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ABSTRACT

This study examined the interchange of emotional cues during interactions between parents and their popular or rejected children. Participants were 28 4- and 5-year-old preschool children and their parents. Children were selected as popular or unpopular using a sociometric nomination procedure conducted in their preschool or day care classroom. Children were equally divided by gender and popularity. Parents and children were videotaped in two sessions. For each session, parent and child were seated facing one another and were told that they could play any game that involved the use of their hands as long as they stayed in their seats. Each session lasted approximately 8 minutes. Videotapes were coded by undergraduate research assistants who were blind to the children's sociometric status. A mutually exclusive and exhaustive coding catalog using facial, verbal, and postural cues was devised to code the videotapes second by second for the full 8 minutes. Analysis revealed that parents of rejected children displayed more anger and used more neutral cues than parents of popular children, while parents of popular children used more affect-laden guidance and apologized more than parents of rejected children. Sequential analysis of negative affect sequences revealed differences for popular and rejected children playing with same-sex parents. Significant differences were found between patterns in children's play with mothers and fathers. (MM)

Sociometric status differences in affect sequences in preschool children's play with parents

SRCD 1993, New Orleans, LA

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Abstract

The role of emotional regulation in linking children's family and peer social systems was explored. Popular and rejected preschoolers and their parents displayed different patterns of emotions during physical play. Parents of rejected children showed more anger and more neutral cues. Parents of popular children gave more affect-laden guidance and apologized more. Rejected children showed more neutral cues while popular children displayed more positive affect. Sequential analysis of negative affect sequences revealed differences for popular and rejected children playing with same sex parents. Rejected boys playing with fathers and popular girls playing with mothers showed more negative affect reciprocity then their same gender, opposite sociometric status counterparts. Significant differences were found between patterns in children's play with mothers and fathers. The study supports the mediating role of emotion in accounting for family-peer system links.

Introduction

In spite of an interest in the links between family and peer social systems, the mediating processes that account for these relationships are still poorly understood. There is a growing body of literature which suggests a link between children's emotional skills and their peer status. Children's peer status has been linked to the ability to pose (Buck, 1975; 1977; Field & Walden, 1982) and identify (Field & Walden, 1982; Edwards, Manstead, & MacDonald, 1984) facial expressions of emotion, and to children's use of emotional cues in interactions with peers (Strayer, 1980; Sroufe, Schork,

Motti, Lawroski, & LaFreniere, 1984; Lennon & Eisenberg, 1987; Denham, McKinley, Couchoud, & Holt, 1990). A number of investigators have suggested that variations in emotional expressivity during parent-child interactions may account for some of the variation in expressivity seen in children's play with peers (Cummings & Cummings, 1988; Dunn, 1988; Parke, Carson, Burks, & Bhavnagri, 1989). However, most of the research which attempts to examine linkages between expressivity during parent-child interaction and children's peer status has focused largely on global ratings of positive and negative affect and little attention has been paid to examining the exchange of specific categories of emotional cues (e.g., Denham, Renwick, & Holt, 1991).

The purpose of this study was to examine the interchange of emotional cues during the parent-child interactions of popular and rejected children. Children were selected as either popular or rejected using a sociometric nomination procedure (Coie, Dodge, & Coppotelli, 1982) conducted in their preschool/daycare classroom. Previous research has suggested that parent-child physical play is a particularly fruitful context in which to observe the exchange of emotional cues (MacDonald & Parke, 1984). Unfortunately, free physical play does not lend itself to an analysis of the exchange of facial displays of emotions because of the constant movement which occurs. To overcome this problem a physical play paradigm was developed which still permitted micro analysis of the exchange of facial cues. To quantify the observations, a mutually exclusive and exhaustive coding catalog which utilized facial, verbal, and postural cues was developed to categorize observed behaviors. The development of the paradigm and the coding system provided the tools with which to accomplish the goal of examining at a micro level the interchange of emotional cues during parent-child interaction.

Method

Subjects

Participants were twenty-eight four- and five-year-old preschool children and their parents. A sociometric nomination procedure (Coie, Dodge, & Coppotelli, 1982)

was used to screen participants. Half of the child participants had been classified as popular and half had been classified as rejected. The children were also equally divided by sex with fourteen boys and fourteen girls. Cells were balanced with seven popular boys, seven popular girls, seven rejected boys, and seven rejected girls. Child participants were invited to the play lab twice, once with mother and once with father.

Procedure

Parent and child were seated facing one another at eye level. This was facilitated by seating the child on a bar stool and having the parent sit across from the child on a chair. The participants were taught the "hand game." One person was instructed to place her hands on her shoulders, and the other person was to clasp her hands together in front of her body. The object of the game was for the first person to reach out and grab the other person's hands before that other person could pull them away. The parent-child dyad was told that they should play that game or any other hand game as long as they stayed in their seats, and the experimenter would return in about eight minutes.

Coding

Videotapes were coded by eleven undergraduate research assistants who were blind to the children's sociometric status. A mutually exclusive and exhaustive coding catalog which utilized facial, verbal, and postural cues was devised to code the videotapes second by second for the full eight minutes. Mean reliability between coders was .77 (Cohen's Kappa) with a range of .75 to .82.

The categories in the code catalog were: Happy, Laugh, Surprise, Joking/Silly, Apologetic, Praise, Pouting/Whine, Anger, Affect Instruction, Tease, Copy/Mock, Mock Threat, Boredom, and Neutral. While the content of many of the categories is apparent from their label, a few explanations will help the reader to understand the others. Laugh was distinguished from happy primarily through the addition of audible components such as laughter, screeching, or giggling, to positive facial expressions. Apologetic covered verbal apologies and/or submissive behaviors related to a previous wrongdoing. Affect

Instruction was a category which represented attempts by the participants to provide their partners with game rules in a pleasant or playful tone, as opposed to a more neutral or angry tone. The Copy/Mock category was used to code the duplication of a play partner's affect for the purpose of teasing. Mock Threat was a behavioral code which represented a quick jerk of the shoulders, arms, and hands by the "hand grabber" during the hand game in an attempt to make the "hand grabbee" flinch. Finally, the Neutral category was used to code the flat affect state that was portrayed by the participants during much of the eight minute interaction. In addition, Neutral was also used as a catch-all category, containing behaviors which could not be coded in other categories. However, these "unknown" codes comprise less than one percent of the total Neutral codes.

For purposes of sequential analysis, the fourteen code catalog was collapsed into three possible categories: positive, negative, or neutral (Gottman & Bakeman, 1986). In addition, the parent and child time lines of affect codes were collapsed into a single parent-child dyad time line with alternating parent and child affect codes. In this way a new dyad time line was formed using half of the data from the child's time line, and half from the parent's time line, with parent and child codes alternating every second for a total of eight minutes.

Results

Sociometric status differences

Parents of rejected children displayed more Anger cues ($p<.05$) and there was a trend for them to display more Neutral cues as well ($p<.10$). Parents of popular children displayed more Affective Instruction ($p<.05$) and Apologetic cues ($p<.05$). Rejected children displayed more Neutral cues ($p<.05$), while popular children showed more positive affect (happy and laugh categories combined, $p<.05$).

Sex differences

Fathers displayed more Neutral cues ($p<.05$) and tended to Joke more often ($p<.10$). Mothers displayed more positive affect (happy and laugh categories combined, $p<.01$). There was a tendency for parents to joke more with sons than with daughters ($p<.10$).

Relationships between parent and child affect frequencies

A correlation matrix broken down by sociometric status revealed that despite the fact that rejected children displayed similar amounts of anger during interaction with both their mothers and their fathers ($r=.85$), their anger displays were only correlated with those of fathers ($r=.60$) and not with the anger displays of mothers ($r=-.07$).

Sequential Analysis

Follow-up sequential analysis of negative affect was conducted to determine if these correlations for anger displays reflected an underlying time sequence of reciprocal negative affect, a feature which has been reported in the interactions of unhappily married couples (Gottman, 1979). Because of the small sample size and because displays of negative affect were relatively rare occurrences in our paradigm, we chose to pool data for same gender and status dyads (e.g., popular boys with fathers, rejected girls with mothers, etc.). The pooled z-scores for the frequency of parent negative affect at lag 0 and child negative affect at lag 1 are displayed in Figure 1, and the pooled z-scores for child negative affect at lag 0 and parent negative affect at lag 1 are displayed in Figure 2. Reciprocal negative affect displays appear to differentiate between popular and rejected participants in a number of different ways. First and foremost, reciprocal negative affect appears to be a more frequent feature of the interaction of rejected boys and their fathers relative to the interaction of popular boys and their fathers. This is true regardless of whether the parent or the child's negative affect display is used as a starting point (i.e., lag 0 event). Secondly, the occurrence of reciprocal negative affect also appears to differentiate between the interactions of popular and rejected girls playing with their

mothers, with negative reciprocity occurring more frequently in the interactions involving popular girls.

Another important finding is revealed in Figures 1 and 2. With the exception of popular girls with their mothers, reciprocal negative affect is a relatively rare occurrence in interactions involving mothers and their children. Negative reciprocity appears to occur more frequently in interactions involving fathers and children.

A comparison of reactions to negative affect displays is shown in figures 3 and 4. Notice in figure 3 that when rejected boys respond to the negative affect displayed by their fathers they respond to father's negative affect with neutral affect of their own no more frequently than would be expected by chance. This is in distinct contrast to the other three dyad types portrayed in figure 3, for whom a neutral reaction to parent negative affect occurs more frequently than would be expected by chance. Finally, in figure 4, it is interesting to note that the fathers of popular boys are the only adult dyad members in the figure to respond to children's negative affect with positive affect.

Discussion

This investigation revealed interesting sociometric status related differences in the emotional signals of parents and children engaged in face-to-face physical play. The findings provide some support for earlier hypotheses regarding status related variations in parent-child play. Of foremost interest is the finding that the occurrence of negative reciprocal anger differentiates between the interactions of popular and rejected children and their parents. This process of reciprocating anger has been described by Patterson (1982) in the interactions of coercive families and by Gottman (1980) in marital interactions.

However, it is puzzling to understand why negative reciprocity in parent-child play might be a precursor of peer acceptance in the case of girls playing with their mothers, while the same process might produce peer rejection in the case of boys playing with their fathers. There are a number of potential explanations for this puzzling finding.

First, there is some indication that the negative affect exchanged by mothers and popular daughters may not be as intense as the negative affect being exchanged by rejected boys and their fathers. Unlike other children, rejected boys were no more likely than chance to respond to their fathers' negative affect with neutral affect. One possible explanation for this finding is that popular girls and their mothers may be more likely to be exchanging criticism (a lower level of negative affect) while rejected boys and their fathers may be more likely to be exchanging types of intense negative affect (such as anger) which decrease the likelihood of a more subdued neutral response.

A second possible explanation for why reciprocal negative affect with a same sex parent would lead to peer acceptance for girls and peer rejection for boys may lie in gender roles. Escalation to from reciprocal negative affect to aggression may be more acceptable behavior for boys than for girls. Prior research suggests that the peer interactions of rejected children are often characterized by aggressive interchanges (Dodge, 1986). In addition, other research on the rough and tumble play of rejected children with their peers indicates that rejected childen's play is more likely to lead to aggression than the rough and tumble play sequences of popular children and their peers (Pelligrini, 1989). Reciprocal negative affect exchanged during parent-child interaction involving boys may serve to act as a springboard for aggressive behaviors in subsequent interaction with peers.

On the other hand, reciprocal negative affect in parent-child interactions involving girls may provide a setting for learning assertive skills. Prior research has shown that assertiveness is a characteristic which seems to coincide with popularity in girls (MacDonald & Parke, 1984; Baumrind, 1973). If in fact assertiveness is a prerequisite of popularity in girls, it may be that the parents of popular girls teach their girls to respond to negative affect in others with negative affect of their own. However, in contrast to boys, the level of negative affect typically expressed by girls may be within more socially acceptable limits and may serve as a technique for social control of peers. In boys, the

occurrence of negative affect may be accompanied by the undesirable side effects associated with the use of aggressive tactics.

Perhaps the most interesting finding revealed by these data is the apparent skill of mothers for dealing with negative affect in children. These data suggest that with the exception of popular fathers and their sons, fathers appear to be escalating negative affect by responding to the negative affect of their children with negative affect of their own. Children also appear to typically respond to the negative affect of their fathers with negative affect of their own. One possible explanation for these findings is that mothers may be much more concerned with preventing their children from becoming too upset or aroused. This increased concern may stem from the fact that mothers spend more time with children than fathers, or it may be due to the fact that mothers prefer a less arousing interactive style. Evidence from parent-infant interaction (Power & Parke, 1982) suggests that mothers may, in fact, be more skilled in engaging infants in non-arousing games than fathers. Direct measurement of parental preferences for activities of varying levels of arousal would be helpful in clarifying these patterns.

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Breakdown of Correlations into Popular and Rejected Groups

Pearson r N=14	Father-Child Dyad		Mother-Child Dyad		Child Across Contexts	
	Rejected	Popular	Rejected	Popular	Rejected	Popular
Happy	.555*	.448	.748***	.567*	.225	.576*
Laugh	-.007	.795***	.445	.65**	.362	.799***
Anger	.60*	•	-.072	-.131	.851***	•
Neutral	.615**	.601*	.349	.751***	.371	.519

***p<.01, **p<.02, *p<.05
• popular children did not show anger with fathers

Table 1

Parent Negative Affect followed by Child Negative Affect

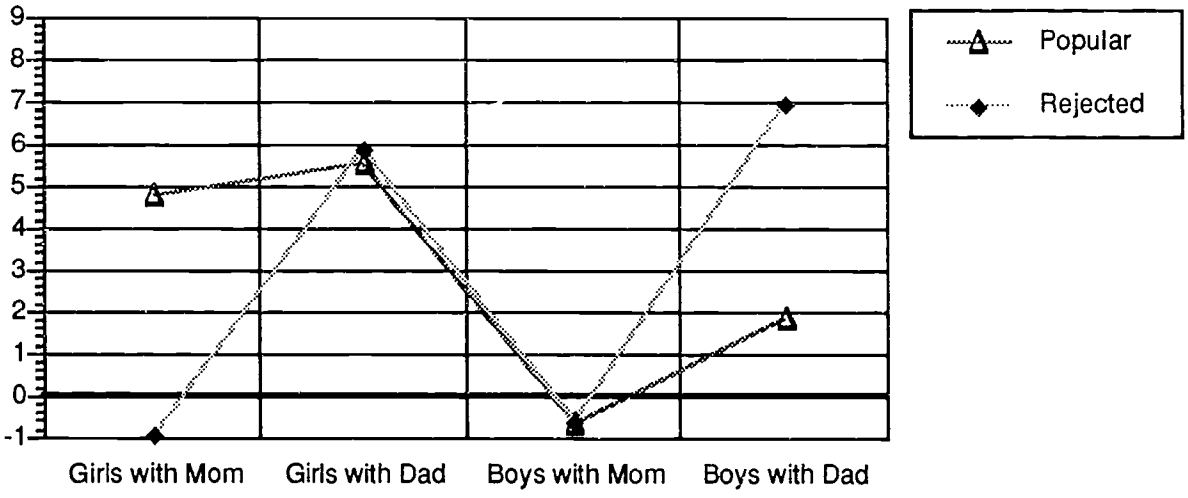

Figure 1

Child Negative Affect followed by Parent Negative Affect

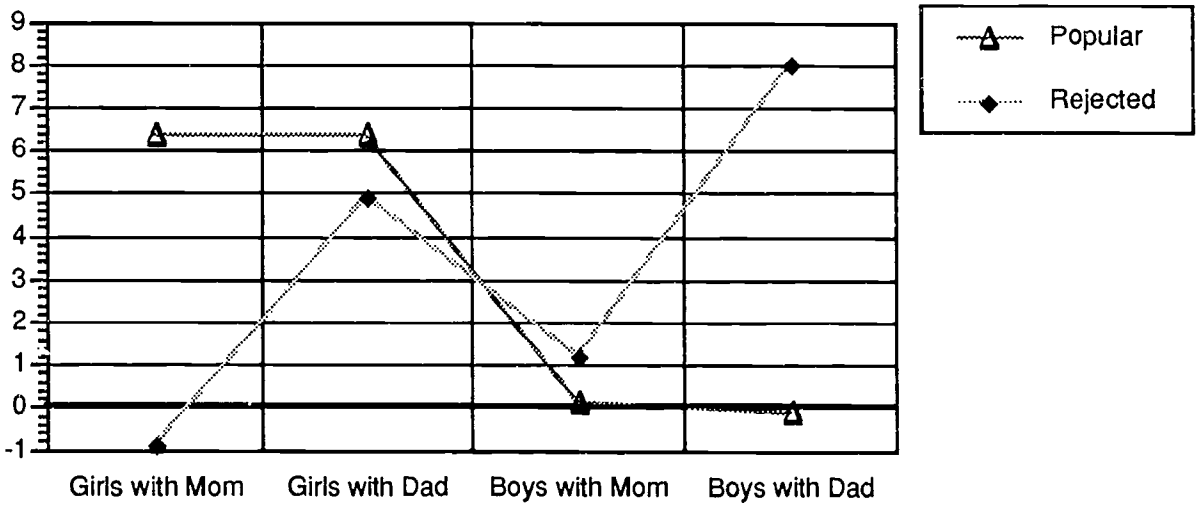

Figure 2

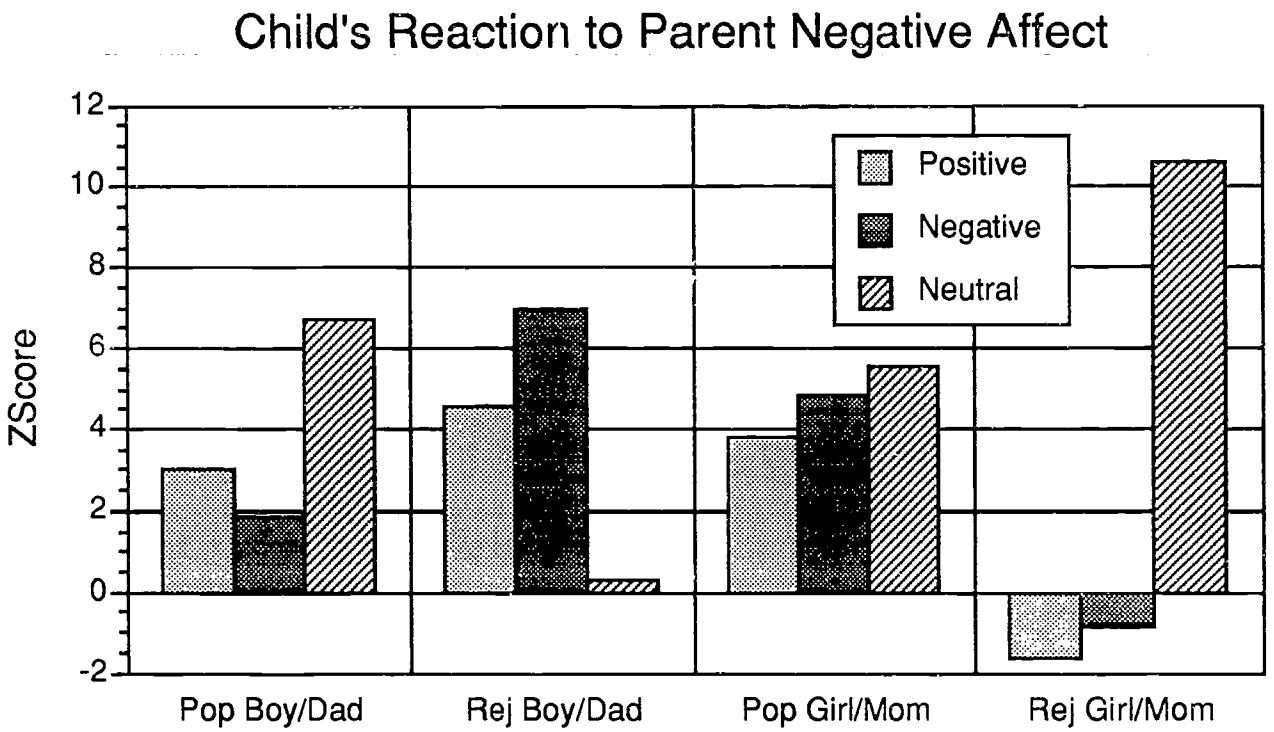

Figure 3

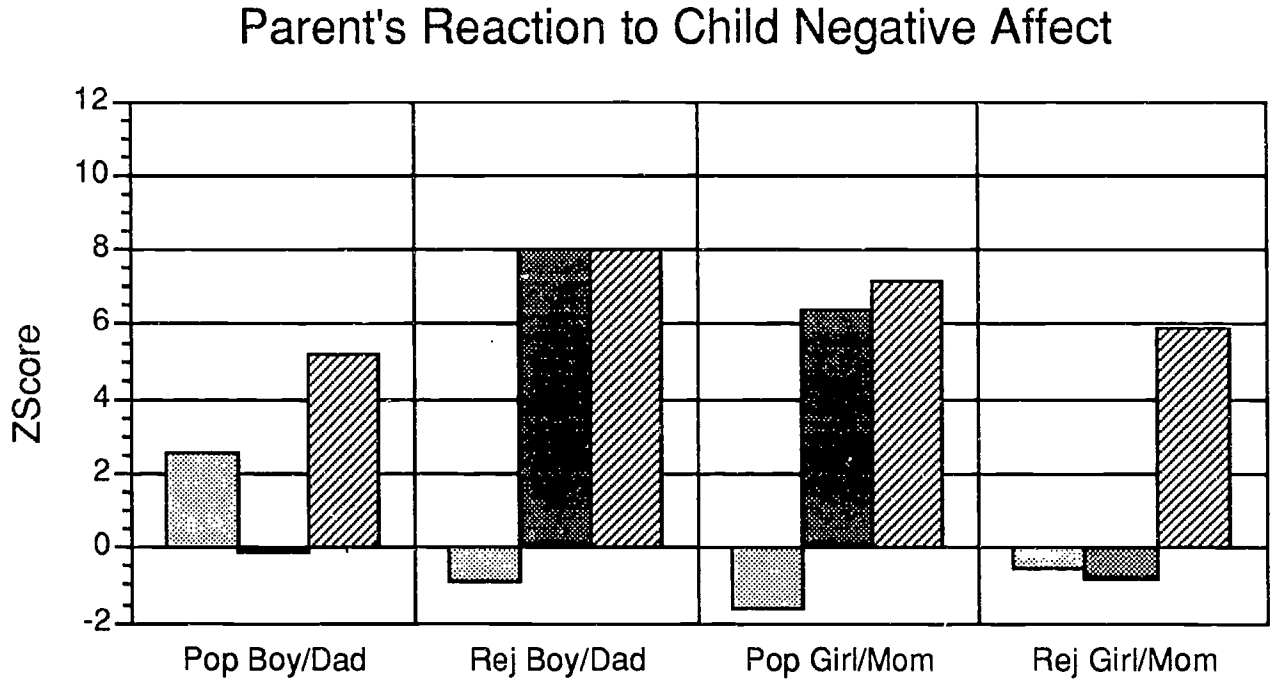

Figure 4