Sociometric Stability and the Behavioral Correlates of Peer Acceptance in Early Childhood

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Abstract

This paper presents findings from an Australian study examining the behavioral correlates and stability of social status for preschool-aged children. The social status of an initial sample of 187 (94 boys and 93 girls) preschool children (mean age 62.4 months, $SD = 4.22$) was determined through sociometric assessment. Children classified as rejected, neglected and popular ($n = 70$) were selected for observation. Children were observed for a total of 25 minutes over a three-month period engaging in free play within their preschool centers. Results indicated that children classified as popular were more likely than rejected or neglected children to engage in cooperative play, ongoing connected conversation and to display positive affect. Popular children were less likely than rejected or neglected children to engage in parallel play, onlooker behavior or alone directed behavior. Six months after initial sociometric classification, sociometric interviews were repeated to test for stability and change. Results indicated that preschool-aged children’s social status classifications showed a moderate to high rate of stability for those children classified as popular, rejected and neglected.

Key words: peer relationships, peer rejection, preschool children, social behavior, social status.
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Relationships with peers have significant importance in the lives of even very young children and the role that positive peer relationships play in children's overall development has drawn attention to the potential consequences of rejection from the peer group. Long term rejection by the peer group has been identified as a contributing risk factor towards future negative outcomes such as poor school adjustment, and both internalising and externalising problems (Coie, Terry, Lenox, Lochman & Hyman, 1995; Ladd, 2006; Ladd & Troop-Gordon, 2003). Consequently, much effort has been devoted to identifying the behavioral processes which are associated with successful, or otherwise, social functioning within the peer group. Behavioral characteristics which have emerged as strongly related to the development of peer social status include prosocial, cooperative behaviors, aggressive, disruptive behaviors, withdrawal and patterns of social approach (Coie, Dodge & Kupersmidt, 1990; Dekovic & Gerris, 1994; Newcomb, Bukowski & Pattee, 1993; Warden & Mackinnon, 2003). Specifically, high status children appear to engage in positive, prosocial behaviors, are helpful and considerate, spend little time in solitary inappropriate play and display positive affect and leadership skills (Dodge, Coie, Pettit & Price, 1990; Spinrad et al., 2004). In contrast, rejected children display more aggression, hyperactivity, rule violations and disruptiveness (Coie et al., 1990).

However, while there does appear to be some consistency in the behavioral dimensions associated with popular and unpopular social status with respect to older children, less is known about the correlates of rejection amongst children of preschool age. A few studies with preschoolers in naturalistic settings have yielded results
suggesting that behaviors predictive of rejection are similar for younger as for older children (e.g., Denham & Holt, 1993; Keane & Calkins, 2004; Ladd, Price & Hart, 1988; Wood, Cowan & Baker, 2002). However, there is some evidence that gender may mediate the relationship between behavior and peer social status in that aggression may not be as strong a predictor of peer social status for girls as for boys (Walker, 2004; Wood et al., 2002) and that, for very young children, perceived positive qualities may be better discriminators between popular and rejected children than negative qualities (e.g., Dekovic & Gerris, 1994; Walter & LaFreniere, 2000).

While it is becoming increasingly evident that implementation of intervention programs should begin in early childhood, attempts to devise interventions for preschool-aged children need to be based on a more complete understanding of the factors contributing to peer acceptance or rejection during the early childhood years. The first aim of the present study was, therefore, to examine the behavioral correlates of social status with respect to preschool boys and girls. Of particular interest in this study, were three aspects of social functioning that have been associated with peer-related social competence for preschool-aged children: the ability to engage effectively in play (e.g., cooperative or pretend play); prosocial quality of interactions (e.g., positive affect); and communicative competence (Odom & Ogawa, 1992).

*Play Behavior*

In the present study, social competence is conceptualised as encompassing the interactive skills and prosocial behaviors that promote positive and effective functioning within the peers group. For children of preschool age, social competence includes the ability to engage in ongoing complex play interactions with peers (Howes & Matheson, 1992). Play interactions are thought to make an important contribution to the development of children’s friendships and peer acceptance (Farver, Kim & Lee,
Children’s non-social play in particular has been associated with peer rejection and low social competence (Gazelle & Ladd, 2003; Hart et al., 2000; Spinrad et al., 2004). However, the relationship between play behaviors and social acceptance is complex. For example, while a number of studies (see e.g., Gazelle & Ladd, 2003; Hart et al., 2000) have indicated that onlooker or unoccupied behavior is associated with lower peer sociometric ratings but that solitary play is not, a recent study by Spinrad et al. (2004) provides contradictory findings. Specifically, Spinrad et al, in an observational study, found that solitary play was related to peer rejection and exclusion for preschool aged children. Spinrad et al speculate that, rather than voluntary solitude, solitary play in preschool may represent social isolation. Clearly, the relationship between play behavior and social acceptance needs further investigation. The present observational study examines the relationship between peer acceptance and preschool children’s free play behaviors. On the basis of previous research, it was expected that more complex forms of play involving cooperative interactions would be associated with popular social status and that non-social play, including unoccupied, solitary and parallel play, would be associated with peer rejection and neglected social status.

Emotional Expression

The affective domain is potentially an important focus with respect to interpersonal relationships. Children who are emotionally positive appear to make more prosocial behavioral choices in problematic peer situations (Denham, Bouril & Belouad, 1994) and react more appropriately to the emotions displayed by their peers (Denham, McKinley, Couchard & Holt, 1990). Previous research has also linked emotion situation knowledge and knowledge of emotional display rules to peer social status as early as preschool age (e.g., Denham et al., 1990). However, there are
relatively few observational studies of affective expression. When the relationship between affect and sociometric status has been specifically examined, positive affective expressions have been found to be consistently associated with popular sociometric status and teacher-rated social competence while negative affect is correlated with peer rejection (Howes, 1990; Walter & LaFreniere, 2000; Rubin & Clark, 1983). In this study, the relationship between emotional expression and sociometric status is examined using a larger sample than is typical for observational studies and observations are collected during naturalistic play situations. Based on the existing literature, it was expected that peer acceptance would be associated with higher rates of positive affective displays and that higher rates of negative affective expression would be related to peer rejection. Given the differential relationship between aggression and peer social status for boys and for girls, possible gender differences in the relationship between affective expression and social status were also of interest.

*Verbal Communication*

Communication skills have been identified as important contributors to the initiation and maintenance of children’s social interactions (Parkhurst & Gottman, 1986). In order to engage in cooperative play children need to be able to maintain an ongoing connected discourse characterised by reciprocity, or turn-taking and a responsiveness to their conversational partner (Black, 1992). Previous research has indicated that competence in conversational turn-taking, which would appear to be a prerequisite for cooperative play, is an important contributor to cohesive social interaction at preschool age (Black & Hazen, 1990). According to Attili (1990), social competence can be measured in terms of the frequency with which children are successful in their social interactions. Following this model, indices of social
competence can be considered to include a high frequency of responses from other children to social overtures and high frequencies of compliance by peers to requests. Thus, it was expected that popular children would be more successful in their conversational interactions in comparison to rejected children who may be less likely to be successful in their social overtures.

**Stability of Social Status**

Although sociometric procedures can provide an index of a child's acceptance within the peer group, the potential usefulness of sociometric measures is dependent on how effectively they are able to identify children exhibiting early, persisting patterns of less competent behavior. Multi-measure specification of the behaviors associated with sociometric classification has long been a focus of research with older children (see Asher & Coie, 1990 for a review) and the sparse extant data for children of preschool age have also revealed consistent patterns of correlations between sociometric assessments and young children’s social behavior (e.g., Denham & McKinley, 1993; Denham et al., 1990; Nelson, Robinson & Hart, 2005). However, despite the extensive use of sociometric techniques, the stability of status classifications has seldom been addressed, particularly with preschool-aged children (Cillessen, Bukowski & Haslager, 2000). While the test-retest correlation of sociometrics has been examined in numerous studies, test-retest correlations do not provide clear information on the stability of sociometric status. A low test-retest correlation may indicate either that the measurement instrument (sociometrics) is unreliable or that there is low stability in social status without providing the means to distinguish between the two (Wu, Hart, Draper & Olsen, 2001). In addition, stability data using one sociometric measure cannot necessarily be generalised to other, albeit similar measures (Cillessen et al., 2000).
The means by which sociometric data is gathered varies across studies with three systems used most frequently. Coie, Dodge and Coppotelli (1982) and Newcomb and Bukowski (1983) collected data through positive and negative nominations whereas Asher and Dodge (1986) used a combination of positive nominations and a play rating score whereby children rated all the other children in the group according to how much they liked to play with them (1 = not at all, 2 = sometimes, 3 = a lot). The current study uses the Asher and Dodge procedure which substitutes a “lowest play rating” score for the “disliked” score obtained through the negative nominations used in the other two approaches. The combination of the play rating scale with a positive nomination technique as used in the Asher and Dodge approach provides a valid method for measuring sociometric status with preschool-aged children in the face of possible concerns regarding the use of negative nominations. This approach has also been found to demonstrate higher temporal stability than the use of positive and negative nominations with preschool age children (Cillessen et al., 2000). If interventions are to be targeted effectively in the preschool years, it is essential that we are able to identify children at risk of long term peer relationship difficulties with a reasonable degree of success. The second objective of the present study was to examine the stability of preschool social status over time as measured using a combination of positive nominations and a play rating scale (Asher & Dodge, 1986).

**Method**
Participants

The sample consisted of 187 children ranging in age from 54 to 66 months ($M = 62.4$ months, $SD = 4.22$) from ten suburban, community-based preschools\(^1\) serving middle class, predominantly Caucasian, families in Queensland, Australia. The sample included 94 boys and 93 girls. The participating sample represented 85% of children across the eleven preschool groups.

Measures

Sociometric Status. In the present study, sociometric data were collected through a combination of positive nominations and a rating scale (Asher & Dodge, 1986). Prior to commencing sociometric testing, photographs were taken of all children for whom parental permission had been given to participate in the research. Sociometric interviews were initially conducted individually after the children had spent three months in the preschool program and could be considered to be familiar with each other (Time 1). Peer ratings were restricted to same-sex peers both on the basis of prior research using peer ratings (e.g., Asher & Hymel, 1981), and an acknowledgement that the play of preschool age children occurs predominantly in same sex groups (Maccoby, 1988). It has also been proposed that same sex ratings exhibit less variability and may therefore be more reliable (Hayden-Thomas, Rubin & Hymel, 1987). Children were first asked to select photographs of the three children with whom they most liked to play (positive nomination). Selected children were given a score of 1 for each time they were nominated. Next the participants were asked to rate all the children on a three-point scale

\(^1\) At the time of the study, Community Preschools in Queensland were part-time programs serving children from four to five years of age in the year before formal school entry. Provision for children of this age in Queensland is now universal provision of a non-compulsory full-time preparatory year program.
according to how much they liked to play with them by posting their photographs into one of three boxes. Depicted on the boxes were a happy face, a neutral face, and a sad face. Children were advised that the happy face meant they liked to play with that child a lot, the neutral face that they liked to play with that child a little bit or sometimes, and the sad face that they did not like to play with that child. Children whose photographs were placed in the box with the sad face received a rating of one.

For each child the following scores were computed: (a) number of positive nominations (L score); (b) number of low play ratings (LPR score); (c) a social preference score (SP) based on subtracting the number of low play ratings (LPR) from the number of positive nominations (L); and (d) a social impact score (SI) computed by adding the number of low play ratings (LPR) and the number of positive nominations (L). These scores were converted into standardised scores for each sex within each preschool class. Using the procedure outlined by Asher and Dodge (1986), numbers of positive nominations (L score) and numbers of low play ratings (LPR score), and the social preference and social impact scores derived from these, were used to classify children into the six social status groups of popular \( n = 26 \), rejected \( n = 23 \), neglected \( n = 24 \), controversial \( n = 11 \), average \( n = 34 \) and other \( n = 65 \). Six months after initial sociometric classification, sociometric interviews were repeated to test for stability and change (Time 2). The same procedure was used to classify children once more into the social status groups of popular \( n = 21 \), rejected \( n = 31 \), neglected \( n = 21 \), controversial \( n = 8 \), average \( n = 21 \) and other \( n = 76 \).

*Observational Procedure.* Children were selected for observation based on sociometric results at Time 1. Three children (1 rejected child and 2 neglected children) left their respective preschools either before or during the observational period. The final focus sub-sample comprised rejected boys \( n = 12 \), rejected girls \( n = 10 \), neglected
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boys \((n = 12)\), neglected girls \((n = 10)\) and a comparison group of popular boys \((n = 12)\) and popular girls \((n = 14)\). Children's behavior during free play sessions both indoors and outside with known peers was video recorded using a time sampling procedure whereby each child was observed for five minutes on five separate occasions for a total of 25 minutes over a three-month period. In Australia, preschools typically provide extended periods for free play activities both indoors and outdoors. Indoor activity centres that children might engage in during free play usually include dramatic play areas, a block area, book corner and tables set up for sensory and expressive play (e.g., painting, collage, play doh). Outside, there might be fixed and moveable structures for gross motor activities (e.g., climbing, sliding, swinging), a sandpit and possibly other areas set up with specific activities (e.g., finger-paint). Observations took place in the third term of the school year and were evenly distributed across indoor and outdoor settings.

In a review of observational methodology, Odom and Ogawa (1992) identified four conceptual classifications which have been associated with peer-related social competence for preschool-aged children: effective initiation of social play and effective interactional responding (e.g., reciprocal play); prosocial quality of interactions (e.g., positive affect); communicative competence; and the ability to engage effectively in play (e.g., cooperative or pretend play). A coding system was devised for the present study to reflect these themes from codes used by Coie and Dodge (1988), Ladd, Price and Hart (1988), and Putallaz and Wasserman (1989). The coding system consisted of three main categories as follows: (1) Play behavior, subcategorised into cooperative play, parallel play, onlooker, large group active play, small group active play, rough play; and non-social behavior including alone-directed, alone-undirected, no play with others (excluding conversational interactions) and transition; (2) Affect, subcategorised into neutral affect, positive affect and negative
affect; (3) Verbal communication, subcategorised into ongoing connected conversation and no conversation. The number of conversational bids initiated by the target child and by peers towards the target child as well as the success or failure of these bids and whether they were directives was also coded. The definitions of the behaviors are presented in Table 1.

Two observers were trained in the coding system until 90% reliability was achieved in each of the observational categories. One observer coded the video observations while the second individual served as a reliability checker. Twenty percent of the video observations were independently coded by the observer and the reliability checker. Agreement between the two raters was 98% across the behavioral examples presented suggesting that the behavioral codes in the observation system were reliable.

Results

Observational Analyses

Data analyses proceeded in three steps. First, frequencies and durations (in seconds) for coded behaviors were recorded for each child. Scores were calculated in terms of durations for codes which were conceptualised as ongoing activities (play behavior including non-social behavior, affect and time spent in verbal communication) and as frequencies for codes that were conceptualised as events (conversational initiations both peer-initiated and target-initiated). Frequency scores were summed to result in a total frequency of each behavior for each child over the observation period. As children were not observed for identical periods for specific behaviors, duration scores (in seconds) were computed as a percentage of the total twenty-five minute observation period (Coie & Dodge, 1988). Sex and social status
effects in children’s play behavior, affect and verbal communication were then examined using MANOVA. Descriptive statistics are also presented for the success of conversational initiations and the percentages of conversational initiations that were directives.

**Sex and Social Status Effects**

*Play Behavior.* Play behavior and non-social behavior were coded in terms of the percentage of the total observed time that children spent engaged in cooperative play, parallel play, onlooker, active play (large group), active play (small group), rough play, alone-directed, alone-undirected, no play with others or in transition. These coding categories were exhaustive in that they represented the total range of the play behaviors observed. A MANOVA was conducted in which sex and social status (popular, rejected or neglected) served as between group factors. Dependent measures were the proportion of total observed time subjects spent in the defined play behaviors. Means and standard deviations related to the dependent measures are presented in Table 2. Using Wilks’ lambda statistic, a significant main effect was found for social status, $F(2, 69) = 5.61, p = .000$. The main effect for sex was not significant, $F(1, 69) = 1.44, p = .184$, nor was the interaction of sex by social status, $F(2, 69) = .892, p = .597$. Univariate tests revealed significant social status differences in the extent to which children engaged in cooperative play, $F(2, 69) = 39.76, p = .000$, parallel play, $F(2, 69) = 14.90, p = .000$, onlooker behavior, $F(2, 69) = 8.39, p = .001$, alone-directed behavior, $F(2, 69) = 9.13, p = .000$, and transition behavior, $F(2, 69) = 5.05, p = .009$.

Post hoc analyses using Duncan’s multiple range test indicated that children classified as popular were more likely than rejected or neglected children to engage in cooperative play and less likely than rejected or neglected children to engage in
parallel play, onlooker behavior or alone-directed behavior. Rejected children were more likely than popular children to spend time alone not engaged in play. However, there was a wide variation between children in the extent to which they engaged in each type of play behavior as reflected in the large standard deviations in Table 2.

Affect. Affective behavior was coded as the percentage of total observed time in which children displayed neutral affect, positive affect or negative affect. A MANOVA was conducted in which sex and social status (popular, rejected or neglected) served as between group factors and the dependent measures were the percentages of total observed time children displayed negative, positive or neutral affect. Means and standard deviations related to the dependent measures are presented in Table 3. Using Wilks’ lambda statistic, a significant main effect was found for social status, $F(2, 69) = 8.90, p = .000$. The main effect for sex was not significant, $F(1, 69) = .547, p = .652$, nor was the interaction of sex by social status, $F(2, 69) = .307, p = .932$. Follow up univariate tests revealed social status differences in the extent to which children displayed positive affect, $F(2, 69) = 23.42, p = .000$, and neutral affect, $F(2, 69) = 22.61, p = .000$. Post hoc analyses using Duncan’s multiple range test indicated that popular children were more likely than either rejected or neglected children to display positive affect while rejected and neglected children were more likely than popular children to display neutral affect.

Verbal Communication. Communicative behavior was coded both as the percentage of total observed time children spent in ongoing connected conversation or no conversation and as the frequency of conversational initiations made by peers to the target children and by the target children to their peers. The percentage of directives and the percentage of conversational initiations that were successful were also coded. A MANOVA was conducted in which sex and social status (popular,
rejected or neglected) served as between group factors and dependent measures were
the percentage of total observed time children spent engaged in ongoing conversation
or no conversation. Means and standard deviations related to the dependent measures
are presented in Table 4. Using Wilks’ lambda statistic, a significant main effect was
found for social status, $F(2, 69) = 25.33, p = .000$. The main effect for sex was not
significant, $F(1, 69) = 1.77, p = .163$, nor was the interaction of sex by social status,
$F(2, 69) = 1.25, p = .288$. Follow up univariate tests revealed social status differences
in the extent to which children of different social status groups engaged in connected
ongoing conversation, $F(2, 69) = 114.35, p = .000$, and the extent to which children
were not engaged in any conversation, $F(2, 69) = 116.89, p = .000$. Post hoc analyses
using Duncan’s multiple range test revealed that popular children engaged in
significantly more ongoing connected conversation than either rejected or neglected
children.

The percentages of total conversational initiations that were successful and the
percentage of initiations that were directives are presented in Table 5. Popular
children were more likely than either rejected or neglected children to be successful in
their conversational initiations and to respond to the conversational initiations of
others. Popular children were also more likely than either neglected or rejected
children to use directives in their conversational initiations to their peers but peers
were less likely to use directives towards popular children than to rejected or
neglected children.

**Stability of Social Status**

Cross-period relationships between social status groups defined using the Asher
and Dodge (1986) procedure are presented in Table 6. No child who was rejected at
Time 1 became popular at Time 2 and only one child who was popular at Time 1 was
rejected at Time 2. Children rejected at Time 2 who were not rejected at Time 1 were most likely to move from the category of “other”. No controversial children retained their initial classification. Kappa statistics were used to assess the degree of concordance between social status at Time 1 and social status at Time 2. At Time 1, 12 boys and 11 girls were classified as rejected based on the Asher and Dodge (1986) procedure. Six of the boys (kappa = .31) and eight of the girls (kappa = .55) initially classified as rejected by their peers retained this status classification at Time 2. Similar results were obtained for popular girls (kappa = .43; n = 6). However, social status classification was less stable for popular boys (kappa = .24; n = 4), neglected girls (kappa = .33; n = 4), average boys (kappa = .24; n = 4), neglected boys (kappa = .20; n = 4), “other” boys (kappa = .19, n = 16) and average status girls (kappa = .12; n = 4). Girls classified as “other” (kappa = .08, n = 11) showed the least stability between Time 1 and Time 2 of any social status group except controversial. These values suggest that for rejected and popular girls six month stability is high; for neglected girls and rejected, popular, average and neglected boys stability is fair to moderate; for average status girls and “other” boys, stability is slight to fair; and for girls classified as “other” stability is very low.

Discussion

The purpose of this study was to extend the body of knowledge about the behavioral correlates of rejection and neglect with respect to preschool-aged boys and girls and to examine the stability of social status classification over a six month period. Relationships were found between rejected social status and behaviors that might be seen as less conducive to positive social interactions, such as solitary play behaviors and less frequent displays of positive affect, while popular social status was related to more cooperative play behaviors, positive interactions and communicative behaviors that contribute to meaningful social discourse. Results will be discussed
first in terms of findings related to observed behavior followed by consideration of the stability of social status as defined by Asher and Dodge’s (1986) procedure.

*Observed Behavior*

In general, the findings with respect to social status differences were consistent with expectations however, the lack of an interaction between sex and social status was not expected and indicates that, in most instances, there may be more similarities than differences between boys and girls of preschool age in the behaviors that predict popularity or rejection.

*Play Behavior.* The results with respect to play behaviors were largely consistent with expectations. Specifically, popular children were observed to engage in significantly more cooperative play than either rejected or neglected children. Popular children also engaged in less parallel play, onlooker behavior or alone-directed behavior than either rejected or neglected children and less time alone not engaged in play than rejected children. In general these findings support previous research with preschoolers which has indicated that solitary, immature play patterns appear characteristic of rejected children while higher levels of play are characteristic of popular children (e.g., Hart et al., 2000; Ladd et al., 1988; Rubin, 1982). These results are also similar to past results obtained with older children (e.g., Coie et al., 1990) indicating that cooperative interactions are consistently related to the development of peer acceptance from early through middle childhood. While there has been some disagreement in the literature concerning the pattern of relationships between sociometric and behavioral measures, specifically with respect to total rate of interaction (see e.g., Ironsmith & Poteat, 1990; Rosen, Furman & Hartup, 1988), it appears that, at least in early childhood, individual differences in levels of cooperative play are directly related to peer popularity. Thus, bearing in mind the complexity of
the relationship between individual behavior and rejection from the peer group, teaching of cooperative play skills may still emerge as a useful focus for interventions in early childhood programs.

_Affect._ The central role played by emotional expression in the degree to which children become accepted by the peer group is demonstrated by the present findings which indicated that popular preschool-aged children were more likely than either rejected or neglected children to display positive affect such as smiling or laughing while rejected and neglected children were more likely than popular children to display neutral or negative affect. While predominance of positive affect per se may not predict popularity, emotions are a powerful regulator of behavior and children with generally “happy” dispositions may be more likely to respond prosocially. Albeit, a display of positive affect may be an effect of popular social status as much as a cause given that positive relations with peers may be a reason for happiness. The lack of sex differences in the present findings are in contrast to some previous research findings with preschoolers (Walter & LaFreniere, 2004) but support the proposition there are more similarities than differences between boys and girls of preschool age in the correlates of peer social status. Emotional expression, emotional regulation and emotional understanding are important aspects of early social development and the relationship between peer acceptance and early socialisation of emotions within both family contexts and early education settings may be an important focus for future research.

_Verbal Communication._ The findings of the present study highlight the relationship between communicative competence and social status. Specifically, popular children were observed to engage in ongoing connected conversation significantly more often than either rejected or neglected children. Popular children
were also more likely than either rejected or neglected children to use directives in their conversational initiations to their peers and receive a response to their initiations. The present results indicate that the popular children in the present study conform in many ways to the definition of social competence proposed by Attili (1990). Specifically, the conversational initiations made by popular children were more likely to be successful than initiations by rejected or neglected children and popular children appeared more likely to use directives, which may indicate that they expect compliance from their peers. Rejected and neglected children on the other hand conformed more closely to Attili’s “disconfirmed” children who were less likely to be successful in their social overtures and less likely to have their requests complied with. Black (1992) suggests that rejected and neglected status children may receive less positive responses from their peers through a mode of negotiation that appears to rely less on reciprocity than self-referent statements. Communication strategies such as those demonstrated by popular children which promote extended turn-taking and reciprocal conversation (Black, 1992) may be one of the central correlates of popularity for preschool-aged children. It is important to note that conversational initiations varied widely with respect to the context of the situation and the activities in which children were engaged. It might be useful in future research to examine contextual issues such as the relevance of conversational initiations to the surrounding activity with respect to their success rate.

**Stability of Social Status**

The Asher and Dodge (1986) method of calculating sociometric status showed a moderate to high rate of stability for those children classified as popular, rejected and neglected. Half the boys and over half the girls identified as rejected on the basis of peer nominations and a rating scale at the beginning of the year retained this
classification six months later. These results are in line with previous research into peer rejection with preschool-aged (e.g., Olson & Brodfield, 1991) and school-aged children (e.g., Parke et al, 1997) using positive and negative nominations. For example, Olson and Brodfield (1991) reported that out of their sample of twelve rejected preschool boys, half remained designated as rejected based on peer nominations at the end of the preschool year while Parke and colleagues reported that 43% of their sample retained rejected status over a one year period from 1st to 2nd grade. The present results confirm and extend these findings by indicating that the use of peer nominations and a rating scale provides a reliable means of identifying peer-rejected children at an early age and that a significant proportion of children so identified remain rejected throughout the preschool year. These results also extend prior research which has focussed on boys by indicating that rejected social status may be more stable over a six month period for girls than for boys. Popular, neglected and average social status groups showed less stability than rejected status, however there was still a moderate degree of stability for these groups, particularly for popular and neglected girls. No controversial children retained controversial classification.

It is important to note that while there was a fair degree of stability over the six month time period, particularly for rejected and popular social status classifications, a large proportion of children also changed their social status classification over time. The degree of movement evident across categories suggests that preschool-aged children may still be in the process of developing a stable set of behavioral characteristics which can reliably predict acceptance or rejection from the peer group. Thus, there may be a greater potential to effect changes with respect to children’s acceptance within the peer group in early childhood than during the school years when social status and children’s reputations begin to crystallise and behavioral
patterns become even more resistant to change. As social status appears relatively fluid for preschool-aged compared to school-aged children, it is likely that early identification of rejected children will result in a number of children being erroneously identified as at risk. However, delaying identification may reduce the possibility of effecting change amongst those children at risk for chronic rejection. Although the children who appear to be most at risk for chronic rejection and associated negative outcomes appear to be those who exhibit persistent patterns of aggressive or disruptive behavior (Parke et al., 1997), focussing intervention programs on normative patterns of social skill development may also assist children who are rejected early on for a variety of reasons. As noted by Parke et al. (1997), these early social skills building efforts may be most effective in the early years before children become labelled or develop stable maladaptive patterns of interaction.

Limitations and Future Directions

While a range of studies over time have found evidence for associations between child behavior and peer social status (see review by Ladd, 2006), these studies share many similar limitations. First, although the participation rates within the preschools in the current study were high and comparable to previous studies; it is possible that patterns of acceptance and rejection may have differed if non-participating children had been included. A potential bias in the sample could have occurred if the parents of children experiencing social difficulties refused permission to participate. Second, the observational coding scheme developed for the present study could be refined for future research. For example, conversational initiations were coded as successful or not successful however, initiations varied widely with respect to the context of the situation and the activities in which the children were engaged. It might be useful in future research to examine contextual issues such as the
relevance of conversational initiations to the surrounding activity with respect to their success rate. Last, although the factors identified in the present study as associated with a lack of acceptance by the peer group may assist in the identification and remediation of children at risk of experiencing peer relationship difficulties, there has been relatively little attention paid to issues such as the ongoing interactions between individuals and the environment. To date, research points to the contributions made by parental child-rearing style and interactions within the family environment with respect to peer acceptance and children’s social competence however, factors within the preschool environment and/or preschool program may also influence the quality of children’s peer relationships. It could be speculated for example that programs that emphasise and encourage cooperative play may also provide more support for children to learn critical interactive play skills. Some support for this line of reasoning is provided by a cross-cultural study by Farver and colleagues (1995) which indicated that preschool children’s social behavior and play complexity can be influenced by adults’ culturally based attitudes towards the importance of play. Future research examining the influence of contextual issues such as program content and teacher qualities on young children’s social competence could be very informative. Perhaps rather than focussing exclusively on sociometric status, more general questions about the specific ways in which social relationships support young children’s social development are needed.

Conclusion

The results of the present study corroborate and extend earlier findings (see e.g., Denham et al., 1990; Nelson et al., 2005; Walden, Lemerise & Smith, 1999) that positive, prosocial interactions are related to popularity for preschool-aged children. Specifically, the most powerful discriminator, regardless of gender, between children
in the rejected and neglected groups and popular children was lack of positive interactional behavior. It appears that peers may be responding to the absence of socially appropriate behaviors such as cooperative play and social conversation as opposed to the presence of socially aversive behaviors such as aggression.

The solitary, immature play patterns of neglected children were similar to those of rejected children suggesting that these children do deserve attention. While neglected social status showed less stability than popular or rejected social status, one third of neglected children retained a neglected classification over the study period indicating that these children at least were displaying a persistent pattern of less competent behavior. It may be that a subset of neglected children displays high levels of withdrawn or isolate behavior which, in contrast to neglected social status as such, has been linked to internalising problems particularly for girls (Bell-Dolan, Foster & Chrstitopher, 1995). In conclusion, the results of the present study suggest that future intervention efforts might usefully explore the efficacy of broad based interventions designed to increase positive interactions, cooperative play skills and emotional and social competence. The present results also suggest that such interventions might be effectively targeted during the preschool years, if not earlier, if children’s relationships with their peers are not to be compromised during a period of rapid development in social knowledge and social competence.

Author Notes:

Sue Walker is a Senior Lecturer at the Queensland University of Technology. Her current research interests include aspects of young children’s social behaviour, social problem solving style and temperament that influence children’s acceptance within
the peer group and the social integration of young children with special needs in inclusive early childhood settings.

References


social peer play behavior to their emotionality, regulation and social functioning.

*Developmental Psychology, 40* (1), 67-80.


<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Play behavior</strong></td>
<td></td>
</tr>
<tr>
<td>Cooperative play</td>
<td>Non-disruptive mutual activity</td>
</tr>
<tr>
<td>Parallel play</td>
<td>Child is engaged near other children but does not interact with them. Children are engaged in the same type of activity and are aware of others’ presence.</td>
</tr>
<tr>
<td>Onlooker</td>
<td>Child watches the activity of others’ but makes no attempt to interact</td>
</tr>
<tr>
<td>Active play (large group)</td>
<td>Active play in a group larger than six</td>
</tr>
<tr>
<td>Active play (small group)</td>
<td>Active play in a group of six or smaller</td>
</tr>
<tr>
<td>Rough play</td>
<td>Vigorous physical activity involving body contact (e.g., chasing and play fights without aggression)</td>
</tr>
<tr>
<td>Alone-directed</td>
<td>Child is alone but engaged in an activity</td>
</tr>
<tr>
<td>Alone-undirected</td>
<td>Child is alone and unoccupied</td>
</tr>
<tr>
<td>No play (with others)</td>
<td>Child is in the company of others but not engaged in conversation or in a specific activity (e.g., sitting in proximity to another child on the fort).</td>
</tr>
<tr>
<td>Transition</td>
<td>Child is alone and moving between activities</td>
</tr>
<tr>
<td><strong>Affect</strong></td>
<td></td>
</tr>
<tr>
<td>Neutral affect</td>
<td>No discernable affect, either positive or negative</td>
</tr>
<tr>
<td>Positive affect</td>
<td>Laugh, smile</td>
</tr>
<tr>
<td>Negative affect</td>
<td>Glower, frown, cry, whine</td>
</tr>
<tr>
<td><strong>Verbal communication</strong></td>
<td></td>
</tr>
<tr>
<td>Ongoing conversation</td>
<td>Both partners sustain conversational turn-taking for at least 10 seconds</td>
</tr>
<tr>
<td>No conversation</td>
<td>Child is not engaged in ongoing conversation, initiations without resulting in sustained conversations may occur</td>
</tr>
<tr>
<td>Initiate</td>
<td>Child initiates conversational interaction after at least 10 seconds</td>
</tr>
<tr>
<td>Directives</td>
<td>Commands or directs a peer to take on a specific role or to perform a specific task (frequency)</td>
</tr>
</tbody>
</table>

*Note:* Observational codes recorded as frequencies are identified. All other coded behaviors are expressed as durations.
TABLE 2. Means and Standard Deviations of Percentage Duration of Play Behaviors by Social Status
(N = 70)

<table>
<thead>
<tr>
<th></th>
<th>Popular (n = 26)</th>
<th>Rejected (n = 22)</th>
<th>Neglected (n = 22)</th>
<th>F (2,69)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
<td>SD</td>
<td>M %</td>
<td>SD</td>
</tr>
<tr>
<td>Cooperative play</td>
<td>70.99a</td>
<td>(30.68)</td>
<td>25.82b</td>
<td>(21.57)</td>
</tr>
<tr>
<td>Parallel play</td>
<td>0.37a</td>
<td>(0.75)</td>
<td>24.28b</td>
<td>(19.30)</td>
</tr>
<tr>
<td>Onlooker</td>
<td>0.21a</td>
<td>(0.40)</td>
<td>5.90b</td>
<td>(6.51)</td>
</tr>
<tr>
<td>Active play (large group)</td>
<td>1.18</td>
<td>(2.46)</td>
<td>1.90</td>
<td>(3.93)</td>
</tr>
<tr>
<td>Active play (small group)</td>
<td>20.38b</td>
<td>(18.63)</td>
<td>33.26b</td>
<td>(27.02)</td>
</tr>
<tr>
<td>Rough play</td>
<td>-</td>
<td>-</td>
<td>1.67</td>
<td>(3.84)</td>
</tr>
<tr>
<td>Alone-directed</td>
<td>0.47a</td>
<td>(0.74)</td>
<td>18.69b</td>
<td>(18.17)</td>
</tr>
<tr>
<td>Alone-undirected</td>
<td>-</td>
<td>-</td>
<td>3.65</td>
<td>(8.49)</td>
</tr>
<tr>
<td>No play (with others)</td>
<td>6.40a</td>
<td>(10.09)</td>
<td>12.41b</td>
<td>(11.07)</td>
</tr>
<tr>
<td>No play (alone)</td>
<td>-n</td>
<td>-</td>
<td>2.97b</td>
<td>(5.11)</td>
</tr>
</tbody>
</table>

Note: Means with the same subscript (within rows) are not significantly different from each other according to post hoc analyses (p < .05).

**p < .01, ***p < .001. Standard deviations are presented in parentheses.
TABLE 3. Means and Standard Deviations for Percentage Duration of Display of Affect
(N = 70)

<table>
<thead>
<tr>
<th>Affect Type</th>
<th>Popular (n = 26)</th>
<th>Rejected (n = 22)</th>
<th>Neglected (n = 22)</th>
<th>F (2,69)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M %</td>
<td>SD</td>
<td>M%</td>
<td>SD</td>
</tr>
<tr>
<td>Neutral Affect</td>
<td>64.25&lt;sub&gt;a&lt;/sub&gt; (19.99)</td>
<td>88.05&lt;sub&gt;b&lt;/sub&gt; (10.26)</td>
<td>89.51&lt;sub&gt;b&lt;/sub&gt; (9.84)</td>
<td>22.61***</td>
</tr>
<tr>
<td>Positive Affect</td>
<td>31.79&lt;sub&gt;a&lt;/sub&gt; (19.39)</td>
<td>7.95&lt;sub&gt;b&lt;/sub&gt; (9.86)</td>
<td>7.10&lt;sub&gt;b&lt;/sub&gt; (9.30)</td>
<td>23.42**</td>
</tr>
<tr>
<td>Negative Affect</td>
<td>0.49             (1.17)</td>
<td>0.59              (1.74)</td>
<td>2.11</td>
<td></td>
</tr>
</tbody>
</table>

Note: Means with the same subscript (within rows) are not significantly different from each other according to post hoc analyses (p < .05).

TABLE 4. Means and Standard Deviations for Percentage of Time Engaged in Conversation by Social Status (N = 70)

<table>
<thead>
<tr>
<th></th>
<th>Popular (n = 26)</th>
<th>Rejected (n = 22)</th>
<th>Neglected (n = 22)</th>
<th>F (2,69)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M%</td>
<td>SD</td>
<td>M%</td>
<td>SD</td>
</tr>
<tr>
<td>Ongoing Conversation</td>
<td>83.99</td>
<td>(14.19)</td>
<td>17.88</td>
<td>(14.60)</td>
</tr>
<tr>
<td>No Conversation</td>
<td>13.16</td>
<td>(11.48)</td>
<td>78.84</td>
<td>(16.06)</td>
</tr>
</tbody>
</table>

*Note: Means with the same subscript (within rows) are not significantly different from each other according to post hoc analyses (p < .05).
**p < .001. Standard deviations are presented in parentheses.
### TABLE 5. Percentage of Total Conversational Initiations which were Successful and Percentage of Initiations which were Directives by Social Status (N = 70)

<table>
<thead>
<tr>
<th></th>
<th>Popular (n = 26)</th>
<th>Rejected (n = 22)</th>
<th>Neglected (n = 22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success rate of conversational initiations by target child to peers</td>
<td>100%</td>
<td>55.99%</td>
<td>67.15%</td>
</tr>
<tr>
<td>Success rate of conversational initiations by peers to target child</td>
<td>100%</td>
<td>63.49%</td>
<td>67.13%</td>
</tr>
<tr>
<td>Percentage of directive initiations by target child to peers</td>
<td>83.33%</td>
<td>30.69%</td>
<td>27.41%</td>
</tr>
<tr>
<td>Percentage of directive initiations by peers to target child</td>
<td>0</td>
<td>31.40%</td>
<td>32.82%</td>
</tr>
<tr>
<td></td>
<td>P (T2)</td>
<td>R (T2)</td>
<td>N (T2)</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Popular (T1)</td>
<td>10</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Rejected (T1)</td>
<td>-</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Neglected (T1)</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Controversial (T1)</td>
<td>2</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Average (T1)</td>
<td>2</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Other (T1)</td>
<td>6</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>

Note: T1 refers to social status at Time 1 (second term of the school year), T2 refers to social status at Time 2 (last term of the school year).