Peer Relationships Across the Preschool to School Transition

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Research Findings: The aim of this longitudinal study was to explore peer relationships across the transition from preschool to school. Participants were 35 (17 male) children attending the Irish preschool initiative Early Start ($M$ age = 49.31 months). Sociometric measures were employed on two occasions: at the end of preschool and in the first year of school. Results indicated that most preschoolers (83%) had at least one mutual friend, and by school age all children had at least one mutual friend. Almost one third (29%) of preschools and school-age children had a mutual best friend. Notably, all children made new friends in school. In addition, a number of friendships (18%) survived the preschool to school transition. Correlational analysis also suggested some stability in peer relationships from preschool into the first year of school. Exploratory multiple regression analyses showed that preschool peer variables predicted friendship status and social preference in school. Furthermore, best friendship in preschool uniquely predicted friendship in school, and best friend status in school was uniquely associated with social preference in school. Practice: Results have implications for parents’ and early educators’ promotion of children’s friendships during the transition from preschool to school.

Most early research on peer relationships has focused almost exclusively on middle childhood and adolescence. More recently, researchers have discovered the presence and complexity of peer relationships in the preschool and early school years (Rubin, Coplan, Chen, Buskirk, & Wojslawowicz, 2005). Understanding the emergence and features of early peer relationships is of interest to researchers and early years educators as there is evidence to suggest that these relationships have a
significant role to play in children’s cognitive, social, and emotional development (e.g., Dunsmore, Noguchi, Garner, Casey, & Bhullar, 2008; Howes, 1988; Ladd & Price, 1987).

Children’s peer relationships can crudely be divided into two categories: peer group relations (such as peer status) and dyadic peer relationships (such as friendships). Peer status and friendships are the most widely studied aspects of peer relationships in childhood and are recognized in the literature as being the two key variables (Asher, Parker, & Walker, 1996). Peer status is a measure of the extent to which children are liked or disliked by the members of their peer group (Asher et al., 1996). Peer status is an important construct to measure because it is related to children’s social skills (Murphy & Faulkner, 2006) and behavior (Wood, Cowan, & Baker, 2002). However, peer status does not give a complete picture of children’s peer relationships, and many researchers acknowledge the importance of studying children’s dyadic relationships (mainly mutual friendships), even in the preschool years (e.g., Hartup, 1996; Ladd, 1990; Vaughn et al., 2000).

Although most research on dyadic relationships has focused on mutual friendships, there is a growing interest in the study of best friendship as a distinct category of mutual friendship. Research with older children (middle to late childhood) has found that best friendships are more influential than other friendships and present with different friendship features and qualities (Cleary, Ray, LoBello, & Zachar, 2002). Unfortunately, however, research investigating early peer relationships has rarely separated out these special friendships in their analyses and data collection (with the exception of Sebanc, Kearns, Hernandez, & Galvin, 2007).

The primary purpose of the present study was to describe the changes and continuities in these various facets of children’s peer relationships across the transition from preschool to school. The statistical analyses focused on predicting peer relationships in school from preschool and concurrent school data. Data collection took place toward the end of the children’s time in preschool and again during their first year of primary school. The participating children were all from socioeconomically disadvantaged families, and it was anticipated that this would be of interest to educators who work with similar groups of children, given that so little research has been done on peer relationships in groups with this sociodemographic profile.

PEER RELATIONSHIPS IN EARLY CHILDHOOD

The existence of early friendships has been reported in studies with toddler and preschool children (Gottman & Parkhurst, 1980; Howes, 1988). Moreover, according to J. Dunn (2004), early friendships among toddlers and preschoolers can be quite stable and may last several years. Howes found that in a sample of toddler and preschool children, between 50% and 80% of reciprocated friendships were
maintained from one year to the next, and 10% of friendships established in the toddler period were maintained for 2 years. Lindsey’s (2002) 2-year follow-up study of preschoolers provided further evidence supporting the view that young children’s friendships can be quite stable. This study reported that most preschoolers had at least one mutual friend in their classroom. In addition, the findings of the study indicated that the majority of friendship dyads were maintained over a 2-year period unless they were disrupted by a change in child care arrangement. The distinctiveness of these friendships was demonstrated by research outlining how children as young as 3½ years directed more social overtures, engaged in more social interaction, and played in more complex ways with friends than with non-friends (Rubin, Bukowski, & Parker, 1998).

In the preschool years, children also begin to develop a reputation or status as a liked or disliked member of their peer group. Hymel, Wagner, and Butler (1990) proposed that peer group reputations formed in early childhood are likely to be maintained over long periods of time. Olson and Brodfeld (1991) highlighted the persistence of peer rejection in a short-term longitudinal design over the course of a preschool year. This study reported that 50% of the participants identified as rejected on the basis of peer nominations at the beginning of the preschool year maintained this status at the end of the preschool year. Hymel et al. further developed this hypothesis, arguing that this reputational bias (based on these early reputations) is likely to influence both children’s responses to their peers and also their peers’ perceptions of and responses to them. For example, rejected preschoolers receive fewer social overtures from classmates (Masters & Furman, 1981) and engage in more solitary off-tasks or disruptive behaviors than their more popular peers (Rubin & Daniels-Beirness, 1983).

Researchers such as Ladd, Price, and Hart (1988) and Denham and Holt (1993) have also reported on the antecedents of children’s peer status and social behaviors in preschool settings. Ladd et al.’s (1988) short-term longitudinal study (three time points over 12 months) showed that early social behaviors (e.g., cooperative play, arguing) predicted preschoolers’ later peer status but not vice versa. Moreover, although prosocial behavior (e.g., cooperative play) was stable over time, negative social behavior (e.g., arguing) was less stable. Furthermore, children who displayed a decrease in negative behavior over time were persistently rated as unpopular by peers despite this positive change in behavior. Similarly, Denham and Holt found that over a 10-month period, preschoolers’ later peer acceptance was predicted by earlier peer acceptance and not prosocial behavior (such as friendliness, cooperation, empathy, and positive affect). The results from both studies suggest that, once formed, peer reputation is more influential than social behavior (both prosocial and negative) for current peer acceptance. As Denham and Holt put it, “Peer reputation appear[s] to be solidifying in this age range” (p. 274).

It is clear from this research that the various facets of peer relationships observed in research with older children, such as sociometric status and friendships,
are also present in early childhood. Bagwell (2004) indicated that sociometric status is a unilateral concept. In contrast, friendship is by its very nature a bilateral concept, with mutual liking a provision of friendship. Despite this distinction, the two concepts are related. According to Howes (1988), reciprocated friendships “both mark social competence with peers and appear to facilitate the development of competent interactions with peers” (p. 73). Findings from Howes’s longitudinal study revealed that children who were rejected by the peer group but had a mutual friend had easier entry into play groups than rejected children who had no mutual friends. Notably, children without a mutual friend not only had a harder time entering play groups but also engaged in less skilful interaction and received lower sociometric ratings than did children with friends.

A study by Bukowski, Pizzamiglio, Newcomb, and Hoza (1996) further emphasized the importance of studying both sociometric status and friendship concurrently. The researchers reported that peer group popularity provided opportunities for friendship but was still no guarantee that a child would have friends. Lindsey (2002) observed the longitudinal relationships between peer status and friendship status in a preschool setting. The results showed that children with a greater number of friendships were better liked by peers and were rated as more socially skilled by teachers than children with fewer friends or no friends at all. In addition, high-accepted preschoolers were almost twice as likely to have a reciprocated friendship as low-accepted children. Furthermore, longitudinal analyses revealed that friendship status at Year 1 made a unique contribution to children’s peer acceptance at Year 2. These findings confirm the importance of the distinction made between peer acceptance and friendship as separate aspects of children’s peer relationships. Finally, Sebanc et al. (2007) observed that peer acceptance acted as a predictor of having a friend and having a best friend.

The concept of best friendships is a further distinction that can be made with regard to young children’s friendships. As already mentioned, best friendships in middle and late childhood appear to be more influential than other friendships and present with discrete friendship features. Specifically, higher levels of caring, companionship, intimacy, and exclusivity are displayed within best friendships (Cleary et al., 2002). Berndt and Keefe’s (1995) study with adolescents reported that best friendships were rated as being more positive than other friendships and were also associated with increased involvement in school. However, this conceptual and qualitative distinction between friendships and best friendships described in older children has received little attention in the preschool literature. One exception is a recent study carried out by Sebanc et al. (2007). The researchers observed that preschool children could identify their best friends as compared with other friends. Moreover, consistent with the literature on older children, best friendships were associated with and predicted by positive friendship features. Finally, having a best friend was predicted by individual characteristics, namely age, gender, and peer acceptance. The findings of Sebanc et al.’s study mirror the findings of re-
search carried out with older children and suggest that best friendships may be qualitatively different from other friendships from a young age.

**PEER RELATIONSHIPS AND THE TRANSITION TO SCHOOL**

There is a growing consensus among researchers that well-functioning peer relationships in early childhood are linked with positive developmental outcomes. For example, research by Ladd (1990) with children during their first year of school found that those who had more classroom friends during school entrance developed more favorable school perceptions by the second month of school, and those who maintained these relationships liked school better as the year progressed. Betts and Rotenberg (2007) looked at trustworthiness as a feature of young children’s relationships and found that peer-reported trustworthiness predicted school adjustment in 6-year-olds. Moreover, Ladd and Price (1987) found that various aspects of children’s relations in preschool, such as having an extensive “out of preschool” peer network and starting school with a large number of familiar peers, were associated with positive school adjustment in kindergarten.

The research evidence indicates that the transition to school requires a number of peer-related demands, such as gaining acceptance into a new peer group, forming new friendships, and maintaining old friendships (Ladd, 1990; Ladd & Price, 1987). Despite this evidence, relatively few studies have explored the changes in peer relationships over the transition from preschool to school. One exception is Ledger, Smith, and Rich’s (2000) ethnographic study following friendships from preschool to school. The researchers discovered that among a group of 16 preschoolers, only two out of six friendships survived the transition. They reported that the other friendships were not maintained because of house moves, moving to different schools, or adult interference. Two additional key features of children’s early peer relationships (i.e., sociometric status and best friendships) were not addressed in the Ledger et al. study. This gap is explored in the present study.

**THE PRESENT STUDY**

The primary aim of the present study was to investigate patterns of peer relationships across the transition from preschool to school given the virtual absence of such research across this very important transition. Drawing on the evidence outlined in the literature review, measures of peer status, friendship status, and best friend status were all included in the study. Best friendships have been almost entirely ignored in the early childhood literature, and therefore this concept was a particular focus of the study. Moreover, it has been suggested that even from a
young age, best friendships may be more meaningful than other friendships, offer children more positive experiences, and are more influential in terms of academic and social development (Sebanc et al., 2007). Best friend status is also associated with prosocial behavior and peer acceptance. Thus, best friendship status may represent a particularly important aspect of peer relationships from early childhood. The study used a longitudinal design in order to explore predictive links between peer status, friendship status, and best friend status from preschool to school. This design also facilitated an investigation of the stability of peer relationships across time, thus contributing to the research base (Denham & Holt, 1993; Ladd et al., 1988; Lindsey, 2002; Sebanc et al., 2007).

The sample of children in the present study was recruited from government intervention preschools in socioeconomically disadvantaged areas and included many immigrant children. Previous studies looking at peer relationship patterns in early childhood and across transitions have mostly recruited children from White middle-class families in university-funded preschool programs (e.g., Denham & Holt, 1993; Ladd & Price, 1987; Ladd et al., 1988; Lindsey, 2002). However, research by Vaughn et al. (2000) and Vaughn, Colvin, Azria, Caya, and Krzysik (2001) suggested that patterns of friendship in preschool children from low-income ethnic minority backgrounds are similar to patterns reported in more economically advantaged groups from majority ethnic backgrounds. Moreover, Robinson, McIntyre, and Officer (2005) highlighted the importance of positive peer relationships for the well-being, resiliency, and mental and physical health of children living in poverty. Less research has been done on peer relationships in groups of children who are immigrants, and the authors could find no studies that included a sample of preschool children. However, research by Strohmeier and Spiel (2003) with young adolescents found some evidence that peer relationships, such as friendship, vary as a function of country of origin. The fact that children from socioeconomically disadvantaged backgrounds and children from immigrant families are so rarely represented in research on peer relationships increases the potential for the findings of the present study to make a contribution to the literature on friendship, best friendship, and social preference.

Drawing on a sample of children from socioeconomically disadvantaged areas, the present study aimed to describe the changes and continuities in three aspects of peer relationships (reciprocated friendship, reciprocated best friendship, and social preference), across the preschool to school transition. Specifically, it was predicted that the majority of children would have friends in preschool and in school (see Howes, 1988), that a smaller proportion of children would have best friends in preschool and school (see Sebanc et al., 2007), and that this proportion would increase from preschool to school (see Sullivan, 1953). In addition, it was predicted that the transition to school would produce substantial changes in friendships (Ledger, Smith, & Rich, 2006). The study also aimed to explore whether preschool peer relationships and school peer relationships predict friendship status and social
preference in school. It was predicted that preschool peer variables (reciprocated friendship, reciprocated best friendship, and social preference) would predict school friendship status and social preference. In addition, it was predicted that peer variables in school (reciprocated friendship, reciprocated best friendship, and social preference) would predict school friendship status and social preference.

**METHOD**

**Design and Participant Recruitment**

The present study employed a longitudinal design to follow a group of children from preschool to the first year of formal schooling. Data were collected on two occasions. Children completed Time 1 testing in June 2007 while attending an Irish preschool initiative, Early Start. The same group of children participated in Time 2 testing in April 2008, having started school. Early Start is an Irish Government preschool initiative implemented as part of an integrated approach to tackling social disadvantage (Educational Research Centre, 1998). All Early Start programs are located in primary schools in areas of socioeconomic disadvantage, and children participate in the programs for 1 year only (the year directly prior to beginning school).

The study sample was recruited from two Early Start Centres (four classes) located in two primary schools in Dublin, Ireland. The researcher approached the parents of 52 children in the four classes (class size range = 12–15 children) and obtained consent from 35 parents to include their children in the study. This study sample was re-recruited in the two schools 9 months later. Seven children (20%) were lost to attrition at this time either because they had moved to schools other than the two target schools or because they were absent on data collection days, leaving 28 children at follow-up (when the children were in school). In each school the children who had attended Early Start were fairly evenly distributed among three school classrooms. Thus, the participants were in classrooms (class size range = 15–19 children) with some children with whom they were in Early Start, some children who had attended another Early Start class in the same school, and other children who had not attended any Early Start session.

**Participant Characteristics**

In preschool, 35 children (17 male) were interviewed ($M$ age = 49.31 months, range = 45–55, $SD = 3.42$). English was the first language for 26 children, with the remaining children’s first languages including Bangla, Romanian, Russian, French, Arabic, Urdu, and Moldovan. In school, a full set of data was collected for 28 children (15 male; $M$ age = 59.04 months, range = 54–66, $SD = 3.98$).
Analyses conducted to ascertain potential differences between the children lost to follow-up and the remaining children revealed no significant differences between the groups with regard to age, \( t(33) = 0.11, p > .05 \); behavior problems, \(^1 t(33) = -1.35, p > .05 \); language competency, \(^2 t(33) = 0.80, p > .05 \); gender, \( \chi^2(1, N = 35) = 0.67, p > .05 \); or first language, \( \chi^2(1, N = 35) = 2.24, p > .05 \). The only significant difference found between the groups was for ethnicity, \( \chi^2(1, N = 35) = 5.15, p < .05 \), with a larger number of ethnic minority children leaving the study than would be expected by chance.

In order to complete the data collection in school, it was necessary to get the participating children’s classroom peers to complete the sociometric nomination procedure. The gold standard for classroom participation rates in sociometric research appears to be 70%; however, this rate varies widely across studies (Wu, Hart, Draper, & Olsen, 2001). This group consisted of 39 children (22 male; \( M \) age = 59.14 months, range = 52–70, \( SD = 3.94 \)). There were no significant differences between the study sample and the peer group in terms of age, \( t(66) = -0.18, p > .05 \); or gender, \( \chi^2(1, N = 68) = 0.15, p > .05 \).

**Measures**

**Sociometric interviews.** Peer nominations were used to measure children’s sociometric status and to indicate friendships in preschool and school from the perspective of the child’s peer group. In preschool, McCandless and Marshall’s (1957) picture sociometric technique (using peer photographs) was employed with limited nominations. Limited nominations were gathered for the following categories: “like to play with,” “don’t like to play with,” friendship nominations, and best friend nominations. Children could nominate up to three children for the first three categories. After the children had nominated their three friends, they were asked whether any of the nominees was a best friend.

At school, a procedure of unlimited nominations created by Cillessen, van IJzendoorn, van Lieshout, and Hartup (1992) using an adjusted version of the method used by Asher, Singleton, Tinsley, and Hymel (1979) was employed. Each child was presented with three choice options presented with a happy face (meaning “I like to play with this person”), an unhappy face (“I do not like to play with this person”), and a neutral face (“I do not know” or “in between”). Each participant assigned one of the three choice options to each consenting child in his or her class. Similar to McCandless and Marshall’s (1957) method, nominations were scored for “like to play with” and “don’t like to play with” together with friendship

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\(^1\)Behavior problems were measured using the Child Behaviour Checklist, Teacher Form (Achenbach & Edelbrook, 1983).

\(^2\)Language competency was measured using the British Picture Vocabulary Scale–Revised (L. M. Dunn, Dunn, & Whetton, 1997).
nominations and best friend nominations. The same procedure of limited nominations used at preschool (without photographs) was employed for the friendship and best friendship categories.

Five variables were extracted from each of the sociometric interviews: positive nominations, negative nominations, social preference score, friendship status, and best friend status. Positive nominations refers to the total number of times a child was named as someone that a peer liked to play with; raw scores were subsequently converted into group mean acceptance scores (Ladd & Price, 1987). Negative nominations were defined by the total number of times a child was named for don’t like to play with; raw scores were subsequently converted into group mean acceptance scores (Ladd & Price, 1987). Positive and negative nominations (standardized scores) were subtracted to form the social preference standardized scores used in the analysis. Friendship status refers to the number of reciprocated friendships the child had. Note that a reciprocated friendship denotes a peer dyad in which the two children nominated each other (i.e., mutually) as friends or as someone they liked to play with. Best friend status indicated whether the child had a reciprocated best friend. A reciprocated best friendship is when both children nominated each other as best friends.

RESULTS

Peer Relationships in Preschool and School

The first aim of this research was to describe the patterns of children’s friendships as the children moved from preschool to school. We expected that the majority of children would have friends both in preschool and in school and that a smaller proportion would have best friends. In addition, we predicted that the proportion of children with best friends would increase from preschool to school.

Consistent with these predictions, at the end of preschool, 29 of 35 children (83%) were identified as having at least one reciprocated friend in their class, and 28 reciprocated friendship dyads were identified. Only 4 of the 28 dyads (14%) were cross-sex friendships (i.e., boy–girl friendships). The best friend data showed that 21 of 35 children (60%) were able to nominate one particular mutual friend as their best friend, with 10 of 35 preschoolers (29%) having a mutual best friend (i.e., each child nominated the other as his or her best friend).

School friendship patterns were also consistent with predictions. All children in the study had at least one reciprocated friend, and 46 mutual friendship dyads were identified. Only 6 of the 46 dyads (13%) were cross-sex friendships. Eighteen of the 28 children (64%) nominated a best friend, with 8 of the 28 (29%) having mutual best friends. All children made new friends in their school class; thus, the children with no friends in preschool now had at least one mutual friend in school.
With regard to the stability of early friendships, 5 of 28 preschool friendship dyads (18%) were maintained from preschool to school. However, only 6 of 28 mutual friendships in preschool (21%) had the opportunity to be maintained into the school classroom, as only these six preschool friendship dyads were moved into a school classroom together. Thus, only one of the six friendship dyads from preschool placed into the same school classroom friendships discontinued the friendship. Fifteen of 28 preschool friendship dyads (54%) could not be maintained, as these children were placed into different school classrooms. A further 7 of 28 preschool friendship pairs (25%) were not maintained because of one child in the dyad moving to another school.

Predicting Friendship and Sociometric Status in School

The second aim of the study was to explore longitudinal and concurrent relationships among friendship and social preference variables in preschool and school. It was predicted that preschool peer variables (reciprocated friendship, reciprocated best friendship, and social preference) would predict school friendship status and social preference. In addition, it was predicted that peer variables in school (reciprocated friendship, reciprocated best friendship, and social preference) would predict school friendship status and social preference. Pearson’s $r$ correlations for preschool and school peer relationship variables were calculated first, and these are presented in Table 1. Spearman’s rho analysis was used for the best friend status variable, as the data were nominal. Following this, a series of multiple regression analyses were conducted to ascertain the predictive relationships between the peer variables.

Moderate to strong correlations were found among the concurrent peer variables in preschool (except for having a mutual best friend) and also among all the concurrent peer variables in school. In addition to this, moderate correlations were observed between preschool peer variables and school peer variables.

The correlations between peer variables in preschool and school were further investigated using multiple regression analyses. Specifically, four standard multiple regression analyses were conducted to ascertain whether peer variables in preschool and school predicted social preference and friendship status in school. The results of the regression analyses are exploratory in nature given the small sample size. Preliminary $t$ tests indicated that there were no significant differences between children on the basis of their immigration status (immigrant vs. non-immigrant), on the basis of English as a first language, or on the basis of gender; thus, none of these variables were included in the regression analyses.

Multicollinearity between the predictor variables was checked before regressions were carried out. Tabachnick and Fidell (2001) cautioned researchers to be wary of correlations greater than .7 and suggested excluding them from the analysis. All of the correlations were below the .7 cutoff. Tolerance levels for each of
the variables in the regression analyses were also investigated. Values ranged from .644 to .988, suggesting that multicollinearity was not a problem in the analyses.

The first multiple regression analysis was conducted to predict children’s social preference score in school from their scores on preschool friendship variables (best friend status and friendship status) while controlling for preschool social preference. Variables were entered in two sets, with preschool social preference entered first, followed by reciprocated best friend and number of reciprocated friendships together in a set. Preschool social preference accounted for a significant amount of the school social preference score, \( R^2 = .169, F(1, 23) = 4.66, p < .05 \), indicating that being well liked in preschool predicted being well liked in school. The subsequent addition of the preschool friendship variables did not add significantly to the model, \( R^2 \text{ change} = .135, F(2, 21) = 2.04, p > .05 \). This result suggests that social preference in preschool is a more important predictor than preschool friendships of social preference in school.

The second multiple regression analysis predicted children’s reciprocated friendships in school from their preschool best friendships and social preference scores. Variables were entered in two sets, with children’s reciprocated friendships in preschool entered first, followed by reciprocated best friend and social preference scores together as a set. Reciprocated friendship in preschool did not account for a significant amount of the variance in the school friendship score, \( R^2 = .086, F(1, 23) = 3.25, p > .05 \). When preschool best friendship and social preference scores were added to the model there was a significant increase in the amount of the variance explained, \( R^2 \text{ change} = .255, F(2, 21) = 2.04, p < .05 \), indicating that children who had a best friend and were better liked in preschool were likely to have more friends in school. All together, 30% of the variability in children’s reciprocated friendships in school was predicted by these variables. Having a best friend in pre-

| Variable          | Time 1          | Time 2          |
|-------------------|-----------------|-----------------|
|                   | 1   | 2   | 3   | 4   | 5   | 6   |
| Social preference | —   | .63*** | .11 | .38* | .34* | .15 |
| Friend status     | —   | .09  | .50** | .31* | .17 |
| Best friend       | —   | .01  | .39* | .41* |

* \( p < .05 \), ** \( p < .01 \), *** \( p < .005 \).
school also uniquely added to the variance, \( t(24) = 2.77, p < .05 \); whereas social preference did not, \( t(24) = 0.78, p > .05 \).

See Table 2 for individual variable standardized (\( \beta \)) and unstandardized (\( B \)) coefficients. Overall, the results from the two multiple regression analyses suggest that children with more positive peer relationships in preschool have more friends in school and are more popular.

Two more multiple regression analyses were carried out to look at school peer variables as predictors of school social preference and school friendship status. Again, school peer variables were examined collectively as a model and individually as unique predictors. The model including school friendship status and best friend status significantly predicted social preference in school, \( F(2, 25) = 6.99, p < .01 \), and accounted for 36% (31% adjusted) of variance in social preference. With regard to the individual variables as unique predictors, beta values (see Table 2) revealed that best friend status in school made the strongest unique contribution to school social preference, \( t(27) = 2.42, p < .05 \). This suggests that having a best friendship in school is especially important for the number of friendships a child has in school. Reciprocated friendship made a weaker contribution and was not significant, \( t(27) = 1.27, p > .05 \).

Similarly, social preference and best friend status as a model predicted friendship status in school, \( F(2, 25) = 5.18, p < .05 \). Overall, the model accounted for 29% of the variance (24% adjusted) in friendship status. With regard to the individual variables as unique predictors, beta values (see Table 3) revealed that best friend status in school made the strongest unique contribution to school social preference. However, neither best friend status, \( t(27) = 1.73, p > .05 \); nor social preference, \( t(27) = 1.27, p > .05 \), made significant unique predictions. See Table 3 for individual variable standardized (\( \beta \)) and unstandardized (\( B \)) coefficients.

| Predictor                           | B    | SE B  | \( \beta \) |
|-------------------------------------|------|-------|-------------|
| School social preference            |      |       |             |
| Preschool social preference         | .15  | .24   | .14         |
| Preschool friendship status         | .67  | .33   | .46         |
| Preschool best friend status        | –.04 | .55   | –.01        |
| School friendship status            |      |       |             |
| Preschool social preference         | .10  | .13   | .17         |
| Preschool friendship status         | .16  | .17   | .20         |
| Preschool best friend status        | .80  | .30   | .48*        |

*\( p < .05 \).
DISCUSSION

The present study explored patterns of peer relationships across the preschool to school transition in a group of children from low-income families, many of whom were also immigrants and from ethnic minority backgrounds. The first research aim was to provide a description of changes and continuities in peer relationships (sociometric status, friendship status, and best friend status) across this important transition. High levels of involvement in dyadic relationships and similar patterns of peer relationships were observed in preschool and in school, supporting previous research on the stability and complexity of peer relationships in the early childhood years. Specifically, in preschool the majority of children in this sample had at least one mutual friend, most of the friendship dyads were same-sex dyads, more than half of the children could nominate a mutual friend as a best friend, and a number of children had a reciprocated best friend. By school age, all of the children had at least one mutual friend, nearly all of the friendship pairs were same-sex friendships, again more than half of the children nominated a mutual friend as a best friend, and a proportion of the children had a mutual best friend.

Only a small proportion of children maintained friendships from preschool to school; however, this finding can be attributed to children either moving to different schools or not being placed in the same school classroom as their friend. In fact, when children had the opportunity to continue friendships from preschool to school, they did so, with only one exception. Finally, every child made new friends in his or her school class. Therefore, those children who did not have friends in preschool now had friends in school.

The findings demonstrate that preschoolers have the capacity to develop mutual friendships and, when circumstances allow, can even maintain these friendships across the transition to school. These results not only add support to the existing literature (e.g., J. Dunn, 2004; Howes, 1988; Lindsey, 2002) but also extend it to a disadvantaged sample. Lindsey, for example, also reported that most preschoolers

| Predictor                  | B    | SE B | β    |
|----------------------------|------|------|------|
| School social preference    |      |      |      |
| School friendship status    | 0.33 | 0.26 | 0.23 |
| School best friend status   | 1.37 | 0.57 | 0.45*|
| School friendship status    | 0.18 | 0.14 | 0.26 |
| School social preference    | 0.76 | 0.44 | 0.35 |

*p < .05.
had at least one mutual friend in their classroom and that in some circumstances were able to maintain their friendship over a 2-year period. The increase in the number of children with mutual friends from preschool to school is congruent with developmental theory (Sullivan, 1953) and is similar to the findings of Vaughn et al. (2000), whose sample shared sociodemographic characteristics with the sample in the present study. Ledger et al.’s (2000) ethnographic study drew attention to the barriers children face in the continuation of friendships across the preschool to school transition. Similar barriers were found in the present study, with children losing friends through moves to other schools or to other classrooms.

The second research aim was to examine whether preschool peer relationships and school peer relationships predicted friendship status and social preference in school. A series of correlation analyses indicated a moderate relationship between social preference in preschool and in school. Moderate relationships were also found between friendship status in preschool and friendship status in school. Similarly, a moderate relationship, albeit a stronger one, was found between best friend status in preschool and best friend status in school.

Exploratory multiple regression analyses were used to investigate longitudinal and concurrent relationships between sociometric status, friendship status, and best friend status. These results need to be interpreted with caution given the very small sample size. However, some consistencies in the findings are worth exploring in future research with larger samples of children. One thing to note is that the two regression models predicting peer relationships in school from peer relationships in preschool found consistency in peer relationships over that time. Specifically, social preference in preschool predicted social preference in school, and having a best friend in preschool predicted having more friends in school, even when number of friends in preschool was controlled. These findings are consistent with the findings of Denham and Holt (1993) about the prediction of peer acceptance among preschool children. The regression models also suggest that there may be complex relationships between friendship, best friendship, and peer status in a manner consistent with the findings of other research. For example, Lindsey (2002) found that young children with mutual friends were more socially accepted by the peer group, and Howes (1988) observed that children without mutual friends received lower sociometric ratings than children with friends. Sebanc et al. (2007) found that peer acceptance predicted having a friend and having a best friend. Thus, the findings of the present study (a) support the findings of previous research that friendship and sociometric status are interrelated and (b) extend these findings to a group of children who are socioeconomically disadvantaged.

Another finding of interest from the regression models concerns the role of best friendship. Because this variable has so rarely been studied in samples of preschool children it was of particular interest in the present study. In the four regression models that were tested, best friend status made a significant unique contribution to two models. In a third model, best friend status did not make a significant
unique contribution but was part of the overall significant model. These regression findings need to be considered in conjunction with the fact that the present study also demonstrates that the young participants were able to nominate a mutual friend as a best friend and moreover had a reciprocated best friend from preschool onward. These results support Sebanc et al.’s (2007) contention that best friendships in early childhood are meaningful relationships.

A number of methodological limitations need to be considered when interpreting the findings of the present study. Issues of consent and attrition resulted in a small sample, thus limiting the statistical power of the findings. This particularly affected the regression analyses, and so these should be regarded as exploratory in nature. Another limitation of the present study concerns various issues pertaining to the sociometric interview. Sociometric analyses require a high degree of group participation and can be distorted when only a small proportion of children participate (Crick & Ladd, 1989). In the current study, five classes had participation rates less than 70%. One preschool class had a participation rate of only 50%. However, some recent research has highlighted the possibility that valid sociometric data may be obtained from a small pool of classroom peers (Zakriski et al., 1999).

One final methodological limitation relating to the identification of friendships using sociometric methods is that sociometric assessments are confined to one group—or in this case, one classroom. Children in this study could only nominate children in their classroom. It is possible that children had friends in other classrooms with whom they played in the yard or after school or indeed that they had neighborhood or family peer circles and friends.

Despite these many limitations, one important feature of the present study is the fact that the children who participated were not the typical middle-class, North American children who have participated in so many published studies of friendship and peer relationships. Instead, the children were all from socioeconomically disadvantaged families; 25% of the children were immigrants whose first language was not English; and all were living in Dublin, Ireland. Despite this, the children had mutual friendships, many had best friendships, and there was some evidence of stability in their ability to relate to their peers over time. In other words, the findings of the present study are broadly consistent with those of other studies of peer relationships in early childhood. Vaughn et al. (2000), who explored peer relationships in a large sample of children attending Head Start preschools, highlighted the importance of research findings from less studied groups of children:

Findings such as these are important and potentially useful both because they highlight the breadth of the conceptual models proposed to explain friendship, social competence, and their interrelations and because they highlight young children’s potential for resilience in the face of economic and social adversity. (p. 336)
Despite its limitations, the present study adds to the evidence that friendship, best friendship, and social competence are important and meaningful constructs in very diverse groups of children.

Practical Implications

The findings of the present study suggest that there is continuity in children’s peer relationships across the transition from preschool to school. However, the results also point to the obstacles children face when trying to keep friends in the preschool and early school years, such as children moving to other schools and being moved into different classes at school. Given the literature highlighting the positive association between friendship and school adjustment (e.g., Ladd, Kochenderfer, & Coleman, 1996), it seems logical for parents and early years educators to foster young children’s friendships whenever this is possible. In terms of policy implications for early years education, the findings suggest that early educators, teachers, and school administrators could consider working together to assign reciprocal friends (especially best friends) to the same classroom for their first year of school in order to encourage and value such early complex relationships and help facilitate school adjustment. Moreover, given the sample employed in this study, this practical implication may be especially important for government preschool initiatives tackling social disadvantage (such as Early Start, Head Start, and Sure Start). The facilitation of friendship maintenance across this transition may be particularly beneficial for this sample considering the hypothesized protective influence of positive peer relationships for the well-being, resiliency, and mental and physical health of children living in poverty (Robinson et al., 2005).

REFERENCES

Achenbach, T. M., & Edelbrock, C. S. (1983). Manual for the Child Behavior Checklist and Revised Child Behavior Profile. Burlington: University of Vermont, Department of Psychiatry.
Asher, S. R., Parker, J. G., & Walker, D. L. (1996). Distinguishing friendship from acceptance: Implications for intervention and assessment. In W. Bukowski, A. F. Newcomb, & W. W. Hartup (Eds.), The company they keep (pp. 366–405). New York, NY: Cambridge University Press.
Asher, S. R., Singleton, L. C., Tinsley, B. R., & Hymel, S. (1979). A reliable sociometric measure for preschool children. Developmental Psychology, 15, 443–444.
Bagwell, C. L. (2004). Friendships, peer networks, and antisocial behavior. In J. B. Kupersmidt & K. A. Dodge (Eds.), Children’s peer relations: From development to intervention (pp. 37–58). Washington, DC: American Psychological Association Press.
Berndt, T. J., & Keeffe, K. (1995). Friends’ influence on adolescents’ adjustment to school. Child Development, 66, 1312–1329.
Betts, L. R., & Rotenberg, K. J. (2007). Trustworthiness, friendships and self-control: Factors that contribute to young children’s school adjustment. Infant and Child Development, 16, 491–508.
Bukowski, W. M., Pizzamiglio, M. T., Newcomb, A. F., & Hoza, B. (1996). Popularity as an affordance for friendship: The link between group and dyadic experience. *Social Development, 5*(2), 189–202.

Cillessen, A. H., van IJzendoorn, H. W., van Lieshout, C. F., & Hartup, W. W. (1992). Heterogeneity among peer-rejected boys: Subtypes and stabilities. *Child Development, 63*, 893–905.

Cleary, D. J., Ray, G. E., LoBello, S. G., & Zachar, P. (2002). Children’s perceptions of close peer relationships: Quality, congruence and meta-perceptions. *Child Study Journal, 32*(3), 179–192.

Crick, N. R., & Ladd, G. W. (1989). Nominator attrition: Does it affect the accuracy of children’s sociometric classifications? *Merrill-Palmer Quarterly, 35*, 197–207.

Denham, S. A., & Holt, R. W. (1993). Preschoolers’ likability as cause or consequence of their social behavior. *Developmental Psychology, 29*, 271–275.

Dunn, J. (2004). *Children’s friendships: The beginnings of intimacy*. Malden, MA: Blackwell.

Dunn, L. M., Dunn, L. M., & Whetton, C. (1997). *The British Picture Vocabulary Scale* (2nd ed.). Oxford, England: NFER-NELSON.

Dunsmore, J. C., Noguchi, R. J. P., Garner, P. W., Casey, E. C., & Bhullar, N. (2008). Gender-specific linkages of affective social competence with peer relations in preschool children. *Early Education and Development, 19*, 211–237.

Educational Research Centre. (1998). *Early Start Preschool Programme final evaluation report*. Dublin, Ireland: Educational Research Centre St. Patrick’s College Dublin. Retrieved from http://www.erc.ie/?p=21

Gottman, J. M., & Parkhurst, J. T. (1980). A developmental theory of friendship and acquaintanceship processes. In W. A. Collins (Ed.), *Minnesota Symposia on Child Psychology* (Vol. 13) (pp. 197–252). Hillsdale, NJ: Erlbaum.

Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13.

Howes, C. (1988). Peer interaction of young children. *Monographs of the Society for Research in Child Development, 53*(1), 1–92.

Hymel, S., Wagner, E., & Butler, L. J. (1990). *Reputational bias: View from the peer group*. New York, NY: Cambridge University Press.

Ladd, G. W. (1990). Having friends, keeping friends, making friends, and being liked by peers in the classroom: Predictors of children’s early school adjustment? *Child Development, 61*, 1081–1100.

Ladd, G. W., Kochenderfer, B. J., & Coleman, C. C. (1996). Friendship quality as a predictor of young children’s early school adjustment. *Child Development, 67*, 1103–1118.

Ladd, G. W., & Price, J. M. (1987). Predicting children’s social and school adjustment following the transition from preschool to kindergarten. *Child Development, 58*(Special Issue), 1168–1189.

Ladd, G. W., Price, J. M., & Hart, C. H. (1988). Predicting preschoolers’ peer status from their playground behaviors. *Child Development, 59*, 986–992.

Ledger, E., Smith, A. B., & Rich, P. (2000). Friendships over the transition from early childhood centre to school. *International Journal of Early Years Education, 8*(1), 57–69.

Lindsey, E. W. (2002). Preschool children’s friendship and peer acceptance: Links to social competence. *Child Study Journal, 32*(3), 145–157.

Masters, J. C., & Furman, W. (1981). Popularity, individual friendship selection, and specific peer interaction among children. *Developmental Psychology, 17*, 344–350.

McCandless, B. R., & Marshall, H. R. (1957). A picture sociometric technique for preschool children and its relation to teacher judgments of friendship. *Child Development, 28*, 139–147.

Murphy, S. M., & Faulkner, D. (2006). Gender differences in verbal communication between popular and unpopular children during an interactive task. *Social Development, 15*(1), 82–108.

Olson, S. L., & Brodfeld, P. L. (1991). Assessment of peer rejection and externalizing behavior problems in preschool boys: A short-term longitudinal study. *Journal of Abnormal Child Psychology, 19*, 493–503.
Robinson, L. M., McIntyre, L., & Officer, S. (2005). Welfare babies: Poor children’s experiences informing healthy peer relationships in Canada. *Health Promotion International, 20*, 342–350.

Rubin, K. H., Bukowski, W., & Parker, J. G. (1998). Peer interactions, relationships, and groups. In W. Damon & N. Eisenberg (Eds.), *Handbook of child psychology* (5th ed., Vol. 3, pp. 619–700). Hoboken, NJ: Wiley.

Rubin, K. H., Coplan, R., Chen, X., Buskirk, A. A., & Wojslawowicz, J. C. (2005). Peer relationships in childhood. In M. H. Bornstein & M. E. Lamb (Eds.), *Developmental science: An advanced textbook* (5th ed., pp. 469–512). Mahwah, NJ: Erlbaum.

Rubin, K. H., & Daniels-Beirness, T. (1983). Concurrent and predictive correlates of sociometric status in kindergarten and grade 1 children. *Merrill-Palmer Quarterly, 29*, 337–351.

Sebanc, A. M., Kearns, K. T., Hernandez, M. D., & Galvin, K. B. (2007). Predicting having a best friend in young children: Individual characteristics and friendship features. *Journal of Genetic Psychology, 168*(1), 81–95.

Strohmeier, D., & Spiel, C. (2003). Immigrant children in Austria: Aggressive behavior and friendship patterns in multicultural school classes. *Journal of Applied School Psychology, 19*(2), 99–116.

Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York, NY: Norton.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. Needham, MA: Allyn & Bacon.

Vaughn, B. E., Azria, M. R., Krzysik, L., Caya, L. R., Bost, K. K., Newell, W., & Kazura, K. L. (2000). Friendship and social competence in a sample of preschool children attending Head Start. *Developmental Psychology, 36*, 326–338.

Vaughn, B. E., Colvin, T. N., Azria, M. R., Caya, L., & Krzysik, L. (2001). Dyadic analyses of friendship in a sample of preschool-age children attending Head Start: Correspondence between measures and implications for social competence. *Child Development, 72*, 862–878.

Wood, J. J., Cowan, P. A., & Baker, B. L. (2002). Behavior problems and peer rejection in preschool boys and girls. *Journal of Genetic Psychology, 163*(1), 72–88.

Wu, X., Hart, C. H., Draper, T. W., & Olsen, J. A. (2001). Peer and teacher sociometrics for preschool children: Cross-informant concordance, temporal stability, and reliability. *Merrill-Palmer Quarterly, 47*, 416–443.

Zakriski, A. L., Seifer, R., Sheldrick, R. C., Prinstein, M. J., Dickstein, S., & Sameroff, A. J. (1999). Child-focused versus school-focused sociometrics: A challenge for the applied researcher. *Journal of Applied Developmental Psychology, 20*, 481–499.