This study used behavioral measures of family interaction to examine four traditional explanatory models for the influence of parents on their children's self-esteem. The four models examined were: (1) identification/modeling, (2) directiveness, (3) reinforcement, and (4) warmth/involvement. A total of 98 fourth- and fifth-grade girls and boys identified as being high or low in self-esteem were observed with their parents in their homes. Each child was seen with his/her mother and father separately in a structured interaction and then with both parents in a Family Rorschach. In addition, parents were asked to fill out a questionnaire with demographic and attitudinal items and to respond to Rosenberg's Self-Esteem Scale while their children were given two cards of the Children's Apperception Test, Human Figures Form. Results indicated that the family climate associated with high self-esteem appeared to be the one in which both mother and father were supportive of their children and of each other. Differences between mothers and fathers in their patterns of behavior towards their sons and daughters were also presented and discussed. Findings were interpreted as revealing no support for the identification/modeling hypothesis, mild support for the reinforcement hypothesis, and moderate support for the directiveness and warmth/involvement hypotheses. (Author/JMB)
Fourth- and fifth-grade girls and boys high or low in self-esteem were observed in their homes to assess parental influence on their self-esteem. Each child was seen with his/her mother and father separately in a structured interaction and then with both parents in a Family Rorschach. The family climate associated with high self-esteem appears to be one in which both mother and father are supportive of their child and of each other. Girls have parents who avoid highly directive behavior and fathers who make reinforcement contingent upon their daughters' behavior. For boys, fathers refrain from highly directive or demanding behavior, while mothers can play a relatively directive role with their sons.
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2.

Family Interaction Patterns Associated with Self-Esteem in Preadolescent Girls and Boys

The present study was designed to examine several traditional explanatory models for the influence of parents on their children's self-esteem. It differs from previous research on the topic (e.g., Coopersmith, 1967) in its focus on observation of parent-child interaction and in its simultaneous examination of girls and boys, and mothers and fathers. The latter is important because recent work has suggested that the sources of self-esteem may differ for males and females (e.g., Bárdwick, 1971) and that parental impact may vary for fathers and mothers (Martin, 1975).

Four models were investigated. The present research was not intended as a competitive test of the models. This work is a prior stage; i.e., seeing for which models there is support, especially with behavioral interaction data. It may well be that some of the models are complementary to each other.

Model I (Identification/Modeling) suggests that children identify with, and model their behavior on, their parents (especially same-sex ones). Thus, children should develop levels of self-esteem similar to that of their parents. Coopersmith suggested that both unconscious identification and conscious modeling are likely to be important components of the development of children's self-esteem. In his research, he reported that mothers' self-esteem, as rated by interviewers, correlated positively with self-esteem in their sons. On the other hand, Gecas,
Calonico, and Thomas (1974) and Sears (1970) have found little support for a modeling explanation of the level of self-esteem in children.

Model II (Directiveness) suggests that highly directive ("authoritarian") parents will have children low in self-esteem, while less directive but involved ("authoritative," see Baumrind, 1966) parents will have children high in self-esteem. This position found support in Coopersmith's work. High self-esteem in boys was associated with moderate to high levels of control on the part of the mothers, reasonable but clearly defined limits on their sons' behavior, and a democratic family style. Autocratic and authoritarian patterns were typically found in families of low-esteem boys. Comstock (1973) and McEachern (1973) have provided additional support for the relationship between authoritative parental patterns and high self-esteem in children. In contrast, two other studies have found evidence that a "permissive" (Qadri & Kaleem, 1971) or "low controlling" (Apolonio, 1974) parental approach is most clearly associated with high esteem in children. One other study (Gecas, 1971) found no association between parental control and self-evaluation for a sample of adolescents.

Model III (Reinforcement) suggests that parents who provide a high ratio of positive reinforcement to punishment, especially when a high proportion of the reinforcement is contingent on appropriate behavior from the child, will have children high in self-esteem. In Coopersmith's research, mothers
who believed that: "It is more effective to punish a child for not doing well than to reward him for succeeding" (p. 191) tended to have sons who were low in self-esteem. Katz, Cole, and Baron (1976) also found a negative correlation between parents' reported use of punishment and self-esteem in children. Similarly, positive self-esteem in children has been associated with the following parental behaviors: low punitiveness (Bachman, 1970); use of positive incentives and reinforcement (Baumrind, 1967); and supportiveness rather than either punitiveness or indifference (Rosenberg, 1965).

There are few research reports on the impact of contingent reinforcement considered separately from other reinforcement. Coopersmith (1967) found sons' self-esteem was positively associated with their belief that punishments administered by their parents were deserved, i.e., contingent. Coopersmith (1967) and Baumrind (1967) both claimed that consistency in discipline was also correlated with high self-esteem. While neither of these studies was concerned with the impact of contingent positive reinforcement, they do suggest that contingency may be a critical variable.

Model IV (Warmth/Involvement) suggests that positive family interactions and mutual respect within the family will foster high self-esteem in children. This model has been widely supported in the research literature. Positive self-esteem has been associated with parental warmth (Baumrind, 1967; Coopersmith, 1967; Sears, 1970), support (Apolonio, 1974; Georas, 1971), and acceptance (Baranoff, 1974; Comstock, 1973; and Qadri &
Kaleem, 1974). Relative to low self-esteem children, high esteem children have also been found to be relatively close to their parents (Bachman, 1970), highly involved in family interaction (Rosenberg, 1965), and in frequent agreement with other family members (Coopersmith, 1967).

It is clear that all four models have received at least some support in previous research; in several cases, there have also been disconfirmations. These inconsistencies in the literature are due, at least in part, to differences in methodology (interview, self-report, observation) and demographic characteristics (age, sex, race) of the children studied. In the present research it is possible to assess all four models on the same day, using varied methods, on a large sample of families with preadolescent girls and boys. In this report we are focusing on behavioral measures of family interaction.

Method

Subjects

The subjects for this study were 98 fourth- and fifth-grade students (51 girls and 47 boys) and their parents. All subjects were from white, middle-class, and stable, two-parent families. The middle class sample was found by selecting schools serving middle class areas. This provided a sample ranging from lower-middle to upper-middle class subjects. Stable families were operationally defined as two parents residing together continually from the time the subject was no more than 5 years of age through the time of the research. Only a few of the families had any remarriages. Coopersmith's (1967) Self-Esteem
Inventory (short form) and Behavior Rating Form (in which teachers rate their students' self-esteem related behaviors) were used to select children for the study. Students scoring in the top third of their classroom group on both measures were considered to have high self-esteem; those scoring in the bottom third on both measures were designated as low self-esteem children. Scores on both measures were gathered from the 952 fourth- and fifth-graders (470 girls and 482 boys) present on the day of testing in eight elementary schools. The families of the 143 eligible children received a letter requesting their participation in the study and explaining the procedures to be used. This letter was mailed to the parents approximately 2 months after the testing was done in the schools and was not visibly connected to that testing. The study was presented to the parents as a study of normal children to minimize parental concern and to maximize the chances for relatively typical parental behavior. All families were then contacted by telephone. Of the total group, 45 families were unable or unwilling to participate, resulting in the sample of 98 families, with 20 low-esteem boys, 20 low-esteem girls, 27 high-esteem boys, and 31 high-esteem girls.

Procedure

Two young, adult, female experimenters conducted the study in the homes of the subjects. A double-blind procedure was employed with the subjects and both experimenters. Following establishment of rapport, the parents were each asked separately
to fill out a questionnaire with demographic and attitudinal items, as well as Rosenberg's (1965) Self-Esteem Scale. It was necessary to use this scale, as Coopersmith's is designed for children. Crandall (1973) has reported correlations of .54 and .60 between Rosenberg's scale and Coopersmith's in two different studies. The correlations between these parental scores and their children's scores on the Self-Esteem Inventory were used to assess the Identification Model (Model I). While more strictly behavioral measures would have been preferred, it is difficult to assess identification in a behavioral fashion. While the parents were occupied with this task, one experimenter administered two cards of the Children's Apperception Test, Human Figures Form (Bellak and Bellak, 1973) to the child.

The remainder of the procedure, which emphasizes structured behavioral interaction between parent, or parents, and child, is a modified version of that developed by Loeb (1975). The first task required the children to work at building a tower for seven minutes while blindfolded, using 24 irregularly-shaped blocks. One parent was with the child and was instructed that s/he could aid the child as much or as little as s/he wanted. This is a task which 9-11 year old children can do alone, but one in which parents are clearly in a position to be able to help them. During this task, the frequencies and types of parental control and parental reinforcement behaviors were observed and counted by one of the experimenters. The parental control behaviors that were assessed included: "physically helps" (e.g., puts block near child's hand while still allowing
the child freedom of choice): "physically takes over" (places block on \\

verbally suggests or explains" (the child is given relevant information while retaining freedom of choice, e.g., "Why don't you try the square piece?"); and "verbally orders or directs" (the child is not given an explicit choice and disobedience would be difficult, e.g., "Use this block"). These control behaviors were used to assess the Directiveness Model (Model II). Previous research employing these procedures (Loeb, 1975) suggests that the critical information here is the amount of directing behavior relative to the amount of suggesting behavior. Verbal reinforcement behaviors were either: "gives positive verbal reinforcement" (e.g., "Good work.") or "gives verbal punishment" (e.g., "You're not doing well."). Positive verbal reinforcement was divided post hoc into contingent reinforcement (follows an instance of the child's successfully placing a block on the tower) or noncontingent reinforcement (the lack of this contingency). We did not comparably divide verbal punishment as the appropriate child behavior for eliciting this type of contingent parental response is not clear. These sorts of verbalizations are generally assumed to be reinforcing or punishing and were therefore used as behavioral measures of the Reinforcement Model (Model III). The concern in this model was not primarily with the quantity of reinforcement or punishment but rather the ratio of positive reinforcement to punishment and the ratio of contingent positive reinforcement to total (including noncontingent) positive reinforcement. The amount of reinforcement or punishment is likely to be greatly influenced by parental talkativeness or involvement. Quantity of talking is controlled for by using ratio scores.

This procedure was then repeated with the other parent (with order of parents: predetermined and counterbalanced). For this second interaction sequence four flat blocks were...
replaced by four round blocks in an attempt to counteract the
effects of improvement in the child's performance due to
practice. Interrater reliability was checked by having the
other experimenter rate the first five and last five families.
The correlations between the two experimenters' ratings ranged
from $r(18) = .83$ to $r(18) = .96$ in all categories.

A Family Rorschach (Loveland, Wynne, & Singer, 1963) was
then administered to the mother, father, and child together
to assess communication patterns within the family. One ex-
perimenter recorded all suggestions and modifications made by
each family member. In addition, each person's verbalized
agreements and disagreements were recorded. These communications
were measures of the family Warmth/Involvement Model (Model IX).
The inkblots have proven useful (Loeb, 1975) in eliciting dif-
ferential amounts of family participation and mutual support
or derogation. Interrater reliability on these categories was
assessed in the same way as for the tower-building task and
was found to be between $r(18) = .93$ and $r(18) = .99$.

These procedures and their respective measures were
selected in an attempt to be as naturalistic as possible while
maximizing the opportunity to collect the relevant data by
providing some minimal structure. The procedures have demon-
strated the ability to create involvement in the task thereby
minimizing experimenter effect. Furthermore, though structure
is provided, the tasks are not too far from what parents and
children are likely to do with each other.
After the Family Rorschach, separate interviews concerning family background and history were conducted with each parent, while the child filled out a questionnaire similar to that previously completed by the parents. Following the experimental procedures, family members' questions were answered, the family was offered $5.00 for their participation, and they were requested not to discuss the research with anyone until the research was completed.

**Results**

**Model I**

The Identification or Modeling Hypothesis was assessed by correlating the boys' and the girls' scores on Coopersmith's Self-Esteem Inventory with their mothers' and fathers' scores on Rosenberg's (1965) Self-Esteem Scale. The correlations were strongest between like-sexed parent and child though none of the correlations was significant. For boys, the correlations were: $r(45) = .22$ with fathers and $r(45) = .05$ with mothers. The correlations for girls were: $r(49) = -.05$ with fathers and $r(49) = .15$ with mothers.

**Model II**

Three indices of parental directiveness in the tower-building task were considered in evaluating the Directiveness Hypothesis: physical directiveness (number of physical takeovers minus physical helps); verbal directiveness (number of verbal directions minus verbal suggestions); and verbal directiveness percentage (number of directions divided by the total...
number of directions and suggestions). Physical directiveness percentage would not have been a meaningful measure as many parents provided no physical take-overs or physical helps which would result in a zero in the denominator for calculating the percentage of physical directiveness. These indices are attempting to measure relative directiveness; i.e., a highly involved parent who gives many directions and many suggestions is considered less of a "directive" parent than one who gives many directions and few suggestions. Each dimension was tested for mothers and fathers separately in 2 × 2 (sex of child and self-esteem group) analyses of variance.

Directive behavior on the part of parents was in general predictive of low self-esteem in children. Physical directiveness in fathers was associated with low self-esteem in both boys and girls: F(1, 94) = 8.08; p < .01. With respect to verbal directiveness, the overall main and interaction effects were not significant. However, in planned comparisons considering mothers and fathers separately with their sons and daughters, we found significant differences between high and low self-esteem daughters. Paternal verbal directiveness scores were higher in low-esteem girls (x̄ = 15.65) than in high-esteem girls (x̄ = 3.87): t(49) = 2.15; p < .05. Maternal verbal directiveness scores were similarly higher in low-esteem girls (x̄ = 6.00) than in high-esteem girls (x̄ = 1.32): t(49) = 2.17; p < .05.

When verbal directiveness was calculated as a percentage, maternal directiveness was again higher for low esteem girls.
(V = 51.6%) than for high esteem girls (V = 41.6%). However, maternal directiveness was higher for high esteem boys (V = 54.8%) than for low esteem boys (V = 44.5). Although neither main effect was significant, the interaction effect was significant: F(1,94) = 4.34; p < .05.

Model III

The Reinforcement Hypothesis was assessed with two ratio measures of parental verbal behavior during the tower-building task: the ratio of positive reinforcement to punishment; and the proportion of contingent to total reinforcements. These ratios were examined in 2 x 2 (sex of child and self-esteem group) analyses of variance, separately for fathers and mothers. There were no significant effects for the ratio of positive reinforcement to punishment. For the proportion of contingent to total reinforcements, there was a significant interaction effect for fathers: F(1,61) = 6.17; p < .025. For girls, high self-esteem was associated with a high proportion of contingent reinforcement from fathers, while the reverse was true for boys (see Table 1).

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Insert Table 1 about here

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Model IV

Measures to assess the Warmth/Involvement Hypothesis were taken from the Family-Rorschach data. Warmth and involvement were operationalized as: family involvement in the task (the total number of suggestions and modifications from all family
members concerning what the inkblot might be); high levels of agreement (number of times family members agreed to each others' suggestions); and low levels of disagreement. These three variables were examined in 2 x 2 (sex of child and self-esteem group) analyses of variance. Family involvement was higher in families of high esteem children: $F(1,94) = 6.23; p < .025$. In the context of this higher total family participation, there is suggestive evidence that high esteem children had fathers who were relatively more active than mothers, while the opposite seemed to be true for low esteem children.

All three participants (mother, father, and child) expressed more agreement with each other's suggestions in families of high esteem children than in families of low esteem children. This difference was significant for fathers: $F(1,94) = 5.12; p < .05$; and for children: $F(1,94) = 4.54; p < .05$. There was a trend in the same direction for mothers: $F(1,94) = 3.74; p < .10$. For disagreements, there was a significant interaction effect for fathers: $F(1,94) = 4.51; p < .05$. The fathers disagreed more often in families of low esteem boys ($\bar{x} = 2.70$) than high esteem boys ($\bar{x} = 1.33$), and more often in families of high esteem girls ($\bar{x} = 1.30$). There were no other significant differences for disagreements.

**Other Findings**

Several other parental characteristics distinguished families of high-esteem children from families of low-esteem children. In families with high esteem children, reported
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satisfaction with spouses' performance in child-rearing was significantly higher for mothers: $F(1,94) = 6.04; p < .025$, and for fathers: $F(1,94) = 6.19; p < .025$, than in families of low self-esteem children. High esteem children were also more likely to come from relatively high socio-economic status families, even in this middle class sample. The fathers of high esteem children had occupations of higher status (using the rating system of Hollingshead and Redlich, 1958); $F(1,94) = 3.98; p < .05$, and the mothers were better educated: $F(1,94) = 13.91; p < .001$.

**Discussion**

These results provide some support for Coopersmith's conclusions. However, we have found significant differences which underline the importance of observing both father and mother and considering sons and daughters separately. We will examine our data in their implications for the four models introduced earlier.

Our study is consistent with other recent research (Gecas, Calonico, and Thomas, 1971; Sears, 1970) in finding little support for the identification/modeling theory (Model I). Pre-adolescent children do not appear to "learn" self-esteem by patterning their self-concepts directly after those of their parents. However, this model was tested only by paper and pencil measures. The child and adult versions of these tests are only moderately well correlated introducing additional sources of variance. They also seem to be associated with social desirability. Thus, the lack of significant self-esteem
correlations may indicate different degrees of socialization, differences between the tests, inadequacies of paper and pencil measures, or some combination of all of these.

Self-esteem in children does appear to be related to a number of parental behaviors. Both physical and verbal parental directiveness (Model II) are associated with low self-esteem in children. This low esteem is associated with physically directive behavior on the part of fathers. Verbally directive behavior on the part of mothers is also associated with lower self-esteem in girls. It is interesting to note that the form of directive behavior found with low self-esteem is what we expect from traditional sex-role stereotypes; i.e., fathers use physical modes, mothers use verbal ones.

The one parent-child pair in which directive behavior was not associated with low self-esteem, the mother-son dyad, is the primary relationship on which Coopersmith based his conclusions. The present study does provide some support for his contention that moderate to high levels of control on the part of mothers may promote self-esteem in sons. However, Coopersmith's conclusion that "firmer and more demanding regulations are associated with higher esteem" (p. 197) does not seem to be a valid generalization, since we found quite the opposite pattern in the other three parent-child dyads (mother-daughter, father-son, father-daughter). The present findings underline the importance of separate consideration of all four parent-child dyads.
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With respect to reinforcement, the most important variable seems to be the ratio of the amount of reinforcement administered which is contingent upon appropriate behavior from the child relative to the total amount of reinforcement. Again, we find critical sex differences. Having a father who makes a relatively high proportion of his reinforcements contingent on desired behavior from the child seems to result in high self-esteem in daughters but low self-esteem in sons. The effect of such an approach, which makes reinforcement from parents conditional on the child's performance, may depend on the affective tone and demand structure of the parent-child relationship. Girls apparently profit from this more demanding approach from their fathers perhaps because of the relatively comfortable (warm and relaxed) nature of the relationship, while this approach is harmful in boys who may have a more difficult (competitive) relationship with their fathers (see Rosen and D'Andrade, 1959, Rothbart and Maccoby, 1966, and Gurwitz and Dodge, 1975). This finding supports Benson's (1968) claim that almost any coersive control has a more disturbing impact when from a same-sex parent than from a cross-sex parent.

In this study, we also found that self-esteem in children was associated with a warm and involved style of family interaction (Model IV). High self-esteem in children was found in families demonstrating high levels of agreement (mutual support) and with parents who were satisfied with the child-rearing performance of their spouses. These findings support the research of Coopersmith and many others. Again, there are some interesting
sex differences. Paternal disagreement followed a pattern similar to that found for contingent reinforcement; that is, high levels were associated with high esteem in girls and low esteem in boys. A high rate of disagreement may operate in a way similar to the demanding parent pattern described earlier, in that fathers' disagreement in a generally warm context (i.e., with girls) provides support for self-esteem, while such behavior in a competitive context (i.e., with boys) is harmful to self-esteem.

An important consideration in interpreting these results is the direction of effect. While correlations between parental behavior and child's score on some measure may reflect parental influence, it may well reflect the influence of the child. A child with low self-esteem may perform poorly (eliciting directive responses), may appear discouraged (fostering encouragement in the form of positive reinforcement), or may be withdrawn (provoking low parental warmth and involvement). Third variable effects such as social class may statistically account for both the child's self-esteem rating and the parents' behaviors.

Several questions can be raised concerning both the internal and external validity or generalizability (see Baltes, Reese, & Nesselroade, 1977) of this study. One implication in this paper is that if the parents in the study treated their sons like their daughters (or vice-versa), the effect on self-esteem would differ. However, there is no direct test of that. Such a direct test would create a sampling problem (requiring a son and a daughter of approximately the same age in all families) as well as a
statistical problem (a tricky nested design). Thus, we must be wary of the differential effect implication. Subjects were also not selected randomly. Perhaps there are unique parent-child relations in families of children who are high or low in both self-report of self-esteem and behavioral reports of teachers that would not exist if only one of these or a different measure had been used.

This study is also limited by its structure — the tasks. The tower-building task is representative of the many times in growing up when a child is learning to do some task with an achievement component while a parent is available (e.g., riding a bicycle). The Family Rorschach provides a typical situation in which family members must make decisions based on ambiguous information. It minimizes the danger of relying on previous family history as could be the case if the family was presented a more common issue. These tasks may have characteristics which limit the generalizability of the behavioral data produced, but they do appear to reflect normal family activities. The results are also largely congruent to those found in research using the same methodology to investigate children's locus of control (Loeb, 1975).

Future research on this subject would benefit from the employment of different tasks and more naturalistic observations. Additional measures using the same tasks would provide further tests of the hypotheses. For example, warmth and involvement could be assessed during the tower building, while control and reinforcement patterns could be assessed during the Family Rorschach.
In conclusion, our findings provide moderate support for the Directiveness and the Warmth/Involvement Hypotheses and mild support for the Reinforcement Hypothesis. This suggests that no single explanation for so complex a behavioral outcome as a child's self-esteem will be sufficient. However, some generalizations from the data are possible. The family climate associated with high self-esteem appears to be one in which: 1) both mother and father are supportive of their child and of each other; 2) girls have parents who avoid highly directive behavior and fathers who make reinforcement contingent upon their daughters' behavior; 3) for boys, fathers refrain from highly directive or demanding behavior, while mothers can play a relatively directive role with their sons. These findings support our contention that it is critical to observe both fathers and mothers, with their sons and with their daughters, if we are to understand self-esteem in preadolescents.
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Footnotes

1, 2 (The first two footnotes are on the cover sheet to facilitate blind review.)

3 Crandall, 1973, reports a correlation of .95 between the short and long forms of the Self-Esteem Inventory.

4 The procedure used for dealing with unequal cell frequencies is that provided by the SPSS ANOVA subprogram (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975).

5 All probabilities reported for t-tests are based on two-tailed tests.

6 There are missing data for this analysis because some fathers gave no reinforcements and therefore a percentage could not be calculated.
Table 1

Percentage of Contingent Reinforcements from Mothers and Fathers for High and Low Esteem Daughters and Sons

<table>
<thead>
<tr>
<th></th>
<th>Mothers Daughters</th>
<th>Fathers Daughters</th>
<th>Mothers Sons</th>
<th>Fathers Sons</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Esteem</td>
<td>81.9%</td>
<td>81.1%</td>
<td>73.0%</td>
<td>69.3%</td>
</tr>
<tr>
<td>Low Esteem</td>
<td>67.7%</td>
<td>52.5%</td>
<td>68.9%</td>
<td>82.7%</td>
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</tbody>
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