability and thus may also share common variance with both the social and cognitive dimensions. All other cross-category loadings on the cognitive factor II were relatively low: eight of nine remaining such correlations were below .25. In light of the above findings, it appears that three of the five cognitive category items formed a relatively distinct cluster within the items loading on factor II, while the remaining two cognitive items loaded on additional factors as well.

Factor III (the "social" factor) accounted for only 5% of the variance. The social category items loaded most heavily on this factor with the exception of item 4 ("aware of and concerned with others' feelings") which loaded most heavily (.47) on the "cognitive" factor, as discussed above. Loadings ranged from .32 ("makes friends easily- item 1) to .69 ("works out conflicts"- item 5). Item 2 ("affectionate toward friends and adults") loaded moderately on the "physical" factor (.32) in addition to loading .45 on the "social" factor. Items 1, 3, and 5 however, formed a distinct cluster loading on the "social" factor. The smallest difference between loadings for these three items on this factor and their loadings on any other factor was .30 (for item 1

loading on the "physical" factor). Finally, the next highest loading on the "social" factor of any item from another category was .37 (cognitive- item 5) with the remaining cross-category loadings less than .29. On the basis of the above findings, it appears that three of the original five items defining the social values category form a distinct cluster on factor III. The remaining two items of the social category appear to tap into dimensions of the physical and cognitive value categories.

In summary, factory analysis of the 15 Parent Values items yielded three relatively distinct categories each loading on a separate factor. The original three-category structure was upheld in this analysis: items from the physical category loaded most heavily on factor I and formed a distinct cluster among the items loading on this factor; items from the cognitive category loaded most heavily on factor II, with three items in particular forming a definite cluster distinct from the other item loadings on that factor; and social category items loaded most heavily on factor III, with three items forming a distinct cluster among the items loading on this factor. The "physical" factor accounted for the most variance (25%) while the "cognitive" and "social" factors accounted for 10% and 5% variance, respectively. The low variances accounted for by these two factors will lower the possibility of significant results in subsequent analyses.

Parent-Child Situations

Parent responses on the three parent-child interaction situations were scored for three dimensions: acknowledgment; control; and importance of situation to parent. Each dimension was rated along a five-point scale representing low (1) to high (5) scores on that dimension. Four raters were trained in the scoring procedures. After the experimenter (the author) explained the rating procedure, the raters scored questionnaires that were obtained from single parents, who were not part of the present study. During the training procedure any disagreements in ratings were discussed. If necessary, changes were made in the wording of the rating scales in order to clarify meaning, and to insure that a uniform interpretation would be made by all raters.

Inter-rater Reliabilities. Each rater scored responses for all parents on all dimensions. Thus, each rater made nine ratings for each of the 122 parents in the study. The 122 protocols were divided into four groups based upon equal representation of daycare centers and inclusion of only one parent from a particular family. Raters scored all four groups, but at no time were able to make comparisons of parents within a family. Sex of parent information was unavailable to the raters as well.

Correlations between rater pairs for all rating dimensions are presented in Table 8. Mean reliability for each rater pair, as measured by rater pair correlations across

TABLE 8

Intercorrelations of Rater Pair Scores on Parent-Child Situations Classified by Rating Scale and Situation

Category	Correlations for Rater Pairs						Average Inter-correlation
	1, 2	1, 3	1-4	2-3	2-4	3-4	
Rating Scale							
Acknowledgment	.582	.597	.392	.616	.550	.639	.562
Control	.518	.580	.400	.515	.503	.626	.523
Importance	.496	.647	.462	.527	.584	.430	.524
Situation							
Cognitive	.596	.451	.398	.572	.603	.473	.515
Social	.540	.700	.488	.522	.500	.628	.563
Physical	.405	.602	.540	.458	.434	.699	.521
Intercorrelations for rater pairs across nine rating scores	.476	.530	.411	.539	.479	.590	

Note: All correlations are significant ($p < .001$).

nine rating categories (three rating scale scores for each of three situations) and mean reliability for each rating category are also included. Correlations for the rater pairs across the nine scores were .48, .53, .41, .54, .48, and .59, respectively. Average category reliability for rating scales was .54, with individual reliabilities of .52, .56, and .52. An additional reliability check was made by having each rater score 5 protocols a second time. Reliability as measured by this test-retest correlation was .68.

Internal Consistency of Parent-Child Situations Dependent Measures. Dependent measures for this measure were obtained by summing across rating scales for each of the three situations. Thus, each parent had three summary scores. (Discussion of this derivation of dependent variables can be found in a later section.) Reliabilities of the situation summary scores as measured by standardized scale alpha are presented in Table 9. Part-whole correlations were computed for each of the three rating scales of a situation. All nine items showed high correlations with total item category scores, ranging from .66 (social situation - importance scale) to .89 (cognitive situation - acknowledgment scale). Thus, the internal consistency for each of the three situation summary scores is quite high: .94, .87, and .92 for the cognitive, social and physical situations respectively.

Intercorrelations Among Rating Scores. Correlations among the rating scales were quite high. Acknowledgment was

TABLE 9

Summary of Internal Consistency of Ratings by Rating Category and Situation for Parent-Child Situations

Situation	Rated Item	Item-Total Correlation	Standardized Scale Alpha
Cognitive	Achnowledgment	.89	.94
	Control	.88	
	Importance	.87	
Social	Acknowledgment	.80	.87
	Control	.76	
	Importance	.66	
Physical	Achnowledgment	.86	.92
	Control	.85	
	Importance	.80	

found to correlate .92 with Control and .80 with Importance, while Control and Importance correlated .81 with each other. The dependent measures of the Parent-Child Situations measure were obtained by summing across the three rating scales for each situation. It was decided that the high correlations among rating scales as well as the high internal consistencies (reliability) for the situation categories reported above justified this derivation of dependent measures. (Factor analysis of the rating scores to be reported in a later section also offered further justification of this procedure. Rating scale scores within situations were found to be more highly intercorrelated than scale scores between situations.) Appendix E, Table E-1 presents the intercorrelations among mothers' and fathers' rating scores for the three situations.

Again, a high degree of relatedness among situation scores for mothers and fathers separately indicated a moderate degree of relatedness among situations (average $\underline{r}$ for mothers = .38, $p < .01$; average $\underline{r}$ for fathers = .46, $p < .01$). There were no significant correlations between mothers' and fathers' scores for the same situations.

Means and Standard Deviations of Rating Scale Scores. Means and standard deviations for the nine rating scale scores for mothers and fathers are presented in Table 10. The mean differences between mothers' and fathers' scores were statistically significant for all nine items, with mothers receiving higher ratings on each of these scores. The largest differences in means were obtained for the importance of the social situation problem to the parent ($\bar{x}$ = 3.33 for mothers and 2.87 for fathers) and for the acknowledgment ratings of the cognitive situation ($\bar{x}$ = 4.09 for mothers and 3.69 for fathers). The smallest mean difference was obtained for acknowledgment ratings on the physical situation ($\bar{x}$ = 3.86 for mothers and 3.57 for fathers). Patterns of mean score ratings for situations overall were identical for mothers and fathers: the cognitive situation received the highest overall ratings, while the physical situation and the social situation received the next highest and the least high ratings respectively. The overall pattern of means for the rating scales was also similar for mothers and fathers. For the three rating scales, acknowledgment, control, and importance, mothers received rating score means of 3.79, 3.66, and 3.76

TABLE 10

Means and Standard Deviations for Parent-Child Situations Classified by Situation, Rating Scale, and Parent

Situation / Rating Scale	Mother Mean	Mother SD	Father Mean	Father SD	Significance
Social	3.34	.72	2.96	.78	< .001
Acknowledgment	3.40	.70	3.11	.81	.001
Control	3.28	.80	2.90	.84	< .001
Importance	3.33	.93	2.87	1.08	< .001
Physical	3.86	.76	3.57	.76	.001
Acknowledgment	3.87	.80	3.59	.73	.002
Control	3.82	.82	3.48	.86	.001
Importance	3.90	.84	3.63	.93	.012
Cognitive	4.05	.74	3.69	.88	< .001
Acknowledgment	4.09	.78	3.63	.99	< .001
Control	3.97	.78	3.67	.97	.002
Importance	4.08	.81	3.77	.88	.002
m	3.75		3.41		< .001

respectively, while fathers received means scores of 3.44, 3.35, and 3.42 respectively. The fact that raters were unaware of the sex of the parent suggests that there may be some definite differences between parents' descriptions of their styles of interaction as evidenced by the results presented above.

Factor Analysis of the Parent-Child Situations Rating Scales Scores. Relations between the nine items scored for the Parent-Child Situations measure were explored via a principal components factor analysis; three factors were

rotated to a varimax solution. Table 11 presents a summary of the factor loadings for the 15 items. The purpose of the factor analysis was to evaluate the empirical validity of the three situation category structure and to justify its use in subsequent analyses. The results indicated three distinct scales each loading on a different factor. The three factors extracted accounted for 78.4% of the variance in scores. The situation label applied to each factor represents that situation whose rating scale scores loaded most heavily on that factor.

Factor I (the "cognitive" situation) was the strongest factor accounting for 53% of the variance. The three rating scales items of the cognitive situation loaded most heavily on this factor, ranging from .87 (control) to .90 (acknowledgment). This next highest loading of any of these three scale scores on any other factor was .24 (control loading on the "social" factor III). The next highest loading of any other rating scale item on factor I was .27 for the acknowledgment scale of the social situation. Thus, the three rating scales of the cognitive situation formed a distinct cluster loading on factor I and accounting for most of the variance within this factor.

Factor II (the "physical" factor) accounted for 16.3% variance. The three rating scales loading most heavily on this factor were for the physical situation. These scales formed a distinct cluster of loadings ranging from .80

TABLE 11

Summary of Factor Loadings for Parent-Child Situations

(Varimax Rotation, Three Factors Defined)

Situation Rated Item	Factor 1	Factor 2	Factor 3
Cognitive			
1) Acknowledgment	.90	.17	.22
2) Control	.86	.19	.24
3) Importance	.87	.13	.20
Social			
1) Acknowledgment	.27	.27	.85
2) Control	.26	.24	.79
3) Importance	.14	.20	.65
Physical			
1) Acknowledgment	.17	.88	.22
2) Control	.22	.84	.32
3) Importance	.11	.80	.20
Variance Accounted for by Factor	52.4%	16.3%	9.7%

(Importance) to .88 (acknowledgment). The next highest loading obtained for any of the three physical situation scales on any other factor was .32 (control loading on the "social" factor III) and the next highest cross- factor loading was .27 (acknowledgment loading on the "social" factor III). The physical situation rating scales formed a distinct cluster of loadings on factor II, as can be seen by the pattern of within factor and cross-factor loadings reported above.

The third factor (the "social" factor) accounted for 9.7% of the variance. The social situation rating scales loaded most heavily on this factor and formed a distinct cluster within the loadings for this factor. Loadings for these three items were .65, .79, and .85 for the importance, control, and acknowledgment rating scales, respectively. The next highest loading of any of these three items loading on another factor and the next highest loading of any other rating scale item on this factor were .27 (acknowledgment loading on the "physical" factor) and .32 (physical situation control loading on the "social" factor). Thus, these items formed a distinct cluster of items loading on factor III.

In summary, the factor analysis of the nine rating scale scores for the Parent-Child Situations measure yielded three distinct categories of items loading on separate factors. The original three-situation category structure intended for this measure was upheld in this analysis: rating scales for the three situations loaded on three separate factors. Factor I, which included the cognitive situation rating scales, accounted for the most variance of the three factors (52%). Factors II and III accounted for considerably less of the variance (16% and 9.7% respectively). The physical and the social situation rating scale scores defined factors II and III predominantly. On the basis of the above findings, the cognitive situation category provides the most useful measure of parent behavior. The other two situation categories do

not account for much of the variance among rating scores, and thus provide less useful measures of parent behavior. Further examination of these results would be helpful to the interpretation of later results using these rating scale summary scores, as well as helping to explain the pattern of variance accounted for by the three situations.

Since the first factor to be rated by all raters was also the situation which loaded most heavily on factor I, at least two possible explanations emerge. First of all as with any measure, it may have been that the rating scales themselves were not sensitive enough to discriminate between individual differences across and within situations. This seems to be ruled out as an explanation since significant differences were found between mothers and fathers for every rating variable, even though sex of parent was unknown to the raters. A second explanation might be either that the three situations presented did not elicit significantly different responses from an individual or that the raters did not discriminate among the three situations. It would be difficult to prove after the fact which of these two alternatives was more accurate. However, there is some indication that the rating procedure is at least partly responsible for the pattern of results reported above. All three responses for one individual were rated before another individual was rated. The first three response rated were for the cognitive situation which was the situation loading most heavily on factor I.

This factor accounted for most of the variance accounted for by all three factors combined. Later ratings may have been influenced by those made for the first situation, especially since all three situations for each individual were rated at the same time. Future research should be directed toward construction of distinct sets of scales to examine parent-child interactions in various situations. It is apparent from the results of the factor analysis reported above that the usefulness of the Parent-Child Situations measure is attenuated by the low variances accounted for by two of the three situation summary scales.

Parent Activity

Reliability. Parent responses on the Parent Activity measure were scored into three categories of activity; physical, cognitive, and social. For example, "skiing" was scored as physical activity, while "reading" was scored as cognitive activity. Category definitions can be found in Appendix D--Parent Activity Rating Form. The author scored all 122 responses, while a second rater scored 20 randomly chosen responses. Reliability as measured by the interrater correlation coefficient for 20 items was .88, indicating a high degree of reliability for the total set of ratings.

Means and Standard Deviations for Parent Activity Scoring Categories. Means and standard deviations of the rating scores for mothers and fathers are presented in Table 12. The only significant difference between parent means

TABLE 12

Means and Standard Deviations for Parent Activity Classified by Category and Parent

Activity Category	Mother		Father		Significance
	Mean	SD	Mean	SD	
Physical	.85	.09	.803	.13	
Cognitive	2.14	.16	2.41	.20	
Social	1.16	.07	.95	.49	.015

was found for the social category. Mothers were rated as listing social activities more frequently ($\bar{x}$ = 1.16) than fathers ($\bar{x}$ = .95), $p < .015$. The difference in means among the categories themselves overall was quite large. Cognitive category activities were rated as being listed more frequently ($\bar{x}$ = 2.78) than either the social activity ($\bar{x}$ = 1.06) or the physical category ($\bar{x}$ = .83). As was discussed in an earlier section, the difficulty of classifying some of the activities as primarily one type of activity resulted in leaving 13% of the listed activities unclassified. This no doubt partially influenced the large difference among category means.

Summary of Findings for the Parent Measures

In general, reliabilities for the three parent measures were quite high. Factor analyses indicated support for the three category structure intended for each measure. However, some disadvantages of each of the measures were also

reported. For Parent Values it appeared that some mean responses for both parents approached the upper limit of obtainable scores, which may have lessened the discriminability of this measure. This was seen to be partially a function of the nature of the scales used. The Parent Values measure attempted to differentiate among parents' values for a set of activities all of which are probably highly valued by most people. Also, we would expect to find less differentiation among parents' written responses than we would among parents' specific behaviors as rated in actual observation. These considerations indicate that further research is needed in order to construct sensitive and valid measures of parents' values for their children's behavior.

For the Parent-Child Situations measure, discriminability again appeared to be less than optimal. Individual rating scales as well as the derived summary scores for situations were highly correlated. This lowers the probability of finding significant results in later analyses.

An additional question was raised in relation to the coding format used for the Parent Activity measure. Many activities reported by parents could be classified in more than one category and had to be left uncoded. This may have limited the validity of the obtained data. The problem of validity for this measure appears to be more serious than the problems reported above for the first two parent measures. Significance of the results obtained from analyses using this

measure might be expected to be limited if the validity question raised above is indeed substantiated.

Finally, a common problem to all three measures was the difference in the usefulness of each measure for evaluating the three categories. Due to differences in reliability and variance, certain measures were found to be more useful in evaluating some areas of activity than others.

Differences in patterns of scores were found for mothers and fathers. In 21 of 27 instances, mothers' scores were higher than fathers' scores. Thirteen of these differences achieved statistical significance while an additional three were marginally significant ($p < .10$). In no instance were fathers' scores significantly higher than mothers' scores. Four of the six instances where higher scores were found for fathers were obtained for the physical values category. Fathers rated the typically "masculine" physical activity category as more important than did the mothers. Further, it is interesting to note that when self-reports were rated by others (as in the Parent-Child Situations test), mothers received significantly higher ratings than fathers in every instance. This indicates possibly real differences in the manner in which the two groups interact with their children. When parents were directly rating their own values, fathers had higher scores on a highly sex-role stereotyped category--physical activity, whereas mothers rated all other activities as more important than fathers, particularly the social

activities. As with the children's measures sex-role stereotypes appeared to be operating in parents' values for and treatment of different categories of activity in which their child might engage. As the results presented above are based both upon self-reports and rated attributes, the finding of such widespread differences between mothers' and fathers' scores on the measures used in the present study appears to be significant and reliable across measurement methods. Further research examining these differences is needed for a clearer understanding of the implications of these findings.

Relationship of Parent Variables to Child Variables

Correlation analyses and stepwise multiple regression analyses were performed to examine each of the three hypotheses of this study. For each set of analyses, sex and age differences were also examined by correlation analyses and stepwise multiple regression. Regarding the direction of effects, positive correlations indicate a positive relationship between two variables with the exception of the sex variable. Positive correlations with sex indicate a high correlation for boys on that variable, while negative correlations indicate a high correlation for girls.

Hypothesis 1: Relationship of Parent Values to Activity Preference

Correlational Analyses. Parents' expectations of their child's competence in three areas of activity (as

measured by the Parent Values test) were predicted to be positively related to children's activity preferences in each of three areas: physical, cognitive, and social activity. Partial support for this hypothesis was obtained. Three of the six predicted relationships for mothers and fathers were in the positive direction, although only one of these was significant at a marginal level. Of the four significant or marginally significant results found for both predicted and nonpredicted relationships, three of these were found for predicted relationships. Further support and a clearer picture of the relationships among parent and child variables were also obtained through correlational analyses for sex and age differences.

Correlations among the three parent values category scores and the three activity preference category scores for children are repoarted in Table 13. For mothers, two of the three predicted relationships were in the positive direction. Only one of these (for the physical category) was marginally significant ($p < .10$). The third predicted relationship (mother social values and child social activity preference) resulted in a significant negative corelation ($r = -.30$, $p < .01$). Higher values on the part of the mother were associated with less preference for social activities on the part of the child. For fathers, only one of the predicted relationships was in the predicted direction (for the cognitive category). The only significant correlation for father-child

TABLE 13

Intercorrelations Among Child Activity Preference Parent Values, Sex and Age

Parent Values	Sex	Age	Activity Preference: Physical	Activity Preference: Cognitive	Activity Preference: Social
Mother					
Physical	.06	.14	.19*	-.07	-.09
Cognitive	-.03	-.20*	.04	.05	-.09
Social	.07	-.29**	.16*	.14	-.30***
Father					
Physical	.11	.05	-.22**	.06	.13
Cognitive	.11	.14	-.13	.07	.04
Social	.21*	.08	-.14	.14	-.04
Sex			.33***	.01	-.28**
Age			.16	-.19*	-.07

* $p < .10$
** $p < .05$
*** $p < .01$

variables was a negative correlation for the physical category ($r = -.22$, $p < .05$). Thus, high scores for fathers on the physical values category were associated with low preference for physical activity by children. Of the 12 nonpredicted relationships among parent and child variables, only one was found to be significant. Social values scores for mothers were found to be marginally positively related to child physical activity preference ($r = .16$, $p < .10$).

The reason for the negative correlations reported above is unclear. The categories for which negative correlations were obtianed, however, appear to be sex-role stereotyped: fathers valued the physical activity category more highly than did mothers, while mothers valued the social activity category more highly than did fathers. One speculation might be that parents' values or expectations for their children in these "value-laden" areas of activity may be stronger (and negatively correlated) when the child is not showing what the parent considers to be appropriate development in these areas. The opposite explanation that children resist those influences which the parent presents more strongly cannot be dismissed either. Parents who promote behavior which is non-normative may have children who actively resist such influences by behaving the opposite of what the parents expect. A similar explanation is that parents who are overly expectant of their child's development in certain areas may negatively influence their child's willingness to engage in that activity. Chance (1961) found that among a group of intellectually superior children, those who had mothers who were highly expectant of their achievement showed less achievement in reading and arithmetic than would be expected in terms of their Stanford-Binet I.Q. score. Although these findings are difficult to interpret clearly, they offer indication that there is probably an optimal level of parental expectations in terms of their effect upon childrens' development. It

might be expected that most of the mothers of this intellectually superior group of children had higher than average expectations for their children. If this were the case, mothers who showed higher expectations than the other mothers in the study may have been overly demanding or expectant of their children's achievement. Such expectations might then have had a negative effect upon even the intellectually superior child's optimal development.

As for parent values and age and sex of child, only one marginally significant relationship was found. Fathers' social values scores were higher for boys ($r = .21$, $p < .10$). For the age variable, the correlation between mothers' social values scores and age was -.29 ($p < .05$), indicating that mothers valued social competence more highly for younger children. Also, cognitive values scores for mothers were marginally related to age ($r = -.20$, $p < .10$), indicating that cognitive competence is highly valued, at least by mothers, for younger children. Partial explanation of such results might be that the young child is more in need of "social" training in order to learn necessary communication skills, whereas the primary developmental task for parents of older children is to help them learn specific cognitive skills once the basic task of socialization along the "social" dimension is achieved.

As for children's preferences and sex and age of child, two significant correlations between child preference and age

and sex were found as well as one marginally significant correlation. Girls were more likely to prefer social activities than were boys; boys were more likely to prefer physical activities than were girls; and younger children were more likely to prefer cognitive activities than were older children (rs = -.28, .33 and -.19, respectively). The relationships of preference with sex appear to be sex-role stereotyped; girls chose the typically "feminine" social activity, boys chose the typically "masculine" physical activity. The reason for the younger children's higher rate of choosing cognitive activities compared with the old age group of children is less clear. One explanation might lie in an examination of the particular items used in each of the three categories of activity. While some of the physical items were definitely not engaged in by many young children (eg. climbing trees, even riding bikes), and while it may be that young children still find it difficult to relate to other children in a primary way (thus reducing their choice of the social activities), it was clear that the cognitive items were quite familiar to these children. Playing with puzzles and reading books were familiar occurrences in the daily routine at all daycare centers. Thus, younger children may have preferred these cognitive activities at a high rate due to the fact that they were the most commonly experienced. Future research should address this issue of equivalency of item familiarity across categories in order to obtain a clearer picture of children's true preferences.

Correlational analysis was also conducted to examine sex and age differences in the relationship between parent and child variables. A median split for age was performed (median = 48.13 months) in order to form an older and a younger age group. Appendix E, Table E-2 presents the intercorrelations among parent values variables and activity preferences for sex and age groups. Few predicted relationships were found to be significant. Somewhat different patterns of results were obtained for the relationship between parent and child variables for boys and girls. For mothers of girls, two of three relationships were significant. As predicted, mothers' physical values scores were significantly correlated with girls' physical preference ($r = .41$, $p < .01$). However, opposite to prediction, mothers' social values scores correlated negatively with girls' social preferences ($r = -.39$, $p < .02$). For the relationship between fathers and daughters variables, none of the predicted relationships were significant. Further, no significant correlations between mothers' values scores and boys' preferences were found. The single significant relationship for fathers of boys showed fathers' physical values scores to be correlated -.46 ($p < .004$) with boys' preference for physical activity, a relationship opposite to that predicted.

The reason for the reported negative correlations is again unclear. Negative results were obtained for those activities which appeared to be sex-role stereotyped. The

analysis of sex differences, however, makes a further speculation possible. Not only were same-sex parent-child relationships in stereotyped activity categories found to be negative, but a significant positive result was also obtained in one instance for a same-sex relationship in a non-stereotyped activity catetory. This suggests that the same-sex parent may be more important than the opposite-sex parent in the socialization of the child regardless of the stereotypes existing for a particular activity. Support for this speculation can be found in a study done by Rothbart and Maccoby (1965). Fathers were found to be generally more permissive toward girls than boys for both dependency and aggression whereas the opposite was true for mothers. Similar to the results presented in the present study, stronger and more specific socialization patterns seem to exist for the same-sex parent child dyad regardless of the role specificity of the activity. This difference in socialization also appears to be even further enhanced when social stereotypes exist for particular activities or behaviors. However, this is not to suggest that the processes or patterns of effects are similar for the socialization along both stereotyped and non-stereotyped dimensions. The difference in direction of effects reported above indicates a complex relationship among these dimensions.

For the younger age group, only one of the six predicted relationships were found to be marginally significant. Mothers' physical values scores correlated .36 with physical

preference ($p < .05$). For the older age group, two of six relationships were found to be significant. Mothers' social values were correlated -.43 ($p < .008$) with social preference, while fathers' physical values correlated -.34 ($p < .019$) with physical preference. Both of these findings were opposite to the prediction of positive relationships between parent and child variables.

Again the reasons for the negative correlations obtained are unclear. The results are again in accord with sex-role stereotypes. It is interesting to note that significant positive relationships were obtained for parent-child relationships for the younger age group, while significant negative relationships were obtained for the older age group. A number of speculations could be made regarding this pattern of effects. One is that parents are more tolerant (and their values more in accord with the child's preferences) when children are younger, but are more intolerant of any sign of lagging development in an older child. Thus it might be expected that parents of children who are developing on what is seen as an adequate level are less concerned with those areas of activity. Partial support for this speculation can be found in a study examining the effects of parental influence upon locus of control. Loeb (1975) found that the relationship between high parental reward and internality for young sons, although clear at younger ages, disappeared as the son reached 4th or 5th grade. Parents had less need to

reinforce an already internal, self-directed child. This process may differ at various stages of development as well as differ from one area to another. The relationship between parent influences may not be observable at later ages for some variables (such as locus of control reported above) due to the fact that the influence was effective at an earlier age. For other variables such as activity preference, the shaping of preferences may span a longer time and hence be observable in different forms at any particular point of development. Again, the need for comprehensive studies examining the nature of these relationships at different stages of development is clear.

In summary, correlational analyses of sex and age differences indicated different patterns of results depending upon sex or age of the child. One of three predicted parent child relationships was found significant for mothers while an additional relationship was significant in the negative direction, opposite to prediction. No significant predicted results were found for fathers of boys, although one significant result opposite to prediction was found. No significant predicted results were found for either the younger or the older age group, while two of the three relationships were found to be significant in the opposite direction to prediction for the older age group. An examination of the areas in which significant results were obtained indicates that the relationship between parent values and child preferences may be

strongest in those areas in which sex-role stereotypes exist. Further, it appears that the relationship between parent and child variables may only become evident for older children, although marginally significant correlations for the predicted relationships were present for the younger age group. Explanations regarding the negative correlations obtained for a number of relationships included the following speculations: negative correlations were the result of parents' tendency to highly value those activities in which their child was performing with less than "appropriate" behaviors along sex-role stereotyped dimensions; children reacted to parents' high values for some activities by preferring them less; and finally that parents were more likely to show more concern (value more highly) in those areas in which their child was doing "poorly," particularly for older children.

Multiple Regression Analyses. In order to clarify the above findings and especially to determine how the three parent-values category scores independently related to children's activity preference scores, stepwise multiple regression analyses were performed for each of the three activity categories (see Table 14). Because sex and age were found to be significantly correlated with some child and parent variables, these two predictor variables were entered first in the analyses reported below in order to more accurately assess the relative contribution of parent-values in the prediction of child activity preference.

TABLE 14

Activity Preference and Significant Parent Values

Predictor Variables Based Upon Stepwise Multiple Regression Analysis

Category	Step	Variable Entered or Removed	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Social	1	Sex	5.17	.027	.08	.08	-.28	5.17	.027
	2	Age	1.50	.225	.10	.02	.07	3.36	.042
	3	Social-(M)	4.27	.043	.17	.06	-.30	3.79	.015
	5	Physical-(F)	.88	.351	.18	.01	.13	2.43	.046
	6	Social-(F)	.00	.992	.18	-.00	-.04	3.09	.023
	7	Cognitive-(M)	.18	.671	.18	.00	-.09	2.47	.043
Physical	1	Sex	7.29	.009	.11	.11	.33	7.29	.009
	2	Age	.36	.553	.12	.00	.16	3.78	.029
	3	Physical-(F)	4.69	.034	.18	.07	-.22	4.25	.009
	4	Physical-(M)	2.64	.110	.22	.04	.19	3.94	.007
	5	Social-(F)	.98	.327	.23	.01	-.14	3.35	.010
	6	Social-(M)	.66	.410	.24	.01	.16	2.89	.016
	7	Cognitive-(M)	.89	.348	.26	.01	.04	2.60	.022
	8	Cognitive-(F)	.03	.816	.26	.00	-.13	2.24	.039

Note: (F) = Father
(M) = Mother

Little support was obtained for the hypothesis that parents' values would be positively related to childrens' preferences in each of three activity categories. Mothers' values for the physical activity category were found to be more strongly correlated with child preferences for that category as well as to account for more of the variance among scores than parents' values for other activity categories. However, negative correlations were obtained for two of the three relationships which were predicted to be positive. Speculations regarding these negative relationships were made in an earlier section and apply to the findings reported here as well.

The stepwise multiple regressions for the three child activity preference categories showed that parent values were significantly negatively related to child preferences in two of three activity areas, the social and the physical. In the social category, four of six parental values categories as well as sex and age were found to be significant predictors of child preference for social activity. Sex and age were significant predictors of social activity preference ($p < .03$ and .042, respectively) and accounted for 10% of the variance combined. Of the four significant parent variables, mothers' social values accounted for most of the variance (6%) and correlated -.30 with child preference. Fathers' physical and social values, and mothers' cognitive values accounted only for an additional 1.5% if the variance when

combined. In the physical category, six of six parent values categories as well as sex and age were found to be significant predictors of child physical activity preference, accounting for a total of 25.6% variance. Sex correlated .33 with physical preference and accounted for 11% of the variance. Fathers' physical value scores, accounting for an additional 6.7% of the variance, correlated negatively with child physical preference ($r = -.22$). The remaining six significant variables combined accounted for an additional 8.9% of the variance.

The reason for the lack of significant findings for the cognitive category is unclear. Reliabilities of both the Parent Values and the Activity Preference tests for the cognitive category were moderately high. One speculation is that social desireability may have been operation for this category. Cognitive activity had the highest category mean of the three categories of parent values and was highly valued by both parents. It might be that parents of this sample from a university community may all highly value cognitive abilities and indicated this on the Parent Values measure. However, these reports may not be consistent with the manner in which the parents express those values. This would obviously have implications for the relationship between parent cognitive values and child cognitive activity preference.

In summary, a significant relationship between parent values and child activity preference was found for one of the three predicted parent-child relationships. Sex accounted for the most variance in both the social and physical activity preference categories, correlating -.28 and .33 with these categories respectively. Thus, girls were more likely than boys to prefer social activity and boys were more likely to prefer physical activity than were girls. Of the parent variables, those that accounted for the most variance were mothers' social values in the social category, and fathers' physical values in the physical category. Other variables, although significant in the regression analysis, accounted for less than 5% of the variance each. The results reported here for the regression analysis are for the same relationships reported in the correlational analyses in an earlier section. Thus the same speculations regarding the findings of negative relationships apply here as well. Briefly, negative correlations appear to be found for those activity categories for which definite sex-role stereotypes exist.

Sex Differences. Because multiple regression analysis gives a clearer picture of the relationships between parent values and child activity preferences, it was decided to use multiple regression analyses to examine the sex differences of the parent- child relationships. Table 15 presents the multiple regression results for sex differences. Mothers' values were found to be more highly related to

TABLE 15

Activity Preference and Significant Parent Values Predictor Variables

Based Upon Stepwise Multiple Regression Analysis for Girls and Boys

Category	Step	Variable to Enter or Remove	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Girls									
Physical	2	Physical-(M)	4.93	.035	.17	.15	.41	2.78	.08
Social	2	Social-(M)	4.29	.048	.16	.13	-.39	2.50	.10
	4	Physical-(F)	3.69	.066	.27	.11	.41	2.28	.089
Boys									
Physical	1	Physical-(F)	7.84	.009	.21	.21	-.46	7.84	.009
Cognitive	4	Physical-(F)	3.58	.070	.18	.11	.37	1.40	.263

Note: (M) = Mother
(F) = Father

daughters' activity preferences, while fathers' values were found to be more highly related to sons' preferences.

In the physical activity category, quite different results were obtained for girls and boys. For girls, the predicted relationship between physical preference and mothers' physical values was found to be significant (r = .41, $p < .035$), accounting for 15% of the total variance. For boys, the only significant variable related to physical preference was fathers' physical values (r = -.46, $p < .009$), accounting for 21% of the total variance. This result was opposite to the prediction of a positive relationship between parent and child variables.

In the social category, the results for boys and girls again differed. For boys, there were no significant parent variables correlated with social preference. For girls, however, mothers' social values were significantly negatively correlated with social preference (r = -.39, $p < .048$), and accounted for 13.4% of the variance.

In summary, only one predicted relationship between parent and child variables was found to be significant. The multiple regression analyses based upon sex differences indicated a different pattern of results for girls and boys. Values of same-sex parents were found to be more highly correlated with child preferences. The reason for negative correlations is unclear; however, speculations which have been made in an earlier section regarding stronger same-sex

parent-child relationships for those activity areas which are sex-role stereotyped for that sex are appropriate here. The assumption here in explanation of the negative correlations is that parents have relatively high values for those activity areas which are seen as consistent with what is considered socially appropriate for a child of that particular sex.

Age Differences. Multiple regression analysis was further used to examine age differences. A median split was performed (median = 48.13 months) in order to form younger and older age groups. Age range was from 28 months to 72 months. Table 16 presents the results for the relationships between parent values and child preferences for younger and older age groups. Only one predicted relationship was found to be significant. Mothers' physical values were marginally correlated with younger children's physical preference ($r = .36$, $p < .07$) and accounted for 10% of the variance. Two results opposite to prediction were also found. For older children, mothers' social values were negatively correlated with childrens' social preference ($r = -.43$, $p < .017$) and accounted for 15% of the variance among childrens' scores. Again for older children, fathers' physical values were found to be negatively correlated with children's physical activity preference ($r = -.34$, $p < .043$) and accounted for 12.8% of the total variance. Further, sex was found to be significantly correlated with children's

TABLE 16

Activity Preference and Significant Parent Values Predictor Variables

Based Upon Stepwise Multiple Regression Analysis for Younger and Older Age Groups

Category	Step	Variable Entered or Removed	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Younger Children									
Physical	1	Sex	8.85	.007	.29	.29	.54	8.85	.007
	2	Physical-(M)	3.46	.077	.39	.10	.36	6.65	.006
	3	Physical-(F)	.16	.696	.39	.00	-.09	4.31	.017
	4	Social-(F)	1.10	.307	.43	.04	-.26	3.52	.026
	5	Cognitive-(M)	.36	.555	.44	.01	.18	2.80	.049
Older Children									
Physical	2	Physical-(F)	4.48	.04	.14	.13	-.34	2.49	.10
Social	1	Sex	5.04	.032	.14	.14	-.37	5.04	.032
	2	Social-(M)	6.45	.017	.29	.15	-.43	6.19	.006
	3	Social-(F)	.81	.376	.31	.02	-.02	4.37	.012
	4	Cognitive-(F)	1.22	.279	.34	.03	.17	3.60	.017
	5	Physical-(F)	.10	.759	.34	.00	.19	2.81	.036

Note: (M) = Mother
(F) = Father

activity preference. Older girls were more likely than older boys to prefer social activities (r = -.37, $p < .032$), while younger boys were more likely than younger girls to prefer physical activities (r = .54, $p < .007$).

No significant results were found for the cognitive category. However, fathers' cognitive values were seen to correlate marginally significantly (r = .25, $p < .08$) with younger children's cognitive preferences. The reason for the lack of significant findings for this category is unclear. Reliabilities for this category were moderately high for both the Activity Preference test and the Parent Values test. However, the factor analysis indicated that this category did not account for much variance among children's cognitive preference scores. It may be that cognitive activity preference stems more from innate abilities which the child possesses than does preference for other areas of activity. Also, it might be that the school environment and experiences the child has there are more related to the child's preferences and have less to do with parents' direct influences. These speculations should be examined in relation to future results regarding the influence of parents' values relative to other influences such as the school provides.

Summary of Findings for Hypothesis 1. In general, only slight support was obtained for the predicted positive relationship between parents' values and children's activity preferences in three areas of activity. Parent values were

more highly correlated and more likely to predict same-category child activity preference scores than were parent values for other activity areas. However, many of the correlations were negative and thus contradict the predicted positive relationships expected. Further analysis indicated that the relationship between parent values and child preferences appeared to be complex and to be mediated by variables such as sex and age.

Parent values scores were positively related to and predicted child preferences in one of the three categories (physical activity). Reasons for the negative findings are unclear, but may include the partial explanation of sex-role stereotypes resulting in strong negative findings for certain activities.

Hypothesis 2: Relationship of Parent-Child Situations to Perceived Competence

Correlational Analyses. Parents' reported treatment of their child in each of three problem situations (Parent-Child Situations test) was predicted to be positively related to child perceived competence in those three areas of competence (as measured by the Perceived Competence test). Correlational analysis was again conducted to examine the extent to which parent variables were related to perceived competence (see Table 17). Only slight support was found for these predictions. Two of the six predicted correlations were in the positive direction, with only one of these significant at a marginal level. Of the seven marginal

TABLE 17

Intercorrelations Among Child Perceived

Competence, Parent-Child Situations, Sex and Age

Parent-Child Situations Variables	Sex	Age	Perceived Competence Category		
			Physical	Cognitive	Social
Mother					
Physical	.18*	.05	.02	-.35***	.12
Cognitive	.10	-.06	-.09	-.23**	.12
Social	.20*	.08	-.06	-.14	.17*
Father					
Physical	.09	.11	-.07	-.29**	.17*
Cognitive	.11	.31**	.07	-.25**	.02
Social	.00	.22**	.12	-.22**	-.05
Sex			-.02	-.19*	.11
Age			.33**	.17*	.01

*p < .10

**p < .05

***p < .01

($p < .10$) or significant results found in the analysis, three of these were obtained for the predicted relationships. A somewhat clearer picture of the relationships between parent reported treatment variables and child perceived competence was obtained through an examination of sex and age differences. The only significant predicted relationship were found to involve mothers' reported treatment particularly for daughters as well as older children (see Appendix E, Table E-3.

For mothers, only one of three predicted relationships was found to be significant. Mothers' treatment in the social situation was marginally related to children's perceived social competence ($\underline{r} = .17$, $p < .10$). For fathers, none of the three predicted relationships were in the predicted direction.

Two results opposite to prediction were found to be significant. Mothers' and fathers' treatment in the cognitive situation were found to be significantly negatively related to child cognitive perceived competence ($\underline{rs} = -.23$, $-.25$, $p < .05$ respectively).

The reasons for the negative correlations obtained are unclear. An examination of the pattern of these relationships showed that all of the correlations between parent treatment variables and the cognitive perceived competence category were negative. This accounted for six of the ten negative results found. The reason for this pattern may lie

in the definition of the measures. Cognitive competence was defined as the child's ability to engage in independent cognitive pursuits. High ratings on the parent-child situations measure indicated that parents were highly concerned about problems in the cognitive situation and would treat such situations sensitively as indicated by their responses on the PCS measure. It may be that those parents who were rated most highly on the cognitive situation were aware of existing problems their children were having within this area. This also assumes that parents whose children were performing adequately in the cognitive area may have responded in a way that was rated as less sensitive on the rating scales used. Thus, two alternative explanations for a high rating on the rating scales used for the PCS measure exists. A high rating might indicate a parent who is always there to "help out" with a problem or who may be responding to a child who is in need of such help in that particular area. On the other hand, a high rating may indicate "intrusiveness" which may have a negative impact upon a child's development of independence and perceptions of competence, particularly in the cognitive realm. Until further research is directed at this issue, neither of these two speculations can be dismissed.

The correlations between parent treatment variables and sex and age of child are also presented in Table 17, different patterns of correlations were obtained for these relationships dependent upon sex and age of child. Two

marginally significant correlations were found for sex of child. Mothers' reported treatment of a problem in the physical competence area was marginally related to sex (r = .18, $p < .10$). Mothers' reported treatment of a problem in the social category was also related to sex (r = .20, $p < .10$). Thus, mothers' reported treatment in the physical and the social categories was more likely to be rated highly if the child was a boy. These results are partially consistent with Rothbart and Maccoby's (1965) findings of more tolerant treatment of opposite sex children. Concerning the age of the child, two father variables were found to be significantly related to age. Fathers' reported treatment of the cognitive problem area, and the social problem area were correlated with age (rs = .31 and .22, $p < .05$ respectively). Thus, fathers' reported treatment was more likely to be rated highly if their child was older than the average age of the children tested in this study. It may be that fathers' spend more time interacting with older children relative to the amount of time they spend with the child when s/he is young. Thus, they may be more aware of and tolerant of the older child's behavior and difficulties based upon a greater knowledge of the child's capabilities.

Finally, three of six correlations between child perceived competence and sex and age were significant of marginally significant. Sex was negatively correlated with the child's perception of cognitive competence (r = .19,

$p < .10$) indicating that girls tend to see themselves as more cognitively competent than do boys. Age was positively correlated with perceptions of physical competence ($\underline{r} = .33$, $p < .05$) and perceptions of cognitive competence ($\underline{r} = .17$, $p < .10$) indicating that older children were more likely to perceive themselves as more competent in the physical and cognitive competence areas.

Correlational analyses were also performed in order to examine sex and age differences in the relationship between different parent-child dyads for sex and age groups. Appendix E, Table E-3 presents the intercorrelations among parent-situations variables and perceived competence for sex and age groups.

For the mother-daughter dyad, only one predicted relationship was found to be significant. Mothers' treatment in the social situation correlated significantly with daughters' perceived social competence ($\underline{r} = .46$, $p < .005$). No predicted relationships were found significant for the father-son dyad.

Two results opposite to prediction were found to be significant. Mothers' treatment in the cognitive situation was negatively correlated with girls' perceived cogntiive competence ($\underline{r} = -.26$, $p < .079$) while fathers' treatment in the cognitive situation predicted sons' perceived cognitive competence ($\underline{r} = -.27$, $p < .08$).

No further significant findings were obtained for same category parent-child relationships.

For the younger age group, no predicted same-category correlations were significant. Opposite to prediction, father treatment in the cognitive situation correlated -.55 ($p < .001$) with perceived cognitive competence. For the older age group, no predicted same-category relationships for the father-older child dyads were found. For the mother-older child dyad, however, one of three predicted same-category relationships was significant. Mother treatment in the social situation correlated .31 ($p < .035$) with perceived physical competence. Opposite to prediction, mother treatment in the cognitive situation correlated -.26 ($p < .10$) with perceived cognitive competence.

In summary, two predicted relationships between perceived competence and parental treatment variables were found to be significant: one significant relationship was found for each at the mother-daughter and the mother-older child dyads. Findings opposite to predictions were found for four relationships. The possible reasons for the negative correlations reported here have been discussed in an earlier section. Briefly, there was some question as to whether high ratings on the PCS rating measure indicated high sensitivity to an existing problem or whether it indicated high intrusiveness (or over protectiveness), among other possibilities. An examination of the areas in which significant

results were obtained indicates that the relationship between parent treatment and child perceived competence may be stronger for mothers in those areas which are sex-role stereotyped. The fact that a few significant correlations were found for the father-child dyads may be partially due to a response difference between mothers and fathers. Fathers were more likely to respond briefly than were mothers, and were also more likely to say such things as "my child would not have this difficulty" and respond no further. It may either be that fathers took the test measure much less seriously than mothers, or that the response style differences truly indicate some underlying difference in the way parents interact with their children. The lack of significant findings for fathers might also be due to a difference in amount of time spent with the child during the early years between mothers and fathers. Mothers might be expected to have more influence at least early in the child's development if they indeed spend more time with their children than do fathers, particularly if their style of interaction with the child differs from the fathers' style of interaction.

Multiple Regression Analyses. Stepwise multiple regression analysis was used in order to clarify the above findings and especially to determine the relationships between the three parent treatment variables and the three categories of child self-perception of competence (see Table 18). Sex and age were included in the regression, as they

TABLE 18

Perceived Competence and Significant Parent-Situations

Predictor Variables Based Upon Stepwise Multiple Regression Analysis

Category	Step	Variable	F	Signif-icance	R Square	R Square Change	Simple R	Overall	Significance
Cognitive	1	Sex	2.12	.151	.03	.03	-.19	2.12	.151
	2	Age	3.35	.072	.09	.05	.17	2.78	.070
	3	Cognitive-(F)	6.53	.013	.18	.09	-.25	4.21	.009
	4	Cognitive-(M)	1.18	.282	.20	.02	-.23	3.46	.014
	5	Physical-(F)	3.45	.069	.25	.05	-.29	3.58	.007
	6	Physical-(M)	2.16	.148	.27	.03	-.35	3.41	.006
	7	Social-(F)	.26	.611	.28	.00	-.22	2.92	.012
	8	Social-(M)	.19	.665	.28	.00	-.14	2.54	.021
Physical	1	Age	7.24	.009	.11	.11	.33	7.24	.009
	2	Sex	.90	.345	.12	.01	-.02	4.07	.022
	3	Physical-(F)	.65	.422	.13	.01	-.07	2.91	.042

Note: (M) = Mother
(F) = Father

were found to be correlated with some child and parent variables. As indicated by the correlational analyses, no support was found for the predicted positive relationship between parent treatment scores and children's perceived competence. The predicted relationships were weak and in the negative direction in some instances.

No predicted relationships were found to be significant. However, one result opposite to prediction was obtained. Fathers' treatment in the cognitive situation correlated negatively with and predicted child perceived cognitive competence ($r = -.25$, $p < .013$). No additional findings were significant in the overall regression analysis for parent-child relationships. Age was found to be significantly correlated with perceived competence, with older children preferring both cognitive and physical activities more than did younger children.

Sex Differences. Table 19 presents the results of the multiple regression analysis examining the relationships between parent treatment variables and child perceived competence for girls and for boys. This analysis offered a slightly clearer picture of the parent-child relationship and an elaboration of the results of the regression reported above. Only one predicted relationship was found to be significant. Mothers' treatment in the social category was highly related to and predicted daughters' social perceived competences ($r = .46$, $p < .008$). In the physical category,

TABLE 19

Perceived Competence and Significant Parent-Child Situations Predictor Variables Based Upon Stepwise Multiple Regression Analysis for Girls and Boys

Category	Step	Variable Entered or Removed	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Girls									
Physical	1	Age	3.14	.087	.10	.10	.32	3.14	.087
Social	2	Social-(M)	8.30	.008	.26	.21	.46	3.45	.031
Boys									
Physical	1	Age	5.33	.028	.16	.16	.39	5.33	.028
	3	Cognitive-(M)	7.16	.013	.37	.17	-.25	3.89	.013
	4	Social-(M)	3.24	.084	.45	.07	-.30	4.03	.008
	5	Social-(F)	.45	.507	.46	.01	.00	3.36	.015
	6	Cognitive-(F)	.18	.679	.46	.00	-.03	2.80	.029
Cognitive	2	Cognitive-(F)	5.05	.033	.21	.14	-.27	3.65	.039
	3	Cognitive-(M)	1.64	.212	.25	.05	-.19	3.03	.046
	4	Social-(F)	3.37	.078	.34	.09	-.27	3.31	.025
	5	Physical-(M)	.90	.351	.36	.02	-.36	2.82	.037

Note: (M) = Mother
(F) = Father

age was the only significant variable found to be marginally related to and predicting girls' perceived competence (r = .32, $p < .087$) as well as accounting for 10% of the total variance of girls' scores. Older girls were more likely to see themselves as more physically competent than younger girls. For boys, four parent variables as well as age were significantly related to perceived competence accounting for 46% of the total variance. Age was significantly related to boys' perceived physical competence (r = .39, $p < .028$) and accounted for 15.5% of the variance. No predicted relationships were found to be significant for the physical category.

No significant results were found for girls for the cognitive category. However, four parent treatment variables were found to be significantly related to perceived cognitive competence for boys. Opposite to prediction, fathers' rated treatment in the cognitive situation was significantly negatively related to cognitive perceived competence (r = -.27, $p < .03$) and accounted for 14.3% of the variance. The finding of a negative relationship was opposite to that predicted, and is difficult to explain. One of the implications of this finding is that fathers who are rated as most "sensitive" on this measure would have sons who have lower perceived competence scores. Since low cognitive perceived competence is represented in the pictured items by children being helped by an adult, the question raised earlier regarding what these rating scales measure seems valid. It appears as if high

ratings for parent treatment might be somehow related to "overprotectiveness" or fostering of dependency in the child and vice versa. The results presented above indicate the necessity of further testing of the usefulness and validity of the rating scales used for this measure.

In summary, separate multiple regression analyses for boys and girls found little support for the predicted positive relationship between parent treatment and child perceived competence. Only one predicted relationship was found to be significant. The reasons for the significant negative relationships opposite to predictions are unclear.

Age Differences. Multiple regression analysis was again used to examine age differences in the relationship between parent treatment variables and child perceived competence for different age groups of children. As was described in an earlier section, two age groups (younger and older) were formed through a median split. Table 20 presents the results for the relationship between parent treatment variables and child perceived competence for both age groups.

Only one predicted relationship was found to be significant in the regression analysis for age differences. Mother treatment in the social situation was significantly related to childrens' perceived social competence for the older age group. Opposite to prediction, fathers' treatment in the cognitive situation was found to be significantly negatively related to younger childrens' perceived cognitive

TABLE 20

Perceived Competence and Significant Parent-Child Situations Predictor Variables Based Upon Stepwise Multiple Regression Analysis for Younger and Older Age Groups

Category	Step	Variable Entered	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Younger Age Group									
Cognitive	1	Sex	4.23	.05	.16	.16	-.40	4.23	.052
	2	Cognitive-(F)	10.17	.00	.43	.27	-.55	8.08	.002
	3	Cognitive-(M)	1.54	.23	.48	.05	-.10	6.04	.004
	4	Physical-(M)	2.02	.17	.53	.05	-.51	5.26	.005
	5	Physical-(F)	.50	.49	.54	.01	-.26	4.20	.011
	6	Social-(F)	.45	.51	.55	.01	-.19	3.47	.020
	7	Social-(M)	.12	.74	.55	.00	-.23	2.83	.040
Older Age Group									
Cognitive	3	Physical-(F)	4.54	.042	.19	.13	-.35	2.31	.097
Social	1	Sex	2.81	.104	.08	.08	.29	2.81	.104
	2	Social-(M)	2.51	.124	.15	.07	.31	2.73	.082

Note: (M) = Mother
(F) = Father

competence (r = -.55, $p < .004$), accounting for 27.4% of the total variance. No other significant same-category relationships were found to be significant.

Analysis of age differences in the relationships between parent-situations variables and child perceived competence found a significant predicted relationship for only one of three categories for the older age group. Mothers' treatment in the social situation was positively related to older childrens' perceived social competence. Opposite to prediction, cognitive competence perceptions of younger children were negatively related to fathers' treatment in the cognitive situation. No further significant results for parent variables were obtained. Finally it was found that younger girls had higher perceived cognitive competence scores than younger boys, while older boys had higher social competence scores than older girls. No clear pattern of results can be seen to emerge from the multiple regression analysis for age differences. The relationship between mothers' treatment in the social situation and older childrens' social perceived competence may indicate that mothers' influence is consistent with expectations of sex-role stereotypes. Such influence may be exerted either (1) early in the child's development or (2) more strongly for the older child. These speculations may partially account for the significant findings for older and not for younger children. A clearer picture of the parent-child relationship requires

longitudinal research in order to examine the patterns of influence over time.

Summary of Findings for Hypothesis 2. In general, very little support was obtained for the hypothesis that parents' reported treatment rating scores would be positively related to childrens' perceived competence. Only one predicted result was found to be marginally significant in the overall regression analysis for sex differences while one marginally significant relationship was found in the regression analysis for age differences. The pattern of negative results obtained in these analyses was quite extensive, although a general trend did appear. Perceived cognitive competence was correlated negatively with all of the parent treatment variables. The question was raised as to the specificity of the rating scales themselves. It appeared that high ratings of the Parent-Child Situations measure might represent a measure of "overprotectiveness" as well as "sensitivity" as was expected.

Hypothesis 3: Relationship of Parent-Values and Parent Activity Preference.

Correlational Analyses. It was hypothesized that parent-child accordance (child preferences correlating with parental expectations) would be greater than parent-child similarity (match of child's activity preferences with parent activities). Correlational analyses have been reported in Table 13 for the relationship between parent

values and child activity preference. As reported earlier, only one predicted relationship was found to be significant in that analysis. Table 21 presents the intercorrelations among child activity preference and parent activity. Again, only one marginally significant result was obtained. Father cognitive activity was marginally correlated with child cognitive activity preference (r = .20, $p < .10$).

The correlations between parent activity and sex and age of child are also presented in Table 21. Marginally significant correlations were obtained for the relationships between social activity category for both mothers and fathers and sex (rs = -.20, -.17; $p < .10$ respectively). Thus, parents of girls report higher social activity participation than did parents of boys. No significant relationships were found for age of child and parent activity.

Finally, as reported in an earlier section, two relationships between age and sex of child and activity preference scores were found. Boys preferred physical activities and girls preferred social activities (r = .33, and -.28, $p < .01, .05$, respectively). Two additional marginal correlations were found for age of child. Younger children were more likely to prefer cognitive activities than were older children (r = -.19, $p < .10$) and older children were more likely to prefer physical activities (r = .16, $p < .10$).

Correlational analyses were also conducted to examine sex and age differences in the relationship between parent

TABLE 21

Intercorrelations Among Child Activity Preferences, Parent Activity, Sex and Age

Parent Activity Variable	Sex	Age	Activity Preference Category: Physical	Cognitive	Social
Mothers					
Physical	-.15	-.02	-.00	-.07	.07
Cognitive	-.15	.07	-.15	-.10	.24**
Social	-.20*	-.09	.04	-.01	-.02
Fathers					
Physical	-.09	-.10	-.02	-.30**	.35**
Cognitive	.03	-.04	-.20*	.20*	-.04
Social	-.17*	-.03	.12	-.03	-.07
Sex			.33***	-.00	-.28**
Age			.16*	-.19*	.07

*p < .10
**p < .05
***p < .01

and child variables. Appendix E, Table E-4 presents the intercorrelations among parent-activity variables and predicted activity preference for sex and age groups. (See Appendix E, Table E-2 for the correlations among child activity preference and parent values.)

Three predicted relationships were found to be marginally significant for girls. Fathers' activity was marginally related ($p < .10$) to girls' activity preference in each of the three categories: rs = .28, .29, and 27, respectively for the cognitive, physical, and social categories. Only one

predicted relationship was found to be significant for boys. Father physical activity correlated .39 ($p < .05$) with boys' physical activity preference. No additional findings were significant in the analysis of sex differences.

For the younger age group, no predicted prelationships were found to be significant. Opposite to prediction, mother cognitive activity correlated -.34 ($p < .05$) with younger childrens' cognitive activity preference. For the older age group, only one predicted relationship was found. Father cognitive activity correlated with child cognitive activity preference ($r = .25$, $p < .05$). No other significant or marginally significant results were found for the predicted parent-child relationships.

In summary, little support was obtained from the correlational analysis for the predicted relationship between parent activity and child activity preference. The clearest pattern of correlations was found for the father activity-daughter preference relationships. Although only marginal, father activity was positively related to daughter's activity preference in each of the three categories. The reason for this pattern of results is unclear. The reason for the significant negative correlations as well as for the cross-category relationships is also unclear. These findings are in need of further examination. It has been speculated that the direction of effects for the parent-child relationship may vary over different developmental periods, resulting in

negative correlations in some instances. The significance of the cross-category correlations is unknown. Further research is needed in order to investigate the manner in which parent activity affects child preferences both in the same activity as well as across activities. The correlational results were equivocal in regard to the predicted greater degree of "accordance" vs. "similarity" in the relationship between parent variables and child activity preference. One significant and four marginally significant relationships were found in support of the "similarity" hypothesis, while only two significant predicted relationships were found in support of the "accordance" hypothesis.

Multiple Regression Analysis. Again, stepwise multiple regression analysis was used in order to clarify the above findings as well as to determine the relationship between the parent values and activity variables and the three categories of child preference. Table 22 presents the results of this analysis. Predictor variables entered into the regression for each category were sex, age the two parent activity variables for that category (mother activity and father activity) and the two parent values variables for that category (mother values and father values). Thus, each child activity preference category was examined in relationship with six predictor variables.

Moderate support was found for the prediction that the correlations between parent values and child activity

TABLE 22

Activity Preference and Significant Parent Activity and Parent-Values

Predictor Variables Based Upon Stepwise Multiple Regression Analysis

Category	Step	Variable	F	Signif-icance	R Square	R Square Change	Simple R	Overall R	Significance
Physical	1	Sex	7.29	.009	.11	.11	.33	7.29	.009
	2	Age	.36	.553	.12	.01	.16	3.78	.029
	3	Physical-(FV)	4.69	.034	.18	.07	-.20	4.25	.009
	4	Physical-(MV)	2.64	.110	.22	.04	.19	3.94	.007
	5	Physical-(MA)	.12	.729	.22	.00	-.00	3.13	.015
Social	1	Sex	5.17	.027	.08	.08	-.28	5.17	.027
	2	Age	1.50	.225	.10	.02	.07	3.36	.042
	3	Social-(MV)	4.27	.043	.17	.06	-.30	3.79	.015
	4	Social-(FA)	.78	.382	.18	.01	-.07	3.02	.025
	5	Social-(MA)	.12	.729	.18	.00	-.02	2.41	.048
	6	Social-(FV)	.15	.698	.18	.00	-.04	2.00	.082

Note: (MV) = mother-values
(FV) = father-values
(MA) = mother-activity
(FA) = father-activity

preference (accordance) would be stronger than the correlations between parent activity and child activity preference (similarity). For one of three categories the "accordance" correlation was found to be higher than the correlation for any other parent-child variable combination. Only one predicted relationship was found to be significant in the overall regression, although it was not significant at the variable level ($p < .110$). Mothers' physical values were found to be correlated with child physical activity preference ($\underline{r} = .19$, $p < .007$). A result opposite to predictions was also found: father physical values was negatively correlated with child physical preference ($\underline{r} = -.22$, $p < .034$). Also opposite to prediction, mothers' social values were found to be significantly negatively correlated with child social preference ($\underline{r} = -.30$, $P < .043$). No other significant relationships between parent variables and child activity preference were obtained.

In summary, few significant results were obtained in the regression analysis for the relationships among parent values, parent activity, and child activity preference. However, parent-values predictor variables accounted for more of the total variance (16.9%) than did parent activity variables which accounted for 1.49% of the total variance. In the physical category, parent values and parent activity accounted for 10.4% and .17% of the total variance respectively. In the social category, parent values accounted for 6.47% of

the variance while parent activity accounted for only 1.32% of the variance. Reasons for the negative correlations are unclear, and have been discussed in an earlier section for the parent values measure. One additional speculation regarding the parent activity measure is that children may not know what their parents do in their free time. The parent activity measure does not include any information as to whether the children are aware of their parents' activities. The validity of the parent activity measure could be improved in relation to the "accordance-similarity" hypothesis by asking parents what activities their children were aware of among those in which the parents engage, as well as asking the children what their parents did "for fun." This information might provide a more valid basis for a test of this hypothesis.

Sex Differences. Multiple regression analysis was used to provide a clearer picture of sex differences in the relationship between parent values, parent activity, and child activity preference. Table 23 presents the multiple regression results for the relationships between parent variables and child activity preference for girls and boys.

For girls, two predicted relationships were found to be significant. Mother physical values correlated .41 with girls' physical preference ($p < .035$). Also, father cognitive activity was found to be marginally related to girls' cognitive activity preference ($r = .28$, $p < .099$). Opposite to prediction, mothers' social values were negatively related

TABLE 23

Activity Preference and Significant Parent Values and Parent Activity Predictor Variables Based Upon Stepwise Multiple Regression Analysis for Girls and Boys

Category	Step	Variable Entered	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Girls									
Social	2	Social-(MV)	4.29	.048	.16	.13	-.39	2.50	.101
Physical	2	Physical-(MV)	4.93	.035	.17	.15	.41	2.78	.080
Cognitive	2	Cognitive-(FA)	2.92	.099	.14	.09	.28	2.25	.125
Boys									
Physical	1	Physical-(FV)	7.84	.009	.21	.21	-.46	7.84	.009
	3	Physical-(MA)	2.99	.095	.29	.08	.22	3.72	.023

Note: (MV) = mother-values
(FV) = father-values
(MA) = mother-activity
(FA) = father-activity

to girls' social activity preferences (r = -.39, $p < .048$). Again, the explanation of sex role stereotypes may account for the negative results found for the social category, with others possibly "pushing" social development and girls reacting to this strong influence.

For boys, mother physical activity was found to be marginally correlated with boys' physical activity preference (r = .22, $p < .095$). Opposite to prediction, fathers' physical values were found to be negatively correlated with boys' physical activity preference (r = -.46, $p < .009$). No other significant relationships were found for boys.

In general, of the five relationships reported above, the one significant result involved parent values while two marginally significant results were obtained for parent activity variables. Variance accounted for by the parent values variable was 15% while the marginally significant parent activity variables accounted for an average of 8.5% of the variance. Reasons for the negative correlations are unclear. Again, significant negative correlations were obtained for same-sex relationships in activity areas which can be seen to be sex-role stereotyped. This suggests the need for future research investigating the effects of such social stereotypes upon the parent-child relationship.

Age Differences. Multiple regression analysis was again used to examine age differences. Table 24 presents the results for the relationships between parent variables and child activity preferences for younger and older age

TABLE 24

Activity Preferences and Significant Parent Values and Parent Activity Predictor Variables Based Upon Stepwise Multiple Regression Analysis for Younger and Older Age Groups

Category	Step	Variable to Enter or Remove	F	Signif-icance	R Square	R Square Change	Simple R	Overall F	Signif-icance
Younger Children									
Physical	1	Sex	8.85	.007	.29	.29	.54	8.85	.007
	2	Physical-(MV)	3.46	.077	.38	.10	.36	6.65	.006
	3	Physical-(MA)	.66	.43	.41	.02	-.17	4.58	.013
	4	Physical-(FV)	.31	.59	.42	.01	-.09	3.39	.03
Older Children									
Social	1	Sex	5.04	.03	.14	.14	-.37	5.04	.03
	2	Social-(MV)	6.45	.02	.29	.15	-.43	6.19	.006
	3	Social-(FV)	.81	.38	.31	.02	-.02	4.37	.012
	4	Social-(MA)	.24	.63	.32	.01	-.03	3.25	.026
Physical	2	Physical-(FV)	4.48	.04	.14	.13	-.34	2.49	.100

Note: (FA) = father activity
(FV) = father values
(MA) = mother activity
(MV) = mother values

groups. Analysis of the age differences in the relationships between child activity preference, parent values, and parent activity found only one significant predicted result for both the younger and the older age groups. The relationship between mother physical values and physical preference in the younger age group was found to be marginally significant ($r = .36$, $p < .077$).

For the social category, the relationships between mother social values and social preference for the older age group was significant and opposite to prediction ($r = -.43$, $p < .02$). A finding opposite to prediction was also found for the physical category. Father physical values were found to be negatively correlated with child physical activity preference ($r = -.34$, $p < .04$). No further significant results were found for parent-child relationships.

Sex was found to be a significant predictor of social preference for the older group ($r = -.37$, $p < .03$), indicating that older girls are more likely than older boys to prefer social activities.

Sex was found to be significantly related to younger childrens' physical preference as well ($r = .54$, $p < .007$), accounting for 29% of the variance. Thus, younger boys were more likely to prefer physical activities than younger girls.

In summary, regression analysis indicated different patterns of results for the two age groups. Sex was found

to be a significant predictor of physical activity preference for younger children, with boys preferring such activities more often than girls. Sex was also found to be a significant predictor of social activity preference for the older age group, with girls preferring such activities more frequently than boys. Significant results were obtained for only one activity category for the younger age group. Mother physical values was related to physical preference for the younger age group, while the pattern reversed for the older age group. Father physical values was negatively related to physical preference for the older age group. Also opposite to prediction, mother social values were significantly negatively related to social activity for the older age group.

Summary of Findings for Hypothesis 3. The results of the multiple regression analyses were equivocal regarding support for the predicted stronger relationship between parent values and child activity preference (accordance) than between parent activity and child activity preference (similarity). The regression analysis indicated that the accordance relationships were stronger than the similarity relationships in one category. Further analyses of sex and age differences indicated little additional support of the predicted relationships. While the only significant predicted relationship was for a parent values variable, two marginally significant relationships were found for parent activity

variables in the analysis for sex differences. In the analysis for age differences, only one significant result for a parent values variable was obtained. The presence of negative results is difficult to explain. In general, while offering little support for the accordance hypothesis, it appears that the relationship between parent and child variables is mediated by sex and age. As was discussed in an earlier section, negative results for same-sex parent-child relationships appear to be found in sex- role stereotyped activity areas. This finding is in need of further examination in future research.

CHAPTER IV

DISCUSSION

Relevance of Results for Hypotheses

Hypothesis 1, that parental expectations of the child's competence will be positively related to the child's activity preferences, was partially supported by the results. Parents' expectations for their child's competence were found to be positively correlated with children's activity preferences in one of three activity categories. Multiple regression analysis for sex and age differences revealed stronger relationships between same-sex parent and child variables particularly for activity areas which could be seen as sex-role stereotyped.

Hypothesis 2, that parents' reported childrearing behavior will be positively related to the child's perceived competence, received minimal support from the data as the predicted positive relationship between parents' reported treatment of problem situations and children's perceived competence were not found. However, some support for the hypothesis was obtained from the multiple regression analyses for sex and age differences which revealed positive relationships between mothers' treatment and both girls' and older

children's perceived competence in the social situation.

Support for Hypothesis 3, that parents' values would be more highly correlated with children's activity preferences than would parents' activities, was equivocal at best. Parents' values were found to be the only variables significantly correlated with activity preferences in two of three categories. However, these correlations were in the negative direction, opposite to prediction. This raised the question (discussed in a later section) of the appropriateness of the term "accordance," which requires a positive relationship between parent and child variables.

Among the unexpected results, perhaps the most difficult to explain were the recurrent significant negative relationships between parent and child variables. If valid, these significant negative correlations suggest the necessity of a more complex view of the relationship between parent and child variables of concern to this study. Often, the negative results were obtained for same-sex parent-child relationships in areas which could be seen as sex-role stereotyped. A negative relationship would thus be obtained for the same-sex parent-child relationship if the activity were sex-role appropriate for that dyad. Speculations regarding these results are: (1) parents may indicate higher values for an activity if their child is not "performing" in accord with the stereotype, and show less concern if their child is performing adequately or (2) parents may try to directly

influence their children more strongly in those areas which the parent sees as being socially appropriate for the child's sex-role, the children may resist such influence and behave in opposition to the parental demands. Rothbart and Maccoby's (1965) finding that parents are less tolerant (expect more) of same-sex children is congruent with this explanation of the significant negative relationships for same-sex dyads.

At least in some instances it appeared that different processes were operating when the sex-role appropriateness of an activity was low, since positive relationships were deserved if an activity were not sex-role appropriate for that parent-child dyad. A parent who is relatively less concerned with a specific competence area because it is not part of the appropriate sex-role for him/herself and the child may hold values for that activity more in accord with the child's own values or abilities rather than with some existing stereotype. A parent's expectation may be stronger for a stereotyped activity.

Finally, additional explanations for the unexpected results obtained here may lie in the nature of the subject population of this study. Parents were from middle- to upper-middle class homes and were predominantly characterized as professionals or graduate students. As such, these parents may differ from the average parent in terms of attitudes, beliefs in stereotypes, and childcare practices. They may be more liberal in their stereotypes regarding

appropriate behavior for their children. However, as Hammer (1975) writes, "Children from three to five are engaged in figuring out the great questions of sexual differentiation and identity, and stereotypes undoubtedly have great appeal to them because they simplify matters" (p. 40). She further points out the near "universal" appeal of dresses to three to five year-old girls, regardless of their mothers' life styles. The negative relationships obtained here may in some instances be the result of a liberal parental attitude and a conservative child. The finding of results opposite to prediction suggests the need for further research to clarify these relationships. Clearly, a wider range of socioeconomic levels would be of some benefit.

Further Considerations of the Results for the Experimental Hypotheses

Further explanations for the minimal degree of support obtained for the three experimental hypotheses may be found both in an examination of the measures used to test these hypotheses as well as in an examination of the conceptual framework of the hypotheses.

The major problem common to all tests of the hypotheses was the low reliability obtained for both the children's measures Perceived Competence and Activity Preference. The small number of items used and the heterogeneity of item variance within categories resulted in low scale reliabilities. A further problem was that no measure of the reliability

of these tests over time was obtained. Consequently it was impossible to evaluate the stability of the children's scores, and questions must be raised regarding the validity of these measures. Children of 2 - 5 years of age may be quite inconsistent in their response to such measures.

A second problem common to all tests of the hypotheses concerned the parent measures: Parent-Child Situations and Parent Values. Although the reliabilities for these two measures were high, and the factor structures indicated clearly defined factors, it was found that the three categories within each test were not equally good as predictors. The variance accounted for by each category ranged from low to moderate and no doubt lessened the significance of the results for certain categories.

An additional problem concerned the rating scales for the Parent-Child Situations (PCS) measure and the Parent Activity (PA) measure. For the Parent-Child Situations test, most of the variance was accounted for by one factor (situation). Little additional variance was accounted for by the rating scores for the remaining two situations indicating that the rating scales did not discriminate highly among parental responses for the three situations. Also discussed in an earlier section was the problem of validity for the PA rating scale. Some of the activities which were listed by parents on this measure could not be coded by the PA rating scales because they could not clearly be distinguished as

predominantly one type rather than a combination of activity types.

In addition to these methodological concerns, some conceptual issues also deserve consideration. One primary concern involves the use of the concept "accordance," which describes a direct positive relationship between parents' expectations and children's attitudes. This concept appears to be either invalid or simplistic in light of the negative correlations obtained in this study. The presence of sex and age differences affecting the relationships between parent and child variables suggests the need of a more complex theory. Further, the actual expression of expectations rather than simple presence of them in the parents' set of values may be more directly relevant to the development of preferences or perceived competence on the part of the child. Such aspects as the strength of the expectations, the degree to which they differ from the norm, and the quality of the parents' childcare skills also need to be examined in terms of their possible mediating role in the relationship between parent expectations and child attitudes. Discussed earlier was the role that stereotypes may play in simplifying a young child's self-conception. The degree to which a parent holds discrepant (non-sterotypical) expectations might be significantly related to the young child's acceptance or rejection of such expressed expectations.

Finally, one further consideration is that the definition of three activity categories may be less useful than an

approach focusing on specific activities or skills. The distinction between the three categories is arbitrary in that almost any activity usually contains elements of more than one of the activity categories--physical, social, or cognitive. By focusing on specific activities of skills perhaps a clearer picture of the socialization process could be obtained.

In summary, the inadequacy of the measures reported above as well as some conceptual issues must also be considered when discussing the significance of the findings for the experimental hypotheses. However, the fact that minimal support was found for two of the three hypotheses indicated that future research along these lines, including improved measures, could lead to an important clarification and elaboration of the results presented above.

Relevance of Results for Past Theory and Research

Harter (1978) discussed the need for a refinement and extension of the model of competence motivation as presented by White (1959). Harter presented a component model of effectance motivation (adopting White's phrase) in which the role of social agents, the reinforcing environment, and other correlates of the motive system such as perceived competence and the self-reward system are dealt with extensively. Further, Harter pointed out the need for three specific directions for future research: (1) an examination of the

interrelationship among dimensions of competence (2) an examination of the developmental framework and ontogenetic changes in the strengths of these components, and (3) a search for the antecedents (particularly the role of the socializing environemnt) of different effectance motivation components. The present study represented an exploratory attempt to understand some of these relationships. The results offered some indication of a relationship between parent influences and children's attitudes in various areas of activity. A component model of competence (as suggested by Harter) appears to be required in order to incorporate the sex and age differences obtained in the analyses. Parent influences differed in strength and direction depending upon the type of activity for which the results were found as well as for the sex and age of the children. These results were seen to have implications in a discussion of theories of socialization.

The role theory of socialization (Hill, 1967; Brim, 1960) focuses on parent's expectations for a particular child's behavior as opposed to general parental characteristics. It suggests that the probability that particular responses, however acquired, will be performed as a function of internalized expectations and the sanctions exercised by others in interaction. A premise of role theory is that parents are more likely to place consistent sanctions on behavior they expect of the child than on behavior solely in

imitation of their own general characteristics. Thus, parent-child accordance (behaving in accord with parent expectations) should be greater than parent-child similarity (behavior in accord with parents' behavior). Further, role theory assumes the mother to be the critical parent for children of both sexes in the sense that their expectations are more likely to be internalized. Results of this study provided only a slight support for the accordance hypothesis. Parents' values (expectations) were found to be more highly related to children's activity preferences than were parents' activities. However, many of these correlations were negative, suggesting that "accordance" might not be the most appropriate term to use in describing the relationship between parent influences and child preferences. As was discussed above, the phenomenon of "accordance" as discussed by the social learning theorists may take on different characteristics at various stages of development. If this is the case, a more elaborate and detailed theory will have to be constructed in order to adequately explain this developmental process.

Further, the findings of a greater relationship for same-sex parent-child dyads for all hypotheses contradicts the role theory premise of the mother as critical parent. The findings reported here are in accord with those reported by Hill (1967). In his study examining attitudes toward mathematics fathers' expectations for their 7th grade sons'

mathematics performance were significantly correlated with their sons' attitudes toward math. Hill suggested that mathematics was part of the male sex-role for the father but not for the mother, with a positive relationship between strength of this attitude and expectations for son's performance. Hill's study did not include daughters therefore no similar comparison of the strength of the mother-daughter relationship in attitudes could be made. The present study, however, did find a significant mother-daughter relationship between parent expectations and child preferences.

The presence of strong same-sex relationships is in contrast with the identification theory of sex-role learning as advanced by Johnson (1963). Johnson argued that it is the father who is the critical parent in the internalization of expectations on the assumption that the father responds differentially to male and female children while the mother does not. Hill, on the basis on his study with parents' of sons, suggested that more assiduous and consistent sanctioning can be expected from the father for those characteristics which are most discordant with the fathers' expectations for his son. However, the same process might be expected to occur for mothers' responses to their daughters regarding those characteristics of activities which are most associated with and consistent with the female sex-role. Rothbart and Maccoby (1965) offer further clarification of the above explanation. In a study examining parents'

differential reactions to sons and daughters, they found that parents were more permissive toward children of the opposite sex for both dependency and aggression. This rules out the possibility that cross-sex parents' socialization demands are more important than same-sex parental demands for sex-role appropriate behavior from their children. Again, Johnson's (1963) theory of the father as the critical parent is not supported. That parents differentially reinforce their children consistent with sex-role standards may be the best explanation for the same-sex relationships found for those activities which appeared to be part of existing sex-role stereotypes.

Significant predicted results were obtained more often for the mother-daughter relationships than for any other parent-child dyad, and more often for girls than for boys in general. This is consistent with the literature proposing that young girls accede to the demands of socialization more readily than boys (Minton et al., 1971; Sears et al., 1965; Baumrind, 1971).

In addition to the finding of significant sex differences in the parent-child relationship, little difference was found between the parent-child relationships for the younger and older age groups. A higher number of significant and marginally significant predicted results both negative and positive was obtained for the older age group than for the younger age group. This result can be examined in

light of cognitive mediation theory (Mischel, 1966; Aronfreed, 1969). Mediating cognitions are seen as playing a broad role in internalization of expectations. Through internal representations of rules and consequences the child learns to formulate expectations about future probable reward and punishments. Obviously, the older child will be more capable of such cognitive activity. Thus, the effects of parental socialization practices may be expected to have more effect for older children.

The lack of significant findings for the hypothesis that parents' reported behavior toward children in problem situations would be correlated with childrens' self-perceptions of competence has been discussed in an earlier section. However, the large number of negative correlations may have a special significance here. There exists a large body of literature which demonstrates that parental socialization attempts can be negatively related to children's development in a number of areas. The concept, "overjustification," refers to the negative effects caused by the addition of external rewards. Attribution is suggested to shift from intrinsic to extrinsic motivation with carry-over effects on future performances (Anderson et al., 1976; Harter, 1978). The negative results obtained here may be partially due to an insensitivity of the rating scales in differentiating between optimal and non-optimal levels of reinforcement. An alternative explanation of the negative results is that

parents responded more positively to those problem areas in which they knew their child had some difficulty, while responding in a manner indicating less concern to other less "problematic" areas of activity. Further clarification of the rating scale structure is obviously needed in order to test the relationship between parent behavior and children's perceptions of competence. A more adequate measure of reinforcement should be included in future research, along with other suggestions discussed previously.

An additional consideration involves the interpretation of significant cross-category (non-predicted) relationships between parent variables and child variables. While a few cross-category (parent variable for one activity predicting child preference in other category) were found to be significant, such relationships were not part of the focus of the present study. The meaning of such relationships is unclear due to the present lack of theory as well as research regarding the transfer of effects of parents' values for an activity upon child preferences for that activity and for others. Future research will need to be directed at this area of the relationship between parent variables and child variables. It may be that the parents' expectations for one area of competence further enhance competence in a second area indirectly, while detracting from the development of competence in a third area. Ideally, one would expect parents to encourage their children to perform competently

in all areas of activity. However, parents do have different expectations, based upon personal preference as well as social sanctions, for their child's behavior and development. For this reason, both the direct and indirect influences which parents exert upon their children is of importance to an understanding of socialization's impact upon the differentiation of competence and preferences. The direction of effects is not unilateral. Children's personal preferences (outside of socialization effects) as well as their abilities in various areas also influence the parents' expectations and perceptions of their child.

Qualification of Results and Directions for Future Research

Several suggestions for future research in the area of parent-child relationships have already been made including suggestions for the improvement of individual test measures. Other suggestions are presented here. The most essential direction for future research would be to improve the test measures in terms of reliability, sensitivity and validity as discussed in earlier sections. Validity measures should be obtained through direct measures of behavior where possible, and by obtaining alternate ratings or questionnaire information elsewhere. Another way in which validity as well as reliability could be improved would be to ask target populations to list activities in which they actually feel children of different ages should exhibit competence. This

pool of items would represent a more relevant set of items to be used for a measure of parent values and could be used also to form a more internally consistent measure through the selection of items which share a high degree of content validity.

In addition to reliability as measured by internal consistency, measures of test-retest reliability should be obtained in order to assess the reliability of individual responses over time. This would be particularly important to assess for young children's scores, as one might expect them to be more variable in their responses due to a number of factors such as attentiveness, degree of comfort with the experimenter, and others. Reliability and validity of the children's measures could be improved in the same way as discussed above. Finally, there appears to be some need for a revision of the rating scales used for both the Parent-Child Situations measure and the Parent Activity measure. Suggestions for the former have been made in an earlier section and include such changes as (1) improving the validity and equivalence of the three problem situations used in the measure; (2) changing the structure of the rating scales to include situation-specific behavioral descriptions, rather than abstract conceptual definitions; (3) change the rating procedure itself such that no transfer of influences between ratings of an individual's responses in one situation and another. A suggestion for obtaining a more adequate

measure of parent activities is to develop a checklist format which would allow all parents' responses to be based on comparable information. The list of activities again could come from among those found to be commonly reported.

In addition to these suggestions regarding test measures, other approaches to examining the parent-child relationship would be useful. First of all, as mentioned above, the design should include a comparison of actual behavior with attitudes and preferences. For example, individual parents could be observed engaging with their children in various activities, and their behavior rated rather than relying upon verbal reports of parents. Measures could also be obtained of children's competence levels in various areas, and this information used in the interpretation of the complex relationship between child motivation, ability, preference and parental influences.

Secondly, the use of a correlational design makes it impossible to designate a cause and effect sequence to the relationship between parent's influences and children's attitudes. Although the literature emphasizes the effects of parents' socialization influences upon child development, children's activities and behaviors are also responsible to some extent for parent attitudes and expectations. A more satisfactory approach to this type of study would be to conduct a longitudinal study using cross-lagged panel correlations between various children and parent measures. This

would allow a clearer examination of the differential role various components play across time. Only through this type of study can an understanding of effectance motivation and the development of a component model such as Harter outlines be developed.

Finally, as had been discussed earlier, future research should entail clarification of concepts such as perceived competence, expectations, and activity area categories. It is likely that parents' self-reports of expectations differ from their expression of those expectations in significant ways. The necessity of understanding the context in which such expressions occur is supported by the literature discussions of "quality" of caregiving rather than "quantity" (Baumrind, 1967, 1971). This distinction between expectations and their expression should remain clear in future studies.

Further, the concept of accordance appears to be in need of elaboration. The clarification presented above will allow more accurate tests of the validity of the concept of accordance. It seems likely that the degree to which accordance would occur would be dependent upon the manner in which parents make expectations known to their child. Other mediating variables appear to be sex of parent and child as well as age of child, as different results were obtained dependent upon these attributes. Further, there are likely to be significant differences in the expression of accordance

depending upon the nature of the parent-child interaction. Perhaps a distinction based upon the quality of the parents' childcaregiving would be useful, and different groups derived therefrom be examined for differences in socialization patterns and effectiveness. Included in this type of study could be an anlysis of the effects of disparate expectations on the part of mothers and fathers, which the literature suggests may have negative effects upon the child's development in various ways (Clark and van Sommers, 1961).

Finally, another area in which further clarification is needed in is the definition of activity categories. A closer match between those activities for which parents' and childrens' attitudes and preferences are obtained is necessary for a clearer and more accurate understanding of the socialization process. Clarification and elaboration of the basis hypothetical framework of this study, as well as methodological improvements, will no doubt lead to a better understanding of the socialization process in all of its complexity.

Conclusion and Implications of Findings

The present study was exploratory and hence suffered the disadvantages of measures which were less than adequate in some ways. However, it appeared to have some success in showing that the degree to which parents value certain areas of activity is somewhat related to children's preferences

for those areas of activity. The results were equivocal as to whether the degree to which children's preferences were related to parents' values was greater than the degree to which children's preferences were related to parents' activities. In addition, support was found for a stronger pattern of same-sex parent-child relationships on the above measures for some areas of activity. This finding was discussed in terms of its fit or lack of fit with current socialization theories. Finally, the results indicated that the pattern of relationships between various dimensions of parental influence and children's preferences and self-perceptions of competence was different for younger and older age groups. This finding represents a first step in developing a developmental model of competence.

The results obtained in this study indicate that careful and systematic research along the lines suggested here may prove to be helpful in clarifying present theories of socialization as well as pointing out areas in which further research would be useful. In conclusion, there remains a large number of important and unanswered questions regarding the direction of influences and the relative importance of specific parental influences throughout development. Results of the present study, however, suggest that comprehensive as well as longitudinal studies which evaluate behavioral, attitudinal, and motivational variables for both parents and children will provide a greater understanding of many of these important questions.

APPENDIX A

Letter to Parents

Research Consent Form

APPENDIX A

Letter to Parents

Dear Parent(s):

We are studying the relationships among parent attitudes, teacher perceptions of children's behavior, and children's activity preferences. For this study we are asking both mothers and fathers, as well as teachers for their cooperation. The research will be conducted at the Michigan State University Early Childhood Laboratories. Permission has been obtained from the coordinator and/or head teacher of your child's program as well as the Psychology Department, the University Committee on Research Involving Human Subjects, and the Early Childhood Studies Committee.

Volunteering parents will be sent several questionnaires. Two of them will require only simple responses. For the third questionnaire you will be asked to write a short paragraph in response to each of three situations in which parents may often find themselves. One of these questionnaires will also be filled out by your child's teacher. Time needed to complete the questionnaires is approximately 20 minutes.

We will be with each child for a total of 15 minutes. In order to assure the child's feelings of familiarity and comfortableness in the testing situation, we will spend time playing and interacting with the children in the classroom before beginning the study. The children will complete two short picture tests. In one test children will choose their favorite activity from pairs of pictured activities. In the second test, children's expectancy of success will be examined. Children will make selections from a series of pictures which depict various levels of skill in different areas of activity. All of the information derived from the testing session with the children, as well as the information you provide on the questionnaires will be kept confidential and anonymity will be preserved in the analyses and the reports of the data. The Picture tests can be examined by the parents upon request. The tests are designed to be enjoyable to the child.

If you are willing to participate in this study, please sign the attached consent form and return it to the school. If you have any questions regarding the study, please do not hesitate to phone Kathy Durda at 337-9638. At the conclusion of the study, a summary of the results will be send to all families, whether your child is still enrolled in the school or not. Thank you in advance for your cooperation and assistance.

Sincerely,

Kathy Durda
M.A. Candidate in Psychology

Dr. Ellen Strommen
Professor of Psychology

KD/ES:sh

Michigan State University

Department of Psychology

Research Consent Form

1. I have freely consented to take part in a scientific study being conducted by: Kathy Durda
under the supervision of: Dr. Ellen Strommen
Academic Title: Professor of Psychology

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve, as well as what my child's 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 sent to me at the conclusion of the study, regardless of whether my child is still enrolled at the school or not.

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

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

Signed_____

Signed_____

Date_____

APPENDIX B

Description of Picture Preference and List of Items

Description of Perceived Competence and List of Items

APPENDIX B

Description of Picture Preference

Instructions: The experimenter introduces the Picture Preference Test to the child by saying: "I have some pictures to show you today. These are pictures of children doing lots of different kinds of things. Maybe you can tell me which of these things you like to do most?"

Pairs of pictures were then presented to the child, and each pair was described. For example, "Here is a picture of a girl reading a book, and this is a picture of a girl riding a bicycle. Would you rather read a book, or ride a bike? Which is more fun?"

List of Picture Preference Items

Cognitive Subscale Items

1. Reading a book
2. Playing with puzzles at school
3. Coming to school with favorite book to tell others about

Physical Subscale Items

1. Riding a bicycle
2. Climbing a tree
3. Climbing through a tunnel

Social Subscale Items

1. Playing with a friend
2. Taking a walk with a friend
3. Sharing toys with two friends

Description of Perceived Competence

Instructions: The experimenter introduces the Perceived Competence test by saying to the child, "Now I am going to tell you some stories about children in these pictures; maybe you can tell me which child you are most like."

Nine pictures were then presented to the child. Each picture consisted of 3 scenes of a child performing at various (graduated) levels of competence in the pictured activity. The child was asked to choose the child who was most like him/herself.

List of Perceived Competence Items

Items	Competence Levels
(Cognitive subscale items)	
1. Reading (or looking at pictures)	a. dislikes reading b. likes to read with someone older c. likes to read alone
2. Puzzles	a. dislikes puzzles b. likes to do puzzles with help c. likes to do puzzles alone
3. Counting blocks	a. doesn't like to count b. count to small numbers c. count to large numbers
(Physical subscale items)	
1. Jumping	a. dislikes jumping b. likes to jump over small things (ball) c. likes to jump over large things (small hill)
2. Climbing on slide	a. dislikes sliding b. likes to go on small slides c. likes to go on large slides
3. Climbing a "jungle gym"	a. dislikes climbing b. climbs on bottom bars c. climbs on the top bars
(Social subscale items)	
1. Choice of play partner	a. mother, father, teacher b. same-aged child c. someone younger (to take care of them)
2. Friends	a. no friends b. one friend c. many friends
3. Mode of play	a. alone b. with friend c. with mother, father, or teacher

APPENDIX C

Instructions for Completing Questionnaires

Parent Values
Activity and Interest Preference
Parent-Child Situations
List of Situations Used for Parent-Child Situations
Parent Activity Questionnaire

APPENDIX C

Instructions

(Please read carefully before filling out the questionnaire)

Enclosed in this packet are two sets of questionnaires: One set marked "Father"; one set marked "Mother." Please fill out the appropriate set of questionnaires. It is important that we keep the information for mothers and fathers separate. The identification numbers you find on each questionnaire are for data analysis purposes only.

There are four questionnaires for each individual to complete. Two of them are on computer sheets (which have columns of numbers printed on them). Please use a soft lead pencil to complete these questionnaires.

Please read the individual instructions for each questionnaire carefully.

If you have any questions, please do not hesitate to call me at the following number: 485-3762. I hope you enjoy completing the questionnaires. Thank you again for your assistance in the project.

Sincerely,

Kathy Durda

Instructions for Parent Values

Please read through the list of items below. Rate each of them in terms of how important you feel it is for your child to be the way described in each item. Keep in mind that while many things are important for a child, there are probably some you feel are really more important than others. For example, you may feel obedience is more important than a child being able to get what s/he wants, or always being happy. Thus, you might mark "obedience" as a 6 on the scale below, "is happy" as a 5 (moderately important), and "able to get what s/he wants" as a 3 (somewhat unimportant) on the scale.

Once you have rated the items as to their importance to you, please go through the list again, placing a checkmark in front of those items in which you would like your child to become most interested in doing well.

1 - unimportant

2 - moderately unimportant

3 - somewhat unimportant

4 - somewhat important

5 - moderately important

6 - most important

List of Items

For Parent Values

		1	2	3	4	5	6
1.	Makes friends easily	___	___	___	___	___	___
2.	Participates in many kinds of outdoor activities	___	___	___	___	___	___
3.	Shows curiosity about things	___	___	___	___	___	___
4.	Affectionate toward friends and adults	___	___	___	___	___	___
5.	Can make and build things	___	___	___	___	___	___
6.	Figures out answers for self	___	___	___	___	___	___
7.	Shares readily with others	___	___	___	___	___	___
8.	Self-confident in physical activity	___	___	___	___	___	___
9.	Expresses thoughts well, can say what s/he means	___	___	___	___	___	___
10.	Aware of and concerned with others' feelings	___	___	___	___	___	___
11.	Coordinated	___	___	___	___	___	___
12.	Interested in books and stories	___	___	___	___	___	___
13.	Able to work out conflicts with other children	___	___	___	___	___	___
14.	Challenges self to improve in physical skills	___	___	___	___	___	___
15.	Asks questions and seems to learn from the answers	___	___	___	___	___	___

Parent-Child Situations

Code#_____

Instructions: Three situations will be found on the following pages. You are to pretend or imagine that each of the situations has come up with you and your child.

Your task is to write down exactly how you would respond to the child in each of the situations, in a short paragraph. Write down your exact words and/or actions, but please do not explain why you said what you described. Again, write down your exact words or actions as if you were writing a script of a play or movie (e.g., do not write: "I would reassure or comfort him," instead, for example, write "I would smile at him and in a quiet voice say, 'Don't worry, Billy, Daddy and I love you.'").

List of Situations Used

for Parent-Child Situations

Situation 1: Your child comes home from school and says, "I don't like school and I'm not going anymore because there's nothing to do.

Situation 2: You invite your new neighbors for coffee and they bring their four-year-old over. Your child stays very close to you, and does not talk to the other child or the adults. The other child, however, seems quite friendly.

Situation 3: You take your child to the neighborhood playground. You find that the old slide has been replaced by one which is larger. Your child does not want to go on the slide, even though it was one of her/his favorite activities before.

PARENT ACTIVITY QUESTIONNAIRE

Code#_____

Please list six favorite activities in which you spend your leisure time. List the activity you spend most time in on the first line (1st). Continue to list the remaining five activities in order of the amount of time you spend in each of them, with the 6th choice being that activity (hobby, sport, or interest) in which you spend least time relative to the other five choices.

1st - _____

2nd - _____

3rd - _____

4th - _____

5th - _____

6th - _____

APPENDIX D

Parent-Child Situations Rating Scales

Parent-Activity Rating Scales

APPENDIX D

Parent-Child Situations Rating Scales

Rating Scale
Acknowledgment

5. Verbal Recognition, Acceptance of Feelings: Parent seeks information about child's feelings, labels child's feelings, uses words or gestures that express warmth, acceptance of child's feelings, says it's "O.K." to feel that way.

4. Implicit Acceptance: Child's feelings are mentioned, but not openly acknowledged, parent focuses more on the problem and its solution than on feelings.

3. Implicit Acceptance - no mention of feelings: Parent responds to child in non-critical manner without discussion or acknowledgment of child's experience or feelings.

2. Slight or Moderate Verbal Criticism: (stated or implicit) Parent expresses disappointment, dissatisfaction, with child's feelings and/or behavior, warmth and acceptance are given conditionally, dependent upon child's satisfactory performance.

1. Rejecting, Lecturing, Embarrassing: Parent lectures to child about proper or right way to act or feel, parent tells child s/he shouldn't feel that way, such feelings are childish, immature, inappropriate, etc.

CONTROL: AUTHORITARIAN-AUTHORITATIVE

5. Parent Informative - Allows Child Self-Direction: Parent discusses child's feelings and situation, points out the intrinsic value of becoming competent, encourages child not to make an attempt to master the situation.

4. Parent Informative-Expectant: Parent same as above except this parent influences or biases the child's decision slightly by implying that the parent's solution is right. Child's opinion and decision (independent) play less part here than above.

APPENDIX D (cont'd.)

3. Parent Non-Directive, Non-Informative: Parent lets child do whatever s/he wants, does not interfere or respond to the child directly in a manner that would encourage change.

2. Parent Directive: Parent directs child to do something, no explanation given, no discussion of child's feelings.

1. Parent Commands or Orders: Parent orders child to act or feel in a particular way, uses words like "you should" or "you must," "you have to."

IMPORTANCE OF PROBLEM AREA TO PARENT

5. High Involvement: Parent highly involved in helping child to achieve competency, or resolve the problem satisfactorily. Parent discusses situation with child, including child's feelings, and various solutions.

4. Moderate Involvement: Parent involved with child's situation, but makes more assumptions about child's feelings and offers his/her own solution rather than looking at problem specifically from child's situation.

3. Parent Distracts Child: Parent passively tries to deal with (or avoid) problem by interesting the child in something else rather than deal with problem directly.

2. Parent Defensive: Parent indicates and communicates to child that s/he is embarrassed, uncomfortable, disappointed by child's failure or lack of competence. May try to change child's feelings or behavior in a manipulative, controlling way.

1. Parent Ignores: Parent ignores the child's difficulty or problem, seems unaware of anything needing attention. Makes this clear through direct statement, or through not responding to this situation.

Parent Activity Rating Scales

Instructions: please rate each individual on the following three categories--physical activity, cognitive activity, and social activity.

Physical activity. Any activity or pastime which involves the individual in physical exercise, or recreation of a definite physical nature, either actively (participant) or passively (observer). Include crafts or hobbies which clearly entail definite physical manipulation or activity.

Cognitive activity. Any intellectual activity, thought, communication in written form, detailed planning or analysis. Include hobbies or crafts which clearly entail organization, categorization, collecting of objects or information into some more abstract or hierarchical structure.

Social activity. Any activity which involves the individual in interaction with other people either directly in social interaction, or indirectly for a definite social purpose such as volunteer work or involvement with community or church groups, workers for social change or public service. (If a parent reports more than one activity on a line, they should both be coded if they are of separate categories.)

APPENDIX E

Tables

APPENDIX E

Table 1-E

Intercorrelations Among Mothers' and Fathers' Scores for All Dependent Measures

Test	Category	Mother			Father		
		Physical	Cognitive	Social	Physical	Cognitive	Social
Parent Values							
Mother	Physical						
	Cognitive	.40***					
	Social	.25**	.46***				
Father	Physical	.13	-.13	-.14			
	Cognitive	.04	.11	-.08	.48***		
	Social	-.09	-.13	.09	.31**	.44**	
Parent-Child Situations							
Mother	Physical						
	Cognitive	.35**					
	Social	.39***	.41***				
Father	Physical	.20	-.02	.09			
	Cognitive	.39***	.20	.24**	.35**		
	Social	.31**	-.05	.10	.56***	.45***	
Parent Activity							
Mother	Physical						
	Cognitive	-.34**					
	Social	.23*	-.16				
Father	Physical	.11	.21*				
	Cognitive	-.06	.09	.10	-.49***		
	Social	.15	.19	.16	.24*	-.27*	

* $p < .10$ ** $p < .05$ *** $p < .01$

Table 2-E
Intercorrelations Among Parent Values and Activity Preference Variables
Classified by Age Group and Sex of Child

Parent Values Variables	Activity Preference Category: Girls			Boys		
	Cognitive	Physical	Social	Cognitive	Physical	Social
Mothers						
Cognitive	.07	.05	-.13	.04	.05	-.08
Physical	-.29*	.41***	-.04	.15	-.07	-.11
Social	.17	.17	-.39**	.09	.11	-.19
Fathers						
Cognitive	.00	-.24*	.22	.13	-.11	-.05
Physical	-.26*	-.09	.41***	.37**	-.46***	-.04
Social	.20	-.30**	.04	.09	-.12	-.00
	Younger Age Group			Older Age Group		
Mothers						
Cognitive	-.12	.18	-.03	.11	.06	-.16
Physical	-.23	.36**	-.07	.02	.11	-.11
Social	-.12	.27*	-.11	.27*	.15	-.43***
Fathers						
Cognitive	.21	-.16	-.08	-.02	.17	-.17
Physical	.07	-.09	.00	.09	-.34**	.19
Social	.16	-.26	.06	.15	-.17	-.02

* $p < .10$
** $p < .05$
*** $p < .01$

Table 3-E

Intercorrelations Among Parent-Child Situations and Perceived Competence Variables Classified by Age Group and Sex of Child

Parent-Child Situations Variables		Perceived Competence Categories: Girls Cognitive	Girls Physical	Girls Social	Boys Cognitive	Boys Physical	Boys Social
Mothers							
	Cognitive	-.26*	.10	.25*	-.19	-.25*	-.04
	Physical	-.33**	.07	.16	-.36**	-.02	.03
	Social	.06	.26*	.46***	-.24	-.30*	-.19
Fathers							
	Cognitive	-.19	.21	.07	-.27*	-.03	-.05
	Physical	-.26*	.06	-.17	-.28*	-.14	-.21
	Social	-.17	.28*	-.13	-.27*	.00	.03
		Younger Age Group			Older Age Group		
Mothers							
	Cognitive	-.10	-.01	-.03	-.26*	-.13	-.24*
	Physical	-.51***	-.21	.15	-.22	.14	.21
	Social	-.23	-.13	.19	-.17	-.13	.31**
Fathers							
	Cognitive	-.55***	-.26	-.02	-.09	.16	.07
	Physical	-.26	-.11	-.26	-.35**	-.01	-.13
	Social	-.19	-.00	-.07	-.26*	.15	.01

* $p < .10$

** $p < .05$

*** $p < .01$

Table 4-E

Intercorrelations Among Parent Activity Variables and Activity Preference Classified by Age Group and Sex of Child

Parent Activity Variables		Activity Preference Categories: Girls			Boys		
		Cognitive	Physical	Social	Cognitive	Physical	Social
Mothers							
	Cognitive	-.14	.35**	-.19	-.06	.05	.02
	Physical	.04	-.18	.13	-.18	.22	-.03
	Social	-.14	.05	.12	.08	-.17	.10
Fathers							
	Cognitive	.28*	.02	-.38*	.12	-.09	-.05
	Physical	-.19	.29*	-.05	-.43***	.39**	.09
	Social	-.13	-.09	.27*	.08	-.15	.09
		Younger Age Group			Older Age Group		
Mothers							
	Cognitive	-.34**	-.04	.42***	.04	-.23*	.15
	Physical	.27*	-.17	-.14	.31**	.15	.23*
	Social	.12	-.35**	.19	-.08	.14	-.03
Fathers							
	Cognitive	.16	-.16	-.05	.25*	-.21	-.10
	Physical	-.32*	-.05	.40**	-.35**	-.09	.46
	Social	.19	.05	-.25	-.21	.15	.11

* $p < .10$

** $p < .05$

*** $p < .01$

REFERENCES

REFERENCES

Aberle, D. F., & Naegele, K. D. Middle class fathers' occupational role and attitudes toward children. American Journal of Orthopsychiatry, 1952, 22, 336-378.

Anderson, R., Manoogian, S. T., & Reznick, J. S. The undermining and enhancing of intrinsic motivation in preschool children. Journal of Personality and Social Psychology, 1976, 34, 915-922.

Aronfreed, J. The concept of internalization. In Goslin (Ed.), Handbook of Socialization Theory and Research. Chicago: Rand McNally, 1969.

Bandura, A., & Mischel, W. Modification of self-imposed delay of reward through exposure to live and symbolic models. Journal of Personality and Social Psychology, 1965, 2, 698-705.

Bandura, A., Ross, D., & Ross, S. A. Imitation of film-mediated aggressive models. Journal of Abnormal and Social Psychology, 1963, 66, 3-11.

Bannister, D., & Agnew, J. The child's construing of self. Nebraska Symposium on Motivation, 1976, Vol. 24, 99-125.

Baumrind, D. Childcare practices anteceding three patterns of preschool behavior. Genetic Psychology Monographs, 1967, 75, 43-83.

Baumrind, D. Current patterns of parental authority. Developmental Psychology Monographs, 1971, 4, (no. 1, part 2).

Bell, R. Q. A reinterpretation of the direction of effects in studies of socialization. Psychological Review, 1968, 75, 81-95.

Brim, O. G. Family structure and sex-role learning by children. In N. W. Bell, & E. F. Vogel (Eds.), A Modern Introduction to the Family. Glencoe, Ill.: Free Press, 1960, pp. 482-486.

Chance, J. D. Independence training and first grader's achievement. Journal of Consulting Psychology, 1961, 25, 149-154.

Clark, A. W., & van Sommers, P. Contradictory demands in family relations and adjustment to school and home. Human Relations, 1961, 14, 97-111.

Deci, E. L. Intrinsic motivation. New York: Plenum Press, 1975.

Educational Design Associates, Catalog no.'s 101, 102, 111, 112, 1972. East Lansing, Michigan.

Eldind, D. Cognitive growth cycle in mental development. Nebraska Symposium on Motivation, 1971, 19, 1-31.

Goodenough, E. W. Interest in persons as an aspect of sex differences in the early years. Genetic Psychology Monographs, 1957, 55, 287-323.

Hammer, S. Daughters and mothers, mothers and daughters. New York: The New American Library, Inc., 1975.

Harter, S. Mastery motivation and need for approval in older children and their relationship to social desirability response tendencies. Developmental Psychology, 1975, 11, 186-196. (a)

Harter, S. Developmental differences in the manifestation of mastery motivation on problem-solving tasks. Child Development, 1975, 46, 370-378. (b)

Harter, S. The effects of praise on the pleasure derived by normal and retarded children from cognitive challenge and mastery, Developmental Psychology, 1976.

Harter, S. The perceived competence scale for children. Paper presented at the Rocky Mountain Psychology Association meetings, Alburquerque, May, 1977. (a)

Harter, S. The pictorial perceived competence scale. In construction. Personal Communication, 1977. (b)

Harter, S. Effectance motivation reconsidered: Toward a developmental model. Human Development, 1978, 21, 34-64.

Harter, S. The perceived competence scale for children. Unpublished manuscript, 1979.

Hill, J. P. Similarity and accordance between parents and sons in attitudes toward mathematics. Child Development, 1967, 38, 777-792.

Hoffman, M. L. Power assertion by the parent and its impact on the child. Child Development, 1960, 31, 129-143.

Horner, M. S. Sex differences in achievement motivation and performance in competitive situations. Unpublish-dissertation, University of Michigan, 1968.

Horner, M. S. Toward an understanding of achievement-related conflicts in women. Journal of Social Issues, 1972, 28 (2), 157-175.

Hunt, J. McV. Intrinsic motivation and its role in psychological development. Nebraska Symposium on motivation, 1965, 13, 189-282.

Johnson, M. Sex-role learning in the nuclear family. Child Development, 1963, 34, 319-335.

Kagan, J. Motives and development. Journal of Personality and Social Psychology, 1972, 22, 51-66.

Katkovsky, W., Crandall, V. C., & Good, S. Parental antecedents of children's beliefs in internal-external control of reinforcements in intellectural situations. Child Development, 1967, 38 (3), 765-776.

Loeb, R. C. Concomitants of boys' locus of control examined in parent-child interactions. Dissertation Abstracts International, 1973, Vol 34 (2-B), 859-861.

Maccoby, E. E. The taking of adult roles in middle childhood. Journal of Abnormal and Social Psychology, 1961, 63, 493-503.

Maccoby, D., & Jacklin, C. N. The psychology of sex differences. Stanford, California: Stanford University Press, 1974.

Maddi, S. R. The search for meaning. Nebraska Symposium of Motivation, Lincoln: University of Nebraska Press, 1970.

Marcus, R. F. The child as elicitor or parental sanctions for independence and dependent behaviors: A simulation of parent-child interaction. Developmental Psychology, 1975, 11 (4), 443-452.

Mead, G. Mind, self, and society. Chicago: University of Chicago Press, 1934.

Meid, E. S. The effects of two types of success and failure on children's discrimination learning and evaluation of performance. Unpublished manuscript, Yale University, 1971.

Mellon, P. M., & Crano, W. D. An extension and application of the mutitraitmultimethod technique. Journal of Educational Psychology, 1977 (Dec.), Vol. 69 (b), 716-723.

Minton, C., Kagan, J., & Levine, J. A. Maternal control and obedience in the two year old. Child Development, 1971, 42, 1873-1894.

Mischel, W. Theory and research on the antecedents of self-imposed delay of reward. In B. A. Maher (Ed.), Progress in Experimental Personality Research. Vol. 3, New York: Academic Press, 1966.

Rosen, B. C., & D'Andrade, R. The psychosocial origins of achievement motivation. Sociometry, 1959, 22, 185-218.

Rothbart, M. K., & Maccoby, E. E. Parents' differential reactions to sons and daughters. Journal of Personality and Social Psychology, 1966, 4, 237-243.

Rotter, J. B. Social learning and clinical psychology. Englewood Cliffs, N.J.: Prentice-Hall, 1954.

Sears, R. R., Rau, L., & Alpert, R. Identification and child rearing. Stanford University Press, 1965.

Stollak, G. E., Scholom, A., Kallman, J. R., & Saturansky, C. Insensitivity to children's responses of undergraduates to children in problem situations. Journal of Abnormal Child Psychology, 1973, 1, 2, 169-180.

Tasch, R. G. The role of the father in the family. Journal of Experimental Education, 1952, 20, 319-361.

Truax, C. B., & Carkhuff, R. R. Toward effective counseling and psychotherapy. Aldine, 1967, pp. 46-56.

Walls, R. T., & DiVesta, F. J. Cognitive factors in the conditioning of children's preferences. Developmental Psychology, 1970, 2 (3), 310-324.

White, R. Motivation reconsidered: The concept of competence. The Psychological Review, 1959, 66, 297-333.

Winterbottom, M. R. The relation of need for achievement to learning experiences in independency and mastery. In J. W. Atkinson (Ed.), Motives in fantasy, action, and society. Princeton, N.J.: Van Nostrand, 1958, pp. 453-478.