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Developmental Pathways to Preference and Popularity in Middle Childhood

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This study examined the associations between children's early life experiences with parents, ego resiliency and ego undercontrol, and peer group social status in a longitudinal, multimethod study from infancy to middle childhood. Participants were 129 children (52% boys) who were followed from 15 months of age to 9 years and their primary caregivers from the Nijmegen Longitudinal Study on Infant and Child Development. The measurements included observations of parent-child interaction, teacher ratings of ego resiliency and ego undercontrol, and peer-reported social status. Quality of parental interactive behavior was associated with ego resiliency and ego undercontrol. Ego resiliency and ego undercontrol were uniquely related to preference and popularity. The findings provide insight into the developmental pathways leading to the two distinct types of social status.

In middle childhood, peers play a vitally important role in children's lives. How well school-aged children function with peers not only influences their concurrent psychosocial adjustment and school achievement, but also their psychosocial adaptation in adolescence and even in adulthood (Bagwell, Newcomb, & Bukowski, 1998; Deater-Deckard, 2001). Therefore, researchers have been interested in examining which early lifetime experiences predict social functioning in middle childhood.

Both theory and extensive empirical evidence suggest that children's experiences within their families contribute to their relationships with peers (e.g., Ladd & Pettit, 2002; Parke, 2004; Ross & Howe, 2009; Rubin, Bukowski, & Bowker, 2015). Prior work in this tradition has focused on multiple aspects of children's social competence, including prosocial behavior and aggression. However, little is known about the developmental roots of social status, even though social status is often the result of being socially competent and successful when interacting with peers (Cillessen, 2011). Therefore, the aim of the current study was to examine the associations between children's early life experiences with parents and their later social status

among peers in a longitudinal, multimethod study from infancy to middle childhood.

Dimensions and Developmental Roots of Social Status

In recent studies, two dimensions of social status have been distinguished: social preference (sometimes called "acceptance" or "likability") and popularity (Cillessen & Marks, 2011). Social preference refers to how well liked and preferred children are by their peers. Children higher in social preference are often more prosocial, cooperative, and possess the ability to read and understand other's perspective and emotions. Popularity refers to how popular peers perceive a child to be. Children who are seen as more popular often possess the ability to be interpersonally effective and to achieve their goals in social situations, sometimes by means of prosocial behavior but sometimes by means of aggressive, dominant, and manipulative behaviors (Mayeux, Houser, & Dyches, 2011). Those who possess these skills behave in ways that provide them with a reputation and make them visible and central in the group, yet they are not necessarily liked. Thus, children who are well liked by their peers are not necessarily popular and vice versa. Preference and

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popularity share certain skills and behavioral characteristics but are also different forms of social status that reflect distinct ways of being socially competent and successful among peers (Cillessen, 2011; Mayeux et al., 2011; Sandstrom & Cillessen, 2006).

Being accepted in the peer group is a desired outcome for children and an important correlate of their general well-being and school adjustment. Well-liked children also do better in the long term in terms of social competence, relationships, mental health, and academic functioning (Rubin et al., 2015). Interestingly, popularity is more of a mixed blessing—although popularity comes with benefits such as friendships, it also comes with enhanced risks for bullying or manipulative behavior and academic problems. In addition, popularity is associated with the development of risk-taking and antisocial behaviors in later adolescence (e.g., drinking, smoking) and other potential health risk behaviors after high school (Cillessen & van den Berg, 2012; Sandstrom & Cillessen, 2006; Schwartz & Hopmeyer Gorman, 2011).

Although the concurrent and longitudinal socioemotional and behavioral profiles of both forms of status are increasingly being documented (see Cillessen, 2011; Mayeux et al., 2011), it remains the question *why* some children become more liked or popular than others. Given the increasing value ascribed to popularity by youngsters (LaFontana & Cillessen, 2010), and the potential for harmful or problematic outcomes, it is important to gain more insight into the developmental trajectories leading to status. Understanding the developmental predictors of later preference and popularity has direct implications for understanding the factors that hinder, as well as promote, children's well-being and their subsequent development in adolescence. Unfortunately, little is known about the developmental roots of social status, especially the (early) childhood antecedents of popularity (Cillessen, 2011).

Part of the developmental roots may lay in children's early experiences with their parents. It is often believed that parent-child relationships lay the foundation for children's social development (Sroufe & Fleeson, 1988), which is supported by extensive empirical evidence (Ladd & Pettit, 2002; Parke, 2004; Ross & Howe, 2009; Rubin et al., 2015). Research has focused on several aspects of parenting associated with children's social development, including parent-child attachment and parenting styles (Ross & Howe, 2009). Several studies have specifically focused on parent-child interactions, showing that socially successful and competent children have parents who use more inductive

reasoning, are more positive and skillful, and are less negative and coercive in interaction with their children (Ladd & Pettit, 2002; Rubin et al., 2015).

With regard to parent-child interaction and social status specifically, studies have shown that more positive (e.g., responsive and positively expressing affection) and less negative (e.g., expressing anger, irritation, and boredom) interactive behaviors of parents are concurrently associated with higher levels of children's social preference among peers in early and middle childhood (Attili, Vermigli, & Roazzi, 2010; Isley, O'Neil, Clatfelter, & Parke, 1999). In addition, McDowell and Parke (2009) found positive concurrent as well as 1-year longitudinal associations between observed parental warmth and responsiveness and peer preference of 10-year-old children. Thus, positive parent-child interactions are associated with children's social preference among peers.

However, all these studies examined parent-child interaction in association with social preference. No studies have examined the associations of parent-child interactions with popularity, even though popularity is a unique dimension of social status distinct from social preference (e.g., Cillessen, 2011; Mayeux et al., 2011). Based on the behavioral characteristics of popular children, one can hypothesize that parent-child interactions are differentially related to popularity and preference. As indicated, popular children behave in prosocial and friendly manners but can also be aggressive, dominant, and manipulative in order to achieve their goals or maintain their status. Thus, popularity may not only be associated with positive parental interactions in infancy but also with negative parental interactions. The goal of the current study was to extend previous work on the role of parental interactive behaviors in the development of social status by examining its associations with preference as well as popularity.

Ego Resiliency and Ego Control

There are several mechanisms through which parent-child interactions can affect children's peer relationships (Parke, 2004). First, when interacting with their children, parents can teach emotion regulation skills such as appropriate emotional expression, emotion understanding, and perspective taking (Brown, Donelan-McCall, & Dunn, 1996; Dunn, 2006). Second, parents teach children communicative skills, such as turn taking and initiating and ending conversations (Ross & Howe, 2009). Third, children learn rules and cultural norms for social interaction and relationships from their

parents (Tamis-LeMonda, Użgiris, & Bornstein, 2002). Thus, parent-child interactions can indirectly affect children's peer relationships through shaping their interpersonal skills (McDowell & Parke, 2009; Ross & Howe, 2009). In the current study, we focused on these indirect pathways and examined whether parental interactive behavior in infancy is associated with children's interpersonal skills in early childhood and subsequently with children's social status in middle childhood.

An important interpersonal skill by which children's social status is enhanced is the ability to flexibly adjust in groups, quickly "reading" group norms, and consequently adjusting behavior to different social norms and situations (Cillessen, 2011). This ability can be conceptualized through the personality attributes of ego control and ego resiliency (Block & Block, 1980) that are also seen as part of children's social competence (Vaughn et al., 2009). Ego control refers to the degree to which children express their impulses, with higher scores on ego undercontrol indicating more problems inhibiting impulses. Ego resiliency concerns the degree to which these impulses are modulated effectively or the capacity to respond flexibly but persistently to challenging social situations (Block & Block, 1980). Ego resilient children master the interpersonal skills necessary to effectively control social situations (Klohn, 1996). Ego control and ego resiliency are distinct constructs, generally independent from each other (Chuang, Lamb, & Hwang, 2006), and have been found to be stable across childhood (Block & Block, 2006; Chuang et al., 2006).

It has been hypothesized that genetic and constitutional as well as environmental influences contribute to individual differences in children's ego resiliency and ego control (Block & Block, 1980, 2006). In terms of environmental factors, studies have shown that positive parenting that is warm, nurturing, and supportive fosters ego resiliency, whereas negative parenting, which is intrusive and controlling, is negatively associated with ego resiliency (Eisenberg, Chang, Ma, & Huang, 2009; Taylor, Eisenberg, Spinrad, & Widaman, 2013). Moreover, it has been shown that parental warmth in early childhood predicts higher levels of ego control over time (Eisenberg et al., 2005). Positive parents are believed to foster ego resiliency and ego control by (a) motivating children to control their emotions and behavior (Eisenberg, Chang, et al., 2009), (b) modeling constructive and regulated ways to manage social interactions (Power, 2004), (c) enhancing children's knowledge of the appropriate expression of emotions in social interactions

(Dunn & Brown, 1991), (d) helping children to manage stress constructively (Power, 2004), and (e) evoking positive emotions that promote creative and flexible thinking (Fredrickson, 2001).

Ego resiliency and ego control can be seen as important skills for gaining and maintaining status in the peer group, as they reflect children's ability to flexibly adjust themselves in groups, quickly "reading" group norms and adjusting their behavior correspondingly (Cillessen, 2011). Indeed, in previous research, effortful control and ego resiliency were positively associated with general social functioning and the ability to make friends (Hofer, Eisenberg, & Reiser, 2010). As being able to flexibly respond to social situations is important for being liked and for being popular, it is hypothesized that ego resiliency positively predicts both preference and popularity. For ego control, however, distinct associations with preference and popularity can be expected. Studies have shown that self-regulation and effortful control are positively related to peer acceptance (Eisenberg, Vaughan, & Hofer, 2009; Gunnar, Sebanc, Tout, Donzella, & van Dulmen, 2003); children who display more control are generally well liked by peers rather than rejected. With regard to popularity, contrasting hypotheses are possible. On the one hand, ego undercontrol may be positively related to popularity. Ego undercontrol is characterized by high impulsivity (Block & Block, 1980), and popularity rather than preference is related to risky and impulsive behavior (e.g., Agan et al., 2015; Mayeux et al., 2011; Schwartz & Hopmeyer Gorman, 2011). On the other hand, popular children often are described as socially savvy and intelligent, aggressively controlling, and successful resource controllers, in order to maintain their high position in the social hierarchy (Adler & Adler, 1998; Lease, Kennedy, & Axelrod, 2002). Such skills require inhibition of impulses and higher levels of control, suggesting that higher levels of ego control would be positively associated with popularity.

Study Goals and Expectations

The aim of this study was to examine the associations between children's early life experiences with parents and their later social status among peers in a longitudinal, multimethod study from infancy to middle childhood. Specifically, we tested a model in which the quality of parental interaction in infancy was related to children's interpersonal skills in early childhood and subsequently to social acceptance and popularity in middle childhood. Positive parent-child interaction was hypothesized to be positively related to later ego resilience and

ego control, whereas negative parent-child interaction was expected to be negatively related to ego control and ego resilience (Eisenberg, Chang, et al., 2009; Eisenberg et al., 2005). Ego resiliency was expected to be positively related to later preference and popularity (Hofer et al., 2010); ego undercontrol was expected to be negatively related to later preference (Eisenberg, Chang, et al., 2009). As research on ego control and popularity is limited and contrasting hypotheses are possible, the examination of this association was exploratory.

Method

Participants

The data for this study came from the first (August 1998–April 1999), third (September 2002–June 2003), and fifth (May 2006–January 2007) wave of the Nijmegen Longitudinal Study (NLS) on infant and child development in the Netherlands (van Bakel & Riksen-Walraven, 2002a). Children and their primary caregiver were recruited via healthcare centers in Nijmegen, a middle-sized city in the Eastern Netherlands. An invitation letter explaining the project was sent to 639 families with 15-month-old babies. Families had to meet two eligibility criteria: sufficient fluency in Dutch and no serious health problems of their child. A total of 174 families agreed to participate, of which 129 families were randomly selected for participation.

At Wave 1, the 129 children (67 boys, 62 girls) were on average 15.1 months old ($SD = 0.25$). The majority of the children were from two-parent families (95.3%) with the mother as primary caregiver (97.7%). The primary caregivers were between 22 and 47 years old ($M = 32.9$ years, $SD = 4.42$), and were representative of the Dutch population in socioeconomic background. At Wave 3, 116 children (62 boys, 54 girls) participated with a mean age of 5.3 years ($SD = 0.10$). At Wave 5, 118 children (63 boys, 55 girls) participated with a mean age of 9.3 years ($SD = 0.20$). For a more detailed description of the NLS sample at each wave see van Bakel and Riksen-Walraven (2002a, 2002b), Smeekens, Riksen-Walraven, and van Bakel (2007), and Peters, Riksen-Walraven, Cillessen, and de Weerth (2011).

At each wave, informed consent for the data collection was obtained first from parents. When parents were willing to participate, teachers were recruited with a letter explaining the project and a follow-up phone call. Teacher consent was obtained following school policies. At Wave 5, parents of the classmates were also asked for their permission

following school policies. Eight children were not allowed to participate.

Procedure and Measures at 15 Months (Wave 1)

At Wave 1, data were collected during a home visit and during a visit of the children and their primary caregiver to the research center. In the home visit, parent-child interaction was video recorded during four instruction tasks lasting 3–4 min each. The parent was asked to have the child unlock a puzzle box, put a puppet together, do a jigsaw puzzle, and “read” a set of picture books. These tasks were designed so that children required at least some support from the parent to complete the task. Parents were told that they could help their child whenever they felt the need to do so. During the laboratory visit, another parent-child interaction episode was video recorded that was almost identical to the interaction episode recorded at home (see van Bakel & Riksen-Walraven, 2002a, 2002b). As two parents could not visit the research center, we have complete data for 127 parents (98.4%).

Quality of Parental Interactive Behavior

The videotaped interaction episodes were rated on five 7-point scales (Erickson, Sroufe, & Egeland, 1985) to assess the quality of parental interactive behavior: (a) supportive presence or the provision of emotional support, (b) respect for the child's autonomy or nonintrusiveness, (c) structure and limit setting, (d) quality of instruction, and (e) hostility. Two observers rated each interaction episode independently. All observers were trained by J. M. A. Riksen-Walraven, who has extensive experience with the scales. Different pairs of observers scored the home and laboratory interaction episodes. Interrater reliability (Pearson correlation coefficient) exceeded .85 for all scales. Cohen's κ was beyond .98 in all cases when considering no difference or a 1-scale point difference between two raters as agreement and a difference of more than 1 scale point as disagreement.

A factor analysis with oblique rotation was performed on the scales for parental interactive behavior at home and at the research center. Two factors with eigenvalues above 1 explained 67% of the variance in parental interaction. After rotation, the first factor was marked by positive loadings of structure and limit setting (home = .82, center = .83), quality of instruction (home = .77, center = .77), and supportive presence (home = .72, center = .68). This factor was therefore labeled *effective guidance*. The

second factor was marked by positive loadings of hostility (home = .77, center = .84) and negative loadings of respect for autonomy (home = -.61, center = -.67). This factor was therefore labeled *negativity*.

As the sample size did not allow the use of latent variables for quality of parental interactive behavior, the two factor scores were used as manifest variables. Higher scores reflected more effective guidance or more negativity.

Procedure and Measures at 5 Years (Wave 3)

At Wave 3, data were collected during one home visit and two school visits. At one school visit, the participants' teachers were given a Q-sort to assess children's ego resiliency and ego control that they could then return by mail. Children were rated by their main classroom teacher. The Q-sort was completed for 108 of the original 129 children (83.7%). There were no significant differences between the children who dropped out of the study ($n = 10$) or had missing data ($n = 11$) and the remaining sample on effective guidance and negativity at 15 months (Wave 1).

Ego Resiliency and Ego Control

Teachers completed the Nijmegen California Child Q-set (van Lieshout & Haselager, 1994) and the Dutch translation of the California Child Q-set (Block & Block, 1980) to measure children's ego resiliency and ego control. Teachers were given 100 cards with descriptions of behavioral, affective, and cognitive characteristics. They were asked to sort the cards in nine categories (ranging from "not at all characteristic" to "extremely characteristic" for this child). Each category had to contain 11 cards, except for the neutral category ("sometimes characteristic, sometimes not"), which had to contain 12 cards. To obtain scores for ego resiliency and ego control, the child's Q-sort profile was correlated with the profiles of a prototypical ego resilient child and a prototypical undercontrolled child (Block & Block, 1980). As they were correlations, these congruence scores ranged from -1 to $+1$. A high positive score then indicated that the child was very similar to the prototypical profile, whereas a high negative score indicated that the child was very dissimilar. Thus, a high positive score for ego resiliency indicated resilience, whereas a high negative score indicated brittleness. For ego control, a high positive score indicated undercontrol, whereas a high negative score indicated overcontrol. Split-half reliability was high for

ego resiliency ($r = .96$) and ego undercontrol ($r = .80$).

Procedure and Measures at 9 Years (Wave 5)

At Wave 5, data were collected in children's classrooms (Grades 3 and 4) during the first of two school visits. The children participating in the longitudinal study, and their classmates were asked to fill out a sociometric and peer assessment questionnaire measuring social status and several behaviors. Popularity and preference were assessed for 116 of the original 129 children (89.9%). There were no significant differences between children who dropped out of the study ($n = 13$) and the remaining sample on any of the study measures.

Social Status

Four items were used to assess social status. Children were asked to nominate classmates they liked most, liked least, were most popular, and were least popular. To answer these questions, each child received a list with the first names of all classmates in alphabetic order, preceded by a code number. Children could nominate the classmates who best fit each question by filling in their code numbers. They could name as many or as few classmates as they wanted for each question. Both same-sex and other-sex nominations were allowed. Children were not allowed to nominate themselves or children outside of their class.

The number of nominations received for each item was counted and standardized within classrooms. A score for preference was computed as the difference between the standardized liked most and liked least scores, which was again standardized within classrooms ($\alpha_M = .71^1$). A score for popularity was computed as the difference between the standardized most popular and least popular scores, again standardized within classrooms ($\alpha_M = .81^1$; Cillessen & Marks, 2011). For both preference and popularity, standardized scores less than -3 or larger than $+3$ were truncated to -3 and $+3$, respectively (Tabachnick & Fidell, 2007).

¹To assess the internal reliability, each sociometric question was converted in a 0-1 matrix for each classroom, with nominees in rows and nominator in columns (Marks et al., 2013). Nominations for "most popular" and "liked most" were coded as 1, nominations for "least popular" and "liked least" were coded as -1 , and nonchoices were coded as 0. Next, the 'pasting' procedure as described by Babcock and colleagues (2014) was used, in which the two matrices for popularity or preference were combined into one matrix. Cronbach's alphas were then calculated within each classroom.

Results

Descriptive Statistics

Means and standard deviations of all study variables are presented in Table 1. Gender differences were tested using *t* tests. Girls scored significantly higher on preference than boys (Cohen’s *d* = .42). No other gender differences were found. Table 1 also shows the correlations between all variables by gender. Fisher’s *r* to *Z* tests were performed to test for gender differences. The correlation between ego undercontrol and popularity, albeit nonsignificant, was stronger for boys than for girls. No other gender differences were found.

Model Building

To test whether parent–child interaction was associated with children’s ego resilience and ego undercontrol, and subsequently with children’s social status, we estimated a sequence of path models in Amos 20 (Arbuckle, 2011). All models were two-group models with girls and boys as separate groups. Maximum likelihood estimation was used to estimate the parameters. To assess the fit of the models, Pearson chi-square (χ^2), the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA) were examined. A nonsignificant chi-square, CFI, and TLI values $\geq .90$, and RMSEA $\leq .08$ indicated reasonable to good model fit (Browne & Cudeck, 1993; Byrne, 2010; Hu & Bentler, 1999).

We took a three-step approach to test the fit of the models and to test for moderation by gender (Byrne, 2010). In the first step, we examined the fit of the hypothesized model (see Figure 1), in which all paths were allowed to vary between boys and girls (unconstrained model). As shown in Table 2,

the hypothesized and unconstrained model had reasonable to good fit.

In the second step, we tested moderation by gender. First, we compared the unconstrained model (all paths can vary by gender) with a fully constrained model (all paths are equal for boys and girls). The fit of the unconstrained model was significantly better than the constrained model (see Table 2), indicating that there were moderating effects of gender. To test which paths specifically varied by gender, we constrained the paths one by one and tested whether constraining a path would significantly impair model fit. When the path from ego undercontrol to popularity was constrained, the fit of the model was significantly worse (see Table 2). This means that the association between ego undercontrol and popularity differed significantly between boys and girls and should not be constrained as equal. Constraining the other paths did not affect model fit, indicating that they did not differ between boys and girls.

In the last step, the fit of the final model was examined (see Figure 1), in which seven of the eight paths were constrained to be equal for boys and girls. The path from ego undercontrol to popularity was allowed to vary between boys and girls. As shown in Table 2, the final model had reasonable to good fit. The final model explained 10.0% of the variance in preference and 16.1% of the variance in popularity for boys, and 17.1% of the variance in preference and 15.8% of the variance in popularity for girls.

Results for the Final Model

As shown in Figure 1, quality of parental interaction at 15 months was associated with children’s ego resilience and ego undercontrol at 5 years. More negativity during the interaction was related

Table 1
Correlations and Descriptive Statistics Separate for Boys (Below Diagonal) and Girls (Above Diagonal)

	1	2	3	4	5	6	<i>N</i>	<i>M</i>	<i>SD</i>
1. Effective guidance		-.51**	.41**	-.26	.21	.30*	61	.12	1.05
2. Negative interaction	-.15		-.43**	.21	-.04	-.25	61	.08	1.00
3. Ego resilience	.08	-.14		-.35*	.43**	.41**	52	.52	.30
4. Ego undercontrol	-.17	.36**	-.04		-.10	-.24 _a	52	-.04	.23
5. Preference	.27*	.04	.29*	-.25		.55**	55	.32 _a	.85
6. Popularity	.17	.21	.19	.23 _a	.51*		55	-.04	.91
<i>N</i>	66	66	56	56	61	58			
<i>M</i>	-.11	-.08	.43	-.00	-.07 _a	-.13			
<i>SD</i>	0.95	1.00	0.25	0.29	1.02	0.94			

Note. Correlations and means with subscript a were significantly different between boys and girls, *p* < .05. Correlations with asterisk were significantly different from 0, **p* < .05. ***p* < .01.

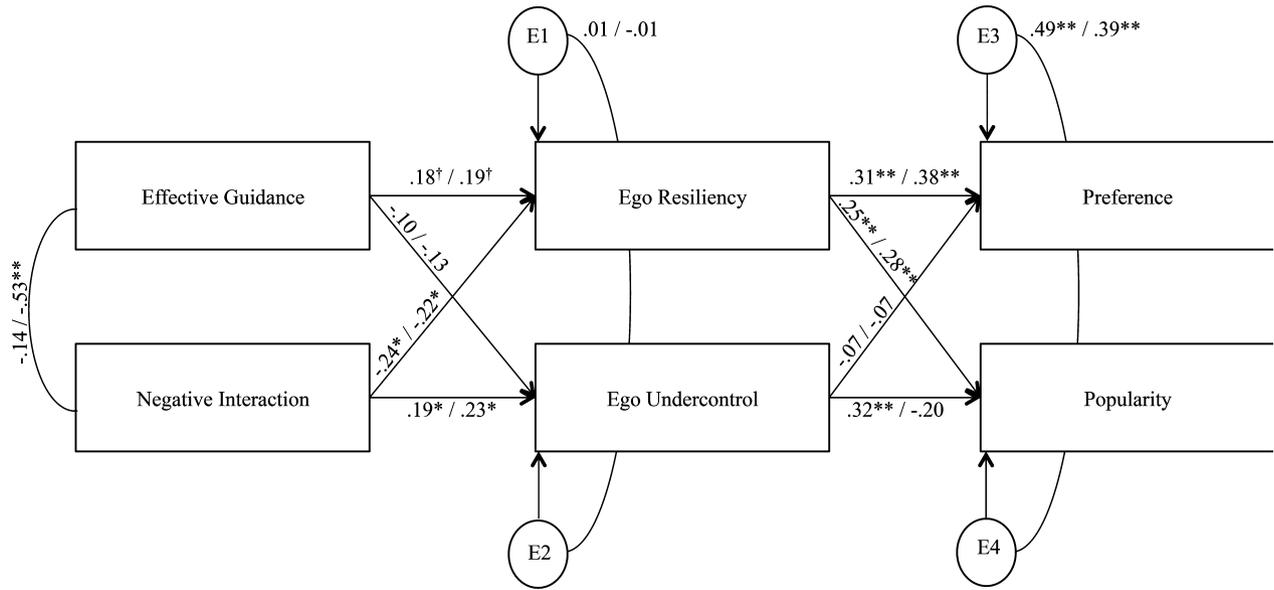


Figure 1. Longitudinal associations between parent–child interactions, ego resiliency and ego undercontrol, and peer status in childhood. Note. Standardized estimates for boys are presented first. $^\dagger p = .05$. $*p < .05$. $**p < .01$.

Table 2
Model Fit Statistics and Chi-Square Difference Test Comparing Fit of Hypothesized Model With Alternate Models

	χ^2 (df)	<i>p</i>	CFI	TLI	RMSEA
Step 1					
Hypothesized model (fully unconstrained)	11.61 (8)	.169	.959	.786	.060
Step 2					
Test for gender differences					
Fully constrained	29.80 (16)	.019	.844	.678	.073
Constrain: Ego undercontrol → Popularity	15.11 (9)	.088	.931	.678	.073
Step 3					
Final model	20.50 (15)	.154	.938	.826	.054

Note. CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation.

to higher levels of ego undercontrol and lower levels of ego resiliency at age 5. A marginally significant association was found between effective guidance and ego resiliency ($p = .05$); children were slightly more resilient when their parents showed more guidance during their interactions. Effective guidance was unrelated to ego undercontrol. The direction and strength of these associations did not differ between boys and girls.

Between ages 5 and 9, higher levels of ego resiliency were associated with both forms of social status. Children who were more resilient at age 5 were more preferred by their peers and more popular at age 9. Ego undercontrol was associated with popularity but not with preference. The association between ego undercontrol and popularity differed

by gender; boys who were more undercontrolled at age 5 were more popular among their peers at age 9. This association was not found for girls.

Discussion

In this study, we examined the associations between children’s early life experiences with parents, their interpersonal skills in the form of ego resiliency and ego undercontrol, and their later social status among peers. An 8-year longitudinal and multimethod approach was used that included home and laboratory observations of parent–child interactions in infancy, teacher-rated ego resiliency and ego undercontrol at age 5, and peer-reported

social status at age 9. Quality of parental interactive behavior during infancy was associated with ego resiliency and undercontrol 4 years later at age 5. More parental negativity was related to higher levels of ego undercontrol and lower levels of ego resiliency. Higher levels of parental structure and support (effective guidance) were positively but marginally associated with ego resiliency. As hypothesized, ego resiliency was positively associated with both preference and popularity 4 years later. Popularity, but not preference, was associated with more ego undercontrol among boys in early childhood. Together, this study presents unique developmental pathways for preference and popularity, explaining up to one fifth of the variance over an 8-year time span from infancy to age 9. Our results highlight the developmental significance of early parent-child interaction in infancy for children's social status among peers 8 years later.

The developmental pathway of preference was characterized by low levels of parental negativity and the capacity to effectively and flexibly respond to challenging social situations (ego resiliency). It has been suggested that positive parenting contributes to positive relationships with peers because parents who interact responsively and positively with their children model appropriate ways of social interactions and constructive ways to manage social situations (Eisenberg, Chang, et al., 2009; Power, 2004). Children in turn can use and further develop these social and regulatory skills while interacting with peers, through which they are likely to become better liked among peers. The current findings are consistent with this notion.

For popularity, two distinct developmental pathways were found. The first was similar to the developmental pathway for preference; low levels of negativity were related to more ego resilience, which in turn was associated with higher levels of popularity. However, for boys, a second pathway was identified. This was characterized by negative parenting and higher levels of ego undercontrol; parental negativity in infancy was related to more ego undercontrol in early childhood, which in turn was associated with higher popularity among boys. Although these pathways may seem to be conflicting at first sight, they are consistent with the dual process model (Cillessen, 2011) and the mixed behavioral profiles of popularity (e.g., Mayeux et al., 2011). On the one hand, popular children are described as prosocial, possessing leadership skills, and having high-quality friendships. All these characteristics require children to flexibly respond to social situations, thus being resilient. On the other

hand, popularity also is associated with increased levels of aggression (Mayeux et al., 2011; Schwartz & Hopmeyer Gorman, 2011) and to risky and impulsive behavior especially in adolescence (e.g., Agan et al., 2015; Mayeux et al., 2011; Schwartz & Hopmeyer Gorman, 2011). Although impulsivity or risky behaviors were not assessed directly, ego undercontrol is indicative of poor impulse inhibition. This impulsivity may increase popularity among peers in adolescence (Schwartz & Hopmeyer Gorman, 2011); it may also explain why these children were perceived as more popular in middle childhood. In addition, ego undercontrol may be one of the childhood precursors of the risky behaviors typically seen among popular adolescents.

The question remains why the association between ego undercontrol and popularity was significant for boys but not for girls. One explanation may lay in gender differences in the correlates of popularity. According to the peer socialization model (Rose & Rudolph, 2006), behaviors that are more typical and salient for each gender (such as aggression for boys) will be more strongly related to popularity for that gender. Impulsivity (ego undercontrol) is more typical for boys than girls (Chapple & Johnson, 2007), which might explain why ego undercontrol was related to popularity only for boys.

Still, an interesting paradox remains when trying to explain the association between ego undercontrol and popularity. Based on research one may explain the relationship by impulsivity; ego undercontrol is characterized by high impulsivity (Block & Block, 1980), and popularity is related to more impulsive behaviors (e.g., Agan et al., 2015; Mayeux et al., 2011; Schwartz & Hopmeyer Gorman, 2011). Thus, children who are more undercontrolled may show more unplanned, impulsive behaviors (both positive and negative), which make them more visible and popular in the peer group. At the same time popular children are often described as socially savvy and intelligent, successful resource controllers, and good at self-presentation and behavior management (Adler & Adler, 1998; Lease et al., 2002). These skills would require inhibition of impulses and higher levels of control. The aggressive and risk-taking behavioral characteristics of popularity are then not the result of impulsivity but rather used as a strategic and controlled way to acquire or maintain status. This might be especially true in adolescence, when youngsters are slightly older than our participants, as such strategic and controlled behaviors require sophisticated levels of social cognition and understanding. This hypothesis

can be tested in further research covering a broader age range.

Strengths and Limitations

This study examined how peer social preference and popularity are rooted in early life experiences and interpersonal skills. This study is one of the first longitudinal and multimethod studies showing that children's preference and popularity in middle childhood are differentially related to parent-child interaction in early childhood and to the way children express impulses and control social situations in early childhood. These findings not only contribute to building a developmental theory of social status, they also support the notion that preference and popularity are distinct aspects of social status with unique developmental roots and consequences (Cillessen, 2011).

Although our findings provide insight into how social status is rooted in early life experiences and interpersonal skills, several limitations need to be addressed. First and foremost, the sample size of our core longitudinal study ($n = 129$) constrained the complexity of the models that could be tested. For example, we were not able to include measures of temperament, whereas parenting and temperament may interact in important ways to influence ego resiliency and control. Similarly, there are other parental, individual, and social contextual factors that could not be included, such as family social economic status, children's early interactions with peers, and parental education level. Thus, the current study does not present a complete model of all possible predictors of peer social status. Expanding the developmental model of our study in larger scale longitudinal studies is needed to further enhance our understanding of the developmental roots of social status.

Furthermore, an ideal longitudinal study has all relevant constructs measured at all time points. By doing so, the complex relationships between variables are taken into account, and a more comprehensive model is tested. In the practice of long-term longitudinal research, this is often not possible. In the current data set, for example, ego resiliency and ego undercontrol were not again measured at age 9 and thus could not be controlled for. While we have not pretended to demonstrate causal relationships, these design limitations emphasize that conclusions about the direction of the effects need to be stated with caution. Notwithstanding these limitations, we took one of the first steps in identifying early developmental precursors for children's

preference and popularity, and thereby contributing to expanding developmental theories of social status.

Next, direct associations of parent-child interaction in infancy with social status in childhood were not tested. We examined how children's peer relationships were related indirectly to parental interaction quality. Conceptually, it is difficult to imagine how interactions between parents and children in infancy might directly predict how children are seen by their classmates 8 years later. It is more likely that by modeling appropriate self-regulatory and behavioral skills parents foster the development of self-regulation in their children (Eisenberg, Chang, et al., 2009; Power, 2004), which in turn promotes their social skills and popularity. Still, parents also can directly influence children's peer relationships by arranging informal peer contacts (play dates, sports). Moreover, parental monitoring (awareness and knowledge of children's activities and friendships) remain important predictors of social functioning even in middle to late childhood (Ross & Howe, 2009). Thus, direct parental associations with children's social status cannot be ruled out. Future studies therefore should examine how parents both directly and indirectly influence children's social competence and status throughout childhood and adolescence.

Although significant longitudinal associations between ego resiliency, ego undercontrol, and social status were found, a question remains why these personality attributes affect peers' judgments of social status. As indicated, resilient children may behave in helpful and friendly ways, making them likeable and preferred by peers. In addition, undercontrolled boys may engage in risk-taking behaviors and gain status as a result. However, observed interactions of children's behaviors and interactions with their peers could shed more light on the underlying mechanisms of the link between personality attributes and social status. Future research could examine whether the association between personality and social status is mediated by children's actual behaviors in interaction with peers.

This study examined the developmental precursors of two distinct dimensions of social status in middle childhood. Their association was moderate, indicating some overlap. Preference and popularity become more distinct in adolescence (Cillessen & Mayeux, 2004; van den Berg, Burk, & Cillessen, 2015). Moreover, around age 14, adolescents prioritize popularity over other relational characteristics, such as friendship, personal achievement, and romantic interests (LaFontana & Cillessen, 2010).

This raises the question whether the early childhood precursors are related in a similar way to popularity in adolescence as they are in middle childhood. A further question is whether the associations of ego resiliency and ego undercontrol become more pronounced when popularity and preference are more distinct from each other. Thus, further prospective longitudinal research is needed to examine the longer term development of preference and popularity as distinct forms of social status in adolescence.

Most primary caregivers in this study were mothers and differences between mother-child and father-child interactions could not be tested. However, numerous studies have found differences between fathers and mothers in amount of time spend with their children, involvement in children's daily lives and concerns, and in children's comfort to talk with them (e.g., Williams & Kelly, 2005). These studies have shown that children more often talk to fathers for practical information and help but seek emotional support or guidance from mothers (Crockett, Brown, Russel, & Shen, 2007). Moreover, relationships with mothers have shown to be more emotionally intense as children also argue more with mothers and perceive them as more controlling than fathers (Larson & Richards, 1994; Shek, 2008). Finally, several studies have found different links between father-child and mother-child interactions with children's social functioning (Attili et al., 2010; Pettit, Brown, Mize, & Lindsey, 1997). Thus, social status may also be differentially predicted by father-child interactions than by mother-child interactions. Future studies measuring child interactions with both parents are therefore recommended.

As research on developmental trajectories of social status is limited (Cillessen, 2011) and most research on children's peer relationships is conducted in Western cultures (Chen, Chung, & Hsiao, 2009), cross-cultural research is valuable. According to contextual-developmental perspectives, cultural norms and values affect the frequency and significance of social behaviors as well as the structural and functional features of friendships, social status, and peer groups (Chen & French, 2008; Chen et al., 2009). With regard to the determinants of popularity and acceptance, studies have found differences as well as similarities between Western and non-Western societies or between societies with collectivistic versus individualistic orientations (French, Niu, & Purwono, 2015; Li, Xie, & Shi, 2012; Schwartz et al., 2010). Still, most cross-cultural research has addressed the concurrent predictors of

social status. Cross-cultural research on the developmental precursors and pathways of social status will be innovative and unique.

Conclusion

Together, the findings of this study suggest that children's early life experiences with parents are related to their interpersonal skills in middle childhood and subsequently to their social status among peers in late childhood. Both theory and extensive empirical evidence already have shown that children's family experiences contribute to multiple aspects of social competence, yet little was known of the developmental pathways of popularity and preferences as distinct types of status. Our study is one of the first longitudinal and multimethod studies showing that children's preference and popularity in middle childhood are differentially related to parent-child interaction in early childhood and to the way children express impulses and control social situations in early childhood. Given the limitations in sample size and comprehensiveness of the model, more longitudinal studies are needed to replicate and extend these results. This will further enhance our understanding of the early life predictors of social status, which is critical for developmental theories of social functioning in the peer group.

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