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A Chance to Be Kinder? Peer Status Profiles and Changes in Prosocial and Aggressive Behavior in Adolescence

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Cover Page Footnote

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The well-known associations of peer status (acceptance and rejection) with prosocial and aggressive behaviors have mostly relied on peer status measures assessed at a single time point. This study adopted a person-oriented approach to examine longitudinal links between stable peer status profiles

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assessed at two time points and prosocial and aggressive behavior using latent profile analysis and latent transition analysis based on three waves of data collected among 324 Chilean adolescents (56.3% male, M_{age} = 12.31, SD = 0.58). First, latent profile analysis identified four status profiles: moderately accepted, moderately rejected, controversial, and highly rejected. Second, we examined the 6-month stability of these profiles during the same academic year (seventh grade, Waves 1 and 2) with latent transition analysis. Results showed that the moderately accepted group was highly stable, with an 87% chance of remaining accepted at T2, followed by the highly rejected (78%), controversial (69%), and moderately rejected (49%), who had a 35% probability of moving into the accepted group. Third, we tested how stable status profiles at two time points predicted changes in prosocial and aggressive behavior during the transition from seventh to eighth grade (Wave 3). When the new academic year began, prosocial behavior increased for the moderately rejected group but not for the highly rejected group. Aggressive behavior decreased in the highly rejected and controversial groups. Implications for the role of stable peer status in the social behavior of early adolescents in educational settings are discussed, with particular attention to the transition to a new academic year.

In peer relations research, the key role of peer status in predicting children's adjustment (e.g., Wentzel, 2003) and social behaviors (Coie et al., 1982; Newcomb et al., 1993) has been emphasized for a long time. The use of sociometric nominations of the most-liked (acceptance) and the least-liked (rejection) classmates has become highly prevalent and has shown that high acceptance and low rejection are generally associated with more prosocial behavior and less aggressive behavior in adolescence (Chávez et al., 2022; Di Giunta et al., 2018; Dijkstra & Gest, 2015; Hymel et al., 2002). Following early works on the associations of sociometric peer status with social behaviors (e.g., Coie et al., 1982; Newcomb et al., 1993) that examine status profiles, the majority of studies conducted since then have been mainly variable-oriented studies. This prevents the identification and investigation of some adolescents who might be at high risk for maladjustment (Coie et al., 1982), such as *controversial* youth, who score high on both acceptance and rejection, and *neglected* youth, who receive few nominations of any kind. Furthermore, it is typical to use sociometric data from one assessment point only to predict changes in behavior. In other words, behavioral changes are attributed to baseline peer status. This may lead to erroneous conclusions; peer status might change due to the dynamic nature of peer relationships (Cillessen & Rose, 2005; Newcomb et al., 1993), and therefore, detected changes in adjustment may not be due to baseline peer status but, rather, to changes in peer status that have occurred across time. Thus, a more accurate strategy might be to investigate changes in the behavior of youth who have shown *consistency in their*

peer status, namely, those whose status has remained stable over the course of one academic year.

Using three waves of data, this study took a person-oriented approach to understand the effect of stable peer status profiles on subsequent changes in prosocial and aggressive behaviors among early adolescents (ages ranging from 9 to 15). We aimed to (a) uncover which peer status profiles emerge based on peer acceptance and rejection (assessed via nominations of peers youth liked [or did not like] to hang out with), (b) examine the 6-month stability of peer status profiles during one academic year (seventh grade, T1–T2), and (c) test whether the most stable peer status profiles were predictive of future changes (if any) in prosocial and aggressive behaviors, as students moved from the seventh to the eighth grade (T2–T3).

Sociometric Research and Peer Status Profiles in Adolescence

Sociometric status was originally conceptualized in terms of positive and negative affect reported by peers to quantify the degree to which an adolescent was liked or disliked by them (Coie et al., 1982). In the early seminal work on children's sociometric status (Coie et al., 1982; Newcomb & Bukowski, 1983), cutoff values were used to create status groups based on continuous scores for social impact (liked most plus liked least) and social preference (liked most minus liked least). Since then, five sociometric groups have been identified (for a review, see Newcomb et al., 1993). Sociometrically *popular* youth (high on liked most, low on liked least) were described as cooperative and socially outgoing; the *rejected* (low on liked most, high on liked least) were characterized by high levels of aggression and disruption and low cooperation; the *neglected* (few nominations of either kind) had low visibility in comparison with the other groups; the *controversial* (high on both liked most and liked least) engaged in significantly more antisocial behavior than the other three groups and were perceived as leaders among peers. The remaining group was identified as *average* (average level of liked most and liked least nominations) and was mainly used as a reference category for comparing behavioral characteristics with the other four sociometric groups (Coie et al., 1982; Newcomb et al., 1993).

There has been a lack of research examining longitudinal associations between sociometric peer status profiles and social behaviors (prosocial and aggressive) while clearly distinguishing between acceptance and rejection and without using cutoff values. The present study investigated peer acceptance and peer rejection as two indicators of peer status during adolescence and adopted a latent profile approach to detect "naturally occurring" groups of early adolescents with different peer status.

Peer Status: Associations With Prosocial and Aggressive Behaviors

Both prosocial and aggressive behaviors are known to be related to adolescents' acceptance and rejection in the peer group (Newcomb et al., 1993). While prosocial behaviors refer to voluntary behaviors intended to benefit others (e.g., helping, caring, sharing), aggressive behaviors are intentionally harmful actions that can undermine both individual (Tremblay, 2000) and group functioning (Dodge et al., 2006).

Effects of Peer Status on Social Behaviors: Variable-Oriented Studies

Findings from variable-oriented studies about the prospective effects of peer status—operationalized as a continuous variable—on prosocial and aggressive behaviors have been mixed, partly due to the use of different methods to assess peer status (e.g., composite scores vs. individual items). Indeed, studies have examined the effects of peer acceptance (liked most nominations only), peer rejection (liked least nominations only), or social preference, operationalized as the difference between liked most and liked least nominations. For instance, adolescents scoring higher on peer acceptance in sixth grade were found to exhibit more prosocial behavior 2 years later (Brass & Ryan, 2021). This study also showed that the positive association between peer acceptance and prosociality significantly declined in magnitude between seventh and eighth grade in U.S. students who attended the same school from kindergarten through eighth grade. Similarly, another study using three waves of data collected in a Chinese sample found that being liked significantly increased prosocial responses a year later (Lu et al., 2018). However, this positive prospective association between likeability and prosocial behavior has not been replicated in other contexts. A recent study did not find support for a positive effect of peer acceptance on prosocial behavior 6 months later in a sample of Chilean early adolescents (Chávez et al., 2022). Regarding aggressive behavior, a longitudinal study found peer acceptance to be negatively associated with physical aggression 2 years later, and this negative association increased in magnitude during the transition to middle school (Brass & Ryan, 2021).

Longitudinal studies on peer rejection measured as a continuous variable have shown rejection to be associated with decreases in prosocial behavior over two time points 6 months apart (Chávez et al., 2022) and increases in aggressive behavior one year later (Malamut et al., 2022). Other research has shown that, in addition to being low in acceptance, only youth who perceive themselves as not liked are likely to display aggressive behavior over time (Mayeux & Cillessen, 2008).

Meanwhile, a meta-analysis of 88 experimental studies on peer rejection, mainly operationalized as ostracism rather than peer dislike specifically, has also revealed that experiencing rejection is likely to lead to aggressive and antisocial responses in an attempt to regain control (Gerber & Wheeler, 2009). The authors distinguished four types of experimentally induced rejection experiences, mostly tested in samples of young adults—ostracism (e.g., being ignored and left out), demarcated rejection (e.g., being told about actual rejection), future rejection (e.g., anticipated aloneness and rejection), and reliving rejection (e.g., induced rejection by writing a story about a time they felt rejected)—concluding that aggressive responses to all kinds of rejection appeared to be attempts at gaining control. Another, more recent meta-analysis examining the associations of peer rejection (e.g., social exclusion) with prosocial and aggressive behavior in both adolescent and adult samples concluded that social rejection promotes aggressive behavior and discourages prosocial behavior (Quarmley et al., 2022).

Although experimental research has found support for a negative association between peer rejection and prosocial behavior (Twenge et al., 2007), other literature suggests that peer rejection might also lead to increases in prosocial behavior. Being excluded and rejected from social groups might fuel a desire for interpersonal reconnection (DeWall & Richman, 2011), which, in turn, may encourage the display of prosocial behaviors (Maner et al., 2007). The interpersonal reconnection hypothesis has been supported by an experimental study using a Spanish sample aged 17–51, showing that affiliation motivation mediated the effect of social exclusion on prosocial behavior. This suggests that being rejected increased individuals' motivation to affiliate with others, which led them to engage more in prosocial behavior (Cuadrado et al., 2016). Similarly, six experiments with undergraduate students supported the reconnection hypothesis, showing that social exclusion increased their motivation to connect with other people by making new friends and working together with others (Maner et al., 2007). Although being socially excluded is different from being sociometrically rejected (i.e., being disliked), these experiments suggest that exposure to the negative feelings of others toward oneself might motivate rather than deter prosocial actions.

Regarding social preference, one study found that adolescents' social preference predicted decreases in overt, relational, and reputational aggression over a 17-month interval (Prinstein & Cillessen, 2003). However, it has also been found that the negative association between social preference and aggressive behavior becomes weaker from Grade 5 to Grade 9, particularly for boys (Cillessen & Mayeux, 2004). This suggests that (overt) aggression becomes more accepted in early adolescence, and even well-liked adolescents may engage in aggressive behavior, especially when they are aware of their own acceptance (Malamut et al., 2022).

Effects of Peer Status Profiles on Social Behaviors: Person-Oriented Studies

Coie et al.'s (1982) original work on categories of peer status (i.e., sociometrically popular, rejected, neglected, controversial, and average) and their association with social behaviors showed that sociometrically popular youth were viewed by peers as cooperative and leaders and received low scores in disruptive behavior. Rejected youth showed the opposite trend. Meanwhile, the controversial youth displayed a combination of being disruptive, starting fights, and being leaders, but they were not as cooperative as the sociometrically popular ones.

The associations between status profiles and social behaviors in childhood and adolescence have also been summarized in a meta-analytic review of 41 studies, indicating that each of the five sociometric profiles had different behavioral repertoires (Newcomb et al., 1993). For instance, both the rejected and controversial youth showed higher levels of aggressive behavior than the other groups. Both sociometrically popular and controversial children showed significantly higher sociability, namely, communication skills, having friends, and prosocial behavior, than average children; and the rejected and neglected showed significantly less sociability than the average group (Newcomb et al., 1993). More recent cross-sectional studies found that being sociometrically popular was positively associated with sociability and leadership characteristics and negatively associated with aggression and disruptiveness (Gest et al., 2001) and that the accepted and controversial groups had higher communicative skills compared with the rejected and neglected groups (van der Wilt et al., 2018). In addition, using status measures collected in the sixth grade to predict behaviors in the eighth grade, Wentzel (2003) found that both the rejected and the controversial profiles were more socially irresponsible (e.g., breaking classroom rules) compared with the sociometrically popular, neglected, and average groups and that prosocial behavior decreased among rejected and neglected groups, whereas it increased among the sociometrically popular.

Although empirical evidence has suggested that sociometrically popular youth tend to be more prosocial and less aggressive than others (Newcomb et al., 1993), longitudinal investigations of the effects of status on behaviors using a person-oriented approach are still scarce. Therefore, how specific status profiles affect youth's behavior over time remains unclear. The present study used a person-oriented approach to investigate early adolescents' peer status profiles assessed at two time points (within a school year) and how they related to changes in social behaviors at a third time point (at the beginning of the following school year).

Stability of Peer Status and Implications for Behavior Across Adolescence

Research on the behavioral correlates of peer status has generally assumed peer status to be relatively stable. However, evaluations of the psychometric adequacy of sociometric status measures have been limited and often relied on test-retest reliability to assess the short-term stability (<3 months) of sociometric status. Assessed at longer time intervals (>3 months), the stability of status is weaker, although still moderate to high, with an average correlation of .50. With respect to sociometric status groups, the (sociometrically) popular, average, and rejected profiles are more stable than the controversial or neglected profiles, and the stability of status is lower among younger adolescents as compared with older adolescents (Cillessen et al., 2000). Again, interval length was an important moderator of the stability, with the stability correlation decreasing by .01 to .04 for every month the test-retest interval increased.

In research on associations between peer status and social behaviors, behavioral changes are usually attributed to baseline peer status measured at a single time point. However, any observed changes in behavioral adjustment may be due to changes in peer status that have occurred between the assessment of status and the assessment of behavior. To overcome this limitation, this study first assessed the stability of peer status across two time points. In a second step, it examined the effect of peer status that had been stable for at least 6 months on changes in prosocial and aggressive behavior.

Current Study

The early and highly influential work on sociometric peer status conducted in the 1980s used a person-oriented approach (Coie et al., 1982) and cutoff values to classify status groups assessed at a single time point. Despite more recent attempts to investigate peer status (i.e., perceived popularity and social preference) through a person-centered lens (Lease et al., 2020; van den Berg et al., 2015), the association between peer status and behavioral change has been mostly variable-oriented. Moreover, the arbitrary nature of cutoff scores to create groups has been shown to be a problematic procedure that can lead to bias and misclassification of the individuals whose scores are close to the cutoff (Leon-Perez et al., 2014). Moving back to a person-oriented approach, with a more sophisticated latent profile analysis (LPA), we aimed to identify status groups and replicate the original sociometric status categories in an early adolescent sample. LPA is a multivariate approach that takes into consideration classification uncertainty, which,

in contrast to the use of cutoff scores, avoids the arbitrary placement of cutoff points to determine class membership and provides a modeling context where the error in group formation can be estimated (Nylund-Gibson et al., 2022).

Although many previous studies have assumed that continuous dimensions of peer status are stable during adolescence, high stability is only found in older samples (Jiang & Cillessen, 2005). Using a three-wave longitudinal design in a sample of Chilean late elementary school students, we first aimed to identify profiles of peer status when students attended the seventh grade (T1–T2) based on sociometric peer nominations of acceptance and rejection using LPA (Goal 1). Second, we investigated the stability in these status profiles from T1 to T2, 6 months apart (seventh grade), using a latent transition analysis (LTA; Goal 2). Finally, we examined changes in prosocial and aggressive behavior over the transition to a new academic year from seventh to eighth grade (from T2 to T3) among those with stable peer status profiles (Goal 3; see analysis plan in Figure 1).

Based on prior research and theoretical considerations, and due to the person-oriented approach of this study, the precise number of status profiles could not be specified a priori. However, we aimed to replicate the five sociometric profiles originally found in other studies (Coie et al., 1982; Newcomb et al., 1993; Wentzel, 2003), namely, sociometrically popular (accepted), rejected, controversial, neglected, and average profiles. Second, consistent with findings reported by Cillessen et al. (2000) and van den Berg et al. (2015), we expected the sociometrically popular profile to be the most stable. Third, consistent with previous research on associations between peer status and behavior (Coie et al., 1982; Newcomb et al., 1993), we expected sociometrically popular youth to be concurrently high on prosocial behavior and relatively low on aggression and the rejected youth

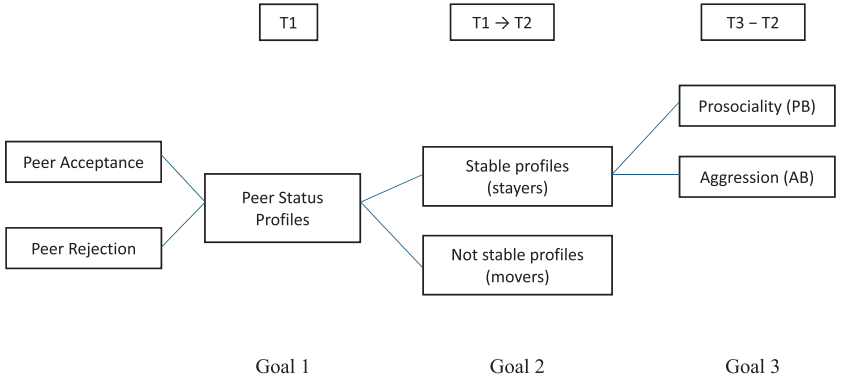

Figure 1. Analysis plan.

to show the opposite pattern. For the controversial profile, we expected them to be high on both prosociality and aggression, while we expected the opposite pattern for the neglected profile. Consistent with the reconnection hypothesis suggesting that socially rejected individuals should be motivated to engage in more positive interactions with others (DeWall & Richman, 2011; Maner et al., 2007) and with the need to belong theory suggesting that desire for interpersonal attachment is a fundamental human need (Baumeister & Leary, 1995), as well as with research suggesting that the beginning of a new academic year offers an opportunity for more positive interactions among students (Chávez et al., 2022), we reasoned that over the transition to a new academic year (T2 to T3), stable controversial, stable rejected, and stable neglected profiles could show increases in prosocial behavior and decreases in aggressive behavior.

Method

Design and Participants

This study used longitudinal data collected as part of a larger research project aimed at promoting prosocial behavior and civic engagement among elementary school students in Santiago, Chile: the ProCiviCo Program (for details, see Luengo Kanacri et al., 2020; Palacios et al., 2019). Participating schools were selected according to socioeconomic heterogeneity criteria to incorporate students from different socioeconomic backgrounds and then were randomly assigned to the intervention (four schools; $n = 336$) and control (four schools; $n = 324$) conditions. Considering that one of our main outcome variables was prosocial behavior, we only analyzed data from the four control schools in which seven classrooms participated to prevent bias in the results due to the confounding effects of the intervention. The data included the three waves of measurement collected in May 2017 (nT1 = 294), October 2017 (nT2 = 282), and May 2018 (nT3 = 275). Classroom size ranged from 36 to 45 students at T1, 36 to 45 at T2, and 33 to 44 at T3. Participation rate per classroom ranged from 95% to 100% at T1, from 93% to 100% at T2, and from 98% to 100% at T3. Attrition rates were 1% at T2 and 5% at T3. Elementary schools in Chile cover Grades 1 to 8. As the academic year started in March in Chile, the first two measurements were collected when students attended the seventh grade (M_{age} = 12.31, SD = 0.58; 56.3% males), and the third (and last) measurement was collected when students attended eighth grade (M_{age} = 13.29, SD = 0.62; 55.1% males). Students' ages ranged from 11 to 15 years at T1. In Chilean elementary schools, the typical age range for seventh grade is 11–13 years old. In our sample, the age range was 11–15, as a few students had to repeat one or 2 years.

Procedure

At the beginning of the study, the parents and/or guardians of all students received a letter from the principal describing the procedures and purposes of the study. High participation was encouraged through building a close relationship between the research team, the school, and the main teachers of each participating classroom (seventh and eighth grade). Additionally, the research team joined formal meetings between the main teacher and parents/guardians to explain the purpose of the research project and to provide clear and direct information about the data collection. Participants received active written parental informed consent and gave their own assent. Social interactions among students occurred mostly within classrooms, and they did not change classes during the school day. The reasons for attrition were, in most cases, related to students' absence on the day of data collection due to illnesses. When this was the case, parents or guardians in charge informed the school of the inability of the student to attend or remain at school. The questionnaires were designed to take approximately 30 min to complete and were administered in each classroom by three to four members of the research team during school hours. The response choices on the questionnaires were explained to students during data collection. For each sociometric question, participants were shown the names of all students in their classroom and were instructed to nominate up to three who best fit the description. Both same- and cross-gender nominations were allowed. Self-nominations were discouraged during testing and discarded during data processing. All instruments and procedures were approved by the ethics committee of the Catholic University of Chile and by the Chilean National Fund for Science and Technological Development (Fondo Nacional de Desarrollo Científico y Tecnológico).

Measures

Sociometric Peer Status

At each wave, participants' peer acceptance and peer rejection were assessed by one question. For peer acceptance, participants were asked, "With whom would you like to hang out at school during recess?" For peer rejection, participants were asked, "With whom would you not like to hang out at school during recess?" For both questions, they could nominate up to three classmates of any gender. Proportion scores of peer acceptance and peer rejection were calculated by dividing for each student the total number of nominations received by the total number of participants (i.e., total number of possible nominators).

Social Behaviors

Prosocial behavior. Peer ratings were used to measure prosocial behavior. At each wave, the participating students were asked to rate the frequency of four representative types of prosocial behavior ("He/she tries to comfort other classmates when they are sad," "He/she shares with others things he/she likes," "He/she tries to understand the point of view of others," "He/she helps others who are in need or have problems") displayed by each of their classmates on a 5-point scale ranging from 1 (*never*) to 5 (*almost always*). A score of prosocial behavior was computed for each individual by averaging the ratings they received from all classmates. The Cronbach's alpha coefficients across items showed high reliability at each time point (T1 α = .96, T2 α = .95, and T3 α = .95).

Aggressive behavior. As for prosocial behavior, at each wave, students rated the frequency of every classmate's engagement in three types of aggressive behavior ("He/she kicks, punches, and pushes other classmates," "He/she insults other classmates," and "He/she speaks badly about other classmates"). Ratings were given on a 5-point scale ranging from 1 (*never*) to 5 (*almost always*). Scores on the three items received from all classmates were averaged to create a total aggression score for each student. Reliability across the three items was high at each time point (T1 α = .92, T2 α = .92, and T3 α = .91).

Analytical Strategy

In the first step, latent profile analysis was conducted to identify peer status profiles based on peer acceptance and rejection (Goal 1). Profile means of the indicator variables were constrained to be equal across T1 and T2 in all analyses to facilitate interpretation. LPA was conducted with $k = 2$ to $k = 6$ profiles based on six within-profile variance-covariance structures, resulting in 5 (number of classes) × 6 (within-profile variance-covariance structures) = 30 latent profile models to identify the optimal number of latent profiles. The within-profile variance-covariance structures represent different assumptions regarding the variances and covariances of the indicators both within and between latent profiles (for details, see Appendix A). As the best within-profile variance-covariance structure is not known a priori, all of the different structures must be tested to identify the best model (Masyn, 2013). Note that the same within-profile variance-covariance structure was specified at T1 and T2.

Based on statistical indicators as well as theoretical considerations, the optimal latent profile model was selected from the 30 models. We used

Bayesian information criterion (BIC), which is recommended for deciding on the number of latent profiles with continuous indicators (Nylund et al., 2007). In addition, the entropy value as a measure of classification accuracy was inspected (entropy value of .70 or higher indicates good accuracy; Reinecke, 2006). Note that the (bootstrap) likelihood ratio test was not available in Mplus given a model with two categorical latent variables. For content-related indicators, we relied on the principle of parsimony, which states that the more parsimonious solution should be selected if the additional class in a k class model represents only a slight variation on a class found in a $k - 1$ class model, along with theoretical considerations and the interpretability of the classes.

In the second step, latent transition analysis (Collins & Lanza, 2010) using the three-step method (Nylund-Gibson et al., 2014) was conducted to assess the stability of the peer status profiles identified in the previous step (Goal 2). More specifically, we tested differences in the stability estimates of the multinomial logistic regression predicting profile membership at T2 between the peer status profiles. In the third step, a three-step mover-stayer LTA (Nylund et al., 2007) was conducted, including a second-order latent class variable with two classes that distinguished adolescents switching peer status profiles (i.e., movers) from adolescents remaining in the same peer status profile across time (i.e., stayers).

Finally, changes in prosocial and aggressive behaviors were examined within the stable peer status profiles, taking the mean difference scores from T2 to T3 (Goal 3), that is, positive values indicate an increase, while negative values indicate a decrease in prosocial/aggressive behavior (see Figure 1 for the full analysis plan). All analyses were conducted with Mplus Version 8.6 (Muthén & Muthén, 1998–2017) using the maximum likelihood estimation method with robust standard errors. Five hundred random sets of starting values with 50 initial-stage iterations and 50 final-stage optimizations were requested. In the case of model nonconvergence, the random set of starting values, initial-stage iterations, and final-stage optimizations were gradually increased until model convergence or the maximum number of starting values (200,000) was reached. To ensure that the estimation process found the global solution, we inspected the results to check whether the highest log-likelihood was replicated.

Results

Missing Data

Attrition analyses were conducted to test, at each time point, for mean differences for the key measures of our study between participating students and students who were absent on the day of data collection (see Appendix B). The data were missing according to the missing at random assumption (MAR), and therefore, we have used the full information maximum

likelihood method, which has been shown to perform well under the MAR assumption (Enders, 2022). This means that the estimates of the LPA model are unbiased even though the missing completely at random assumption is not met. That is because the maximum likelihood estimation yields unbiased estimates under the more general MAR hypothesis (Enders, 2022).

Identification of Peer Status Profiles

To address our first goal, which was to identify peer status profiles based on peer acceptance and rejection, we conducted an LPA, aiming to replicate the original sociometric status categories found in the early work of Coie et al. (1982) and Newcomb et al. (1993). The results of the LPA (Table 1) showed that out of all converged models with the highest log-likelihood replicated, the model with $k = 5$ peer status profiles based on within-profile variance-covariance structure E (Class Varying θ_{mm}, Class Invariant Unrestricted Σ_k) had the lowest BIC value. However, this model comprised a group with only 3% of adolescents ($n = 9$), which was considered too small. Therefore, the model with $k = 4$ peer status profiles, which had the second smallest BIC, was selected. From the four peer status profiles, the first profile ($n = 149$, 46.13% at T1), designated as the *moderately accepted group*, comprised adolescents with relatively high peer acceptance and relatively low peer rejection. The second profile ($n = 82$, 25.19% at T1), the *moderately rejected group*, comprised adolescents with relatively low peer acceptance and relatively high peer rejection. Adolescents in the third profile ($n = 75$, 23.22% at T1), the *controversial group*, had relatively high peer acceptance and peer rejection. The fourth profile ($n = 18$, 5.46% at T1), the *highly rejected group*, represented adolescents with relatively low peer acceptance but very high peer rejection (see Figure 2). One should note that none of the groups had very high levels of acceptance.

The emergence of a moderately accepted, a controversial, and two rejected profiles differed from the original sociometric groups identified by Coie et al. (1982) and Newcomb et al. (1993). Moreover, our analysis failed to detect a group of neglected adolescents (neither accepted nor rejected) or a group of average-status adolescents (scoring around the mean on both acceptance and rejection).

Change and Stability of Peer Status Profiles

To address the second goal of this study, LTA was conducted to assess the extent to which the peer status profiles were (un)stable categories across seventh grade (T1–T2). We identified adolescents who changed their status profile (movers) and those who remained in the same profile (stayers) from T1 to T2. Consistent with our hypothesis and based on descriptive statistics

Table 1. Latent profile analyses results for peer status

Model	# Profiles	#Par.	LL	LL Replicated	BIC	Entropy	Proportions of students in each profile Time 1 / Time 2					
							1	2	3	4	5	6
A: Class Invariant $\theta_{mm'}$ diagonal Σ_k	2	10	–3,996.00	Yes	8,049.81	.976	.96 / .94	.04 / .06				
	3	14	–3,922.21	Yes	7,925.35	.927	.15 / .12	.83 / .84	.02 / .03			
	4	18	–3,877.71	Yes	7,859.47	.926	.02 / .02	.19 / .18	.74 / .74	.05 / .05		
	5	22	–3,831.93	Yes	7,791.03	.946	.20 / .20	.02 / .03	.01 / .01	.73 / .72	.05 / .05	
	6	26	–3,684.84	No	7,647.15	.850	.12 / .42	.06 / .04	.01 / .01	.14 / .17	.00 / .02	.00 / .34
B: Class Varying $\theta_{mm'}$ diagonal Σ_k	2	14	–3,840.58	Yes	7,762.10	.702	.51 / .56	.49 / .44				
	3[a]	—	—	—	—	—	—	—	—			
	4[a]	—	—	—	—	—	—	—	—	—		
	5[a]	—	—	—	—	—	—	—	—	—	—	
	6[a]	—	—	—	—	—	—	—	—	—	—	—
C: Class Invariant $\theta_{mm'}$, Class Invariant Unrestricted Σ_k	2	11	–3,995.99	Yes	8,055.57	.976	.96 / .94	.04 / .06				
	3	15	–3,921.97	Yes	7,930.66	.928	.83 / .85	.15 / .12	.02 / .03			
	4	19	–3,877.71	Yes	7,865.25	.926	.19 / .18	.05 / .05	.74 / .74	.02 / .02		
	5	23	–3,831.93	Yes	7,796.81	.946	.05 / .05	.02 / .03	.73 / .72	.20 / .20	.01 / .01	
	6	27	–3,794.51	Yes	7,745.11	.889	.09 / .14	.64 / .59	.01 / .01	.05 / .04	.02 / .03	.20 / .19

D: Class Invariant $\theta_{mm'}$, Class Varying Unrestricted Σ_k	2	14	−3,995.18	Yes	8,071.29	.976	.96 / .94	.04 / .06						
	3	20	−3,920.84	Yes	7,957.30	.928	.83 / .85	.02 / .03	.15 / .12					
	4	26	−3,873.07	Yes	7,896.43	.925	.19 / .19	.05 / .05	.74 / .74	.02 / .03				
	5	32	−3,824.03	Yes	7,833.04	.865	.13 / .19	.18 / .18	.05 / .05	.63 / .56	.02 / .03			
	6	38	−3,779.78	Yes	7,779.24	.885	.62 / .56	.19 / .19	.02 / .03	.05 / .05	.01 / .01	.12 / .17		
E: Class Varying $\theta_{mm'}$, Class Invariant Unrestricted Σ_k	2	15	−3,840.01	Yes	7,766.74	.703	.51 / .56	.49 / .44						
	3[a]	—	—	—	—	—	—	—	—					
	4	**31**	**−3,747.39**	**Yes**	**7,673.99**	**.700**	**.46 / .50**	**.25 / .17**	**.23 / .24**	**.05 / .24**				
	5	39	−3,669.66	Yes	7,564.77	.790	.55 / .48	.05 / .07	.12 / .23	.03 / .05	.25 / .16			
	6[a]	—	—	—	—	—	—	—	—	—	—	—		
F: Class Varying $\theta_{mm'}$, Varying Unrestricted Σ_k	2	18	−3,835.07	Yes	7,774.19	.706	.49 / .44	.51 / .56						
	3	28	−3,738.05	No	7,637.96	.709	.12 / .10	.43 / .37	.45 / .53					
	4	38	−3,685.69	No	7,591.04	.747	.12 / .26	.55 / .50	.09 / .12	.23 / .13				
	5	48	−3,658.14	No	7,593.76	.763	.04 / .02	.11 / .23	.23 / .17	.08 / .09	.54 / .49			
	6	58	−3,638.92	No	7,613.12	.808	.11 / .14	.06 / .07	.12 / .04	.03 / .05	.16 / .21	.52 / .49		

Note. n = 324 students. #Par. = number of estimated parameters; LL = log-likelihood; LL Replicated = log-likelihood replicated?; BIC = Bayesian information criterion. The selected profile solution is displayed in boldface.

[a] = Model did not converge even after increasing the number of start values to 200,000 with 1,000 initial-stage iterations and 20,000 final-stage optimizations.

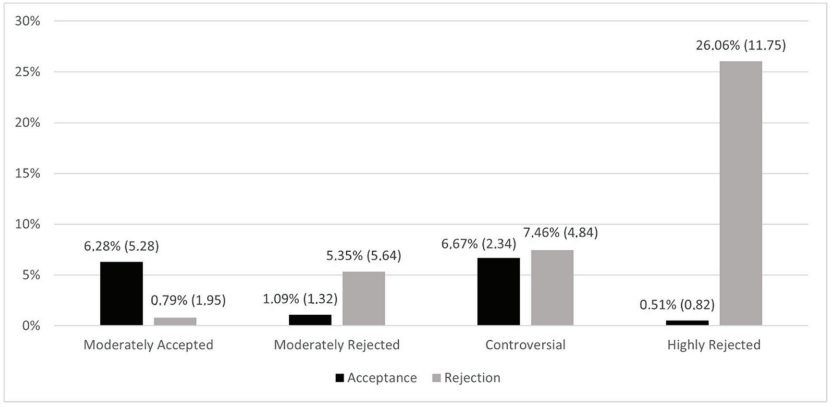

Figure 2. Peer status profiles at T1 based on acceptance and rejection.

Note. Proportion score means and standard deviations of each peer status profile are displayed in percentages.

Table 2. Latent transition probabilities

	Moderately accepted	Moderately rejected	Controversial	Highly rejected
Moderately accepted	.868	.000	.132	.000
Moderately rejected	.358	.494	.082	.065
Controversial	.025	.220	.690	.064
Highly rejected	.012	.192	.020	.777

Note. Diagonal indicates a student's average probability of being classified into each latent class.

only, adolescents in the moderately accepted group at T1 appeared to have the highest probability of remaining in the same peer status profile at T2 (p = .868), followed by the highly rejected group (p = .777), the controversial group (p = .690), and the moderately rejected group (p = .494; see Table 2). However, the results of a t-test showed that none of the differences in the stability estimates were statistically significant. Results of the LTA showed that 175 adolescents (54.02%) changed their peer status profile between the two time points, whereas 149 adolescents (45.98%) stayed in the same profile.

Stable Peer Status Profiles and Changes in Social Behaviors

To achieve the third goal of this study, differences in prosocial and aggressive behaviors right after the transition to a new academic year from seventh to eighth grade (T2–T3) were estimated among stayers, that is, youth

who had consistently belonged to the same status profile during Grade 7. Considering that four status profiles emerged from the analysis (instead of five), and two of them were rejected groups, the concurrent associations between peer status profiles and social behaviors were only partially consistent with our expectations.

Associations and Changes in Prosocial Behavior

Mean scores of prosocial behaviors at T2 and T3 among stayers are displayed in Table 3 (for a graphic presentation, see Figure 3). When comparing the means of each group at T3, stable members of the controversial and moderately accepted groups scored higher in prosocial behavior than their peers in the moderately rejected and highly rejected groups. Moreover, statistically significant differences were found across all groups, with one exception; adolescents with an accepted profile did

Table 3. Changes in prosocial and aggressive behaviors at Time 2 and 3 for stable profiles (n = 149)

	Time 2		Time 3		Mean difference Time 3 – Time 2		
Stable profiles	Mean	*SD*	Mean	*SD*	Mean	SE	*p*
Prosocial Behavior							
Moderately accepted	3.62	0.32	3.61	0.34	–0.01	0.04	.656
Moderately rejected	2.89	0.21	3.02	0.24	**0.13**	**0.06**	**.044**
Controversial	3.40	0.26	3.43	0.21	0.03	0.05	.459
Highly rejected	2.24	0.44	2.22	0.25	–0.02	0.11	.845
Whole sample	3.12	0.51	3.20	0.48	**0.08**	**0.27**	**.000**
Aggressive Behavior							
Moderately accepted	1.47	0.13	1.45	0.13	–0.02	0.02	.152
Moderately rejected	2.22	0.22	2.11	0.22	–0.11	0.09	.223
Controversial	2.43	0.28	2.30	0.23	**–0.13**	**0.05**	**.007**
Highly rejected	3.58	0.13	3.36	0.06	**–0.22**	**0.07**	**.002**
Whole sample	2.14	0.57	2.02	0.51	**–0.12**	**0.26**	**.000**

Note. Significant differences are displayed in boldface.

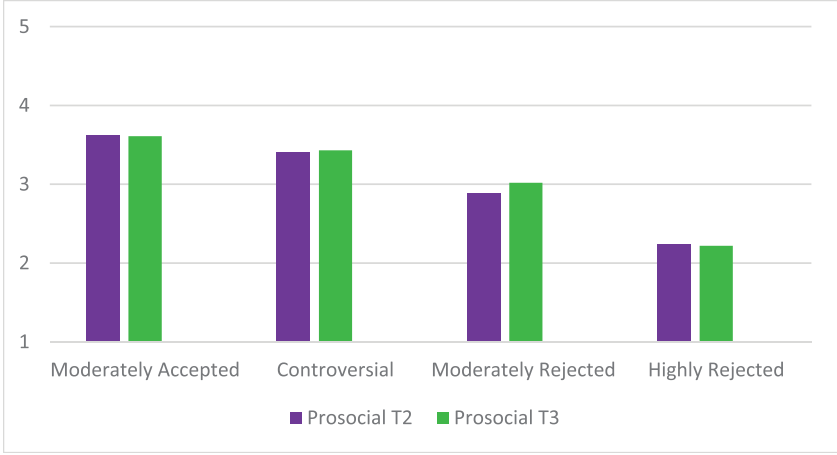

Figure 3. Changes in prosocial behavior between T2 and T3 across peer status profiles.

not significantly differ in prosocial behavior from adolescents with a controversial profile (ΔM = –0.17, p = .055; for details, see Appendix C). Regarding the changes from one time point to the next, the results showed that when students moved to the eighth grade, only those with a stable moderately rejected profile significantly increased in prosocial behavior (ΔM = 0.13, p = .044).

Associations and Changes in Aggressive Behavior

Mean scores of aggressive behavior at T2 and T3 for the stayers in each profile are displayed in Table 3 (for a graphic presentation, see Figure 4). At T3, the moderately accepted group had the lowest score for aggressive behavior, whereas the highly rejected group showed the highest mean score. When comparing mean levels of aggressive behavior across the four profiles, results showed that the only nonsignificant difference was between the moderately rejected and controversial groups (ΔM = 0.19, p = .059; see Appendix D).

Regarding the mean differences from one period to the next, stayers in the controversial group showed a statistically significant decrease in their levels of aggression from T2 to T3 (ΔM = –0.13, p = .007), as did those with a stable highly rejected profile (ΔM = –0.22, p = .002). No significant mean differences in aggressive behavior were found for the stayers in the moderately rejected and moderately accepted groups.

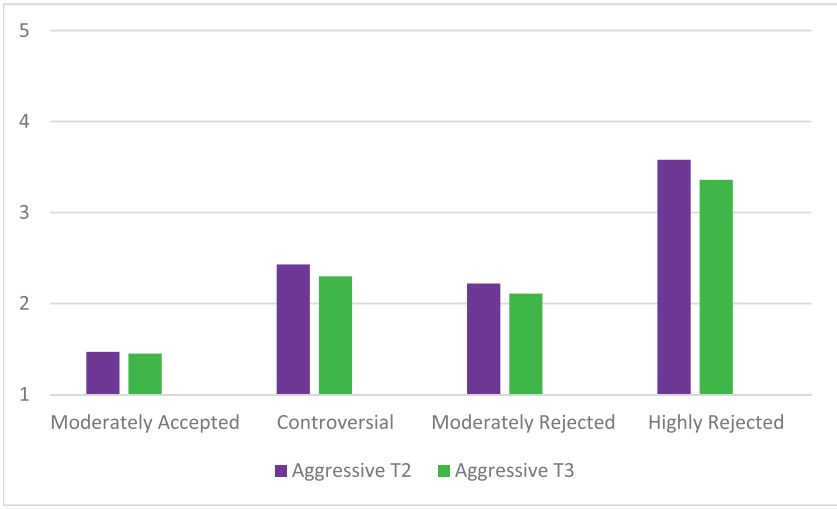

Figure 4. Changes in aggressive behavior between T2 and T3 across peer status profiles.

Discussion

Most research on the associations between sociometric peer status and social behaviors has been variable-oriented, limiting our knowledge of youth with high levels of both acceptance and rejection (i.e., controversial) who might be particularly at risk for future behavioral problems. When a person-oriented approach has been used, the analysis has typically relied on cutoff values to create status groups. This is an arbitrary procedure that does not take into consideration the estimation error, often leading to bias and misclassification of individuals (Nylund-Gibson et al., 2022). Furthermore, sociometric peer status was often assumed to be stable across adolescence and measured at only one time point, despite empirical evidence showing that sociometric status is not always stable, especially in early adolescence (Jiang & Cillessen, 2005).

Building upon previous research and using a three-wave longitudinal design, this study first identified peer status profiles based on peer acceptance and rejection using LPA instead of cutoff scores (Goal 1), to later examine the 6-month stability of these profiles during the seventh grade (from T1 to T2) with LTA (Goal 2). In addition, given that changes in behavior should be more likely to be influenced by baseline sociometric status when this baseline status has been stable for some time, we focused on adolescents who kept the same status profile to assess changes in prosocial and aggressive behaviors during the transition to a new academic year (Goal 3).

Four Status Profiles and Their Associations With Prosocial and Aggressive Behavior

Four peer status profiles were identified via LPA: moderately accepted, moderately rejected, controversial, and highly rejected. The emergence of two rejected profiles, a moderately rejected group, and a highly rejected group extends the original five-profile classification proposed by Coie et al. (1982) and Newcomb et al. (1993). Our analyses failed to detect a group of neglected adolescents (who are neither accepted nor rejected) or a group of average-status adolescents (scoring around the mean on both acceptance and rejection). However, the moderately accepted group represented a group of adolescents with average acceptance levels rather than a group at the extremes, and only the highly rejected group had a clear rejected profile. That is, the moderately accepted group represented students with an average acceptance level and below-average rejection scores, whereas the moderately rejected profile represented a group of adolescents with an average rejection level and below-average accepted scores. More studies investigating latent profiles rather than resorting to cutoff values are needed, especially in early adolescence, to see whether the current classification is replicated.

To examine the 6-month stability of peer status profiles within the same academic year, LTA was conducted and showed that high stability was found in the moderately accepted profile, with a high probability of remaining accepted over a 6-month interval (seventh grade from T1 to T2). The second most stable profile was the highly rejected profile, followed by the controversial and moderately rejected groups. Contrary to our expectations, none of the differences in stability across profiles was significant, probably due to the relatively small sample size. Although there was an overall tendency for adolescents to retain the same profile over time, a non-negligible proportion of adolescents, especially in the moderately rejected group, changed their profile membership to the accepted group (35.8%). Thus, our findings suggest that, even within the same school year, peer status is not highly stable, particularly for young adolescents with moderate rejection levels.

Considering that two rejected groups emerged from the analysis, the concurrent associations between peer status profiles and social behaviors were only partially consistent with our expectations. Behavioral peer ratings showed that the moderately accepted youth were the most prosocial and least aggressive, while the highly rejected were the most aggressive and least prosocial of all profiles. Although both the moderately accepted and the controversial sociometric profiles showed higher levels of prosocial behavior at T2 and T3 than the two rejected profiles,

the controversial group also showed higher levels of aggressive behavior than the accepted profile.

Assuming that a more accurate estimate of the effect of peer status on social behavior can be obtained when focusing on youth with a stable status, we assessed changes in prosocial and aggressive behaviors from T2 to T3 within the stable groups (Goal 3). The moderately rejected profile was the only group that significantly increased in prosocial behavior during the transition to a new academic year, whereas the controversial and highly rejected were the only groups that significantly decreased in aggressive behavior from T2 to T3. The increase in prosocial behavior in the moderately rejected group is consistent with prior studies suggesting that earlier rejection motivates reconnection through the display of prosocial behavior (e.g., DeWall & Richman, 2011), and the transition to a new academic year might be ideal to set up such a goal and strive for peer acceptance by increasing prosocial actions (Chávez et al., 2022). Along the same line, and despite their high levels of aggression, highly rejected and controversial adolescents might also see the beginning of the new academic year as an opportunity to behave less aggressively toward others.

A Chance to Be Kinder? Moderately Rejected Versus Highly Rejected Youth

It is well established in the literature that peer rejection is a distressing experience during adolescence that can affect both school and life adjustment (Buhs & Ladd, 2001) and that it is positively associated with different types of aggressive behavior (Cillessen & Mayeux, 2004; Dodge et al., 2003; Malamut et al., 2022). The present study identified two rejected profiles, showing that not all rejected adolescents are rejected to the same extent, and this has implications for their behavior at school. The moderately rejected adolescents were significantly different from the highly rejected adolescents with respect to both prosocial and aggressive behaviors. They were more prosocial and not particularly aggressive in eighth grade compared with the highly rejected profile. The beginning of the new academic year seems to have been a favorable time for the moderately rejected adolescents to act more kindly toward peers. Meanwhile, for adolescents in the highly rejected profile, the transition appears to have been an opportunity to reduce their aggressive behavior.

Consistent with the idea that prosocial behavior can drive peer acceptance (Chávez et al., 2022), the finding that moderately rejected peers can become more prosocial at the beginning of a new academic year is in line with some prior studies suggesting that at least some rejected youth have

a strong desire to reconnect with peers and belong to the group (Cuadrado et al., 2016) and may engage in prosocial behavior as a means of making new friends (Maner et al., 2007). Thus, the opportunity that the transition to a new academic year offers for reconnecting with peers and building more positive social interactions with them seems to present the most favorable conditions for acting prosocially and getting along with classmates. However, this study also suggests that only youth with a moderate level of rejection are able to increase their prosocial behavior toward others, rather than those whose level of rejection is particularly high. It is possible that highly rejected youth have fewer friends and, therefore, fewer opportunities to behave prosocially toward other peers. Though having the lowest level of prosocial behavior and the highest levels of aggressive behavior at each time point, the highly rejected adolescents were nonetheless able to reduce their aggressiveness during the transition to the eighth grade, suggesting that even at a high level of rejection, they might have a desire to improve their relations with peers. Taken together, the present findings highlight the importance of recognizing that the experience of peer rejection might have different consequences for social behaviors depending on its intensity.

The higher prevalence in the literature of studies using a variable-oriented approach might be a reason why a positive association between peer rejection and aggressive behavior has been found so consistently, hiding potential differences between highly and moderately rejected adolescents. As this study showed, when a person-oriented approach is taken (and without arbitrary cutoffs to select profiles), different profiles of rejected adolescents may emerge, suggesting that moderately rejected and highly rejected youth have different experiences and behaviors with their peers at school. Thus, studies using a person-oriented approach are strongly encouraged to deepen our understanding of the associations between rejection and both prosocial and aggressive responses. Nevertheless, it is important to note that our sociometric measures for peer acceptance and peer rejection as the main items for identifying peer status profiles were "like to hang out with during school recess" and "not like to hang out with during school recess," respectively. Therefore, they were not the exact same sociometric items used in the early studies of Coie et al. (1982) and Newcomb et al. (1993), which directly asked about who children liked the most and who they liked the least. These differences in the measures used could also have affected the findings of our study.

Strengths, Limitations, and Future Directions

One of the major strengths of this study is its three-wave longitudinal design and the identification of peer status profiles based on both peer acceptance and peer rejection, which was important considering the low

correlation between these two status dimensions. Another strength is the use of peer ratings to assess behavior. Self-reports can be strongly biased by socially desirable responding, which can lead to an overestimation of prosocial behavior and an underestimation of aggressive behavior. Thus, examining social behaviors based on peer reports can provide more reliable behavior estimates. In addition, peer ratings capture the frequency of the behavior, not only the strength of reputation.

This study also brought new insights into the association between peer status profiles and social behaviors using a novel methodological approach (LPA and LTA). First, since LPA accounts for estimation error when identifying status profiles, we believe that this procedure helped us obtain a classification of students while avoiding arbitrary placement to a class membership based on a cutoff point (Leon-Perez et al., 2014; Nylund-Gibson et al., 2022). Consequently, the four profiles found in this study emerged from a less biased person-oriented procedure, which might also explain why some sociometric profiles were not found (e.g., neglected, average). Second, measuring the stability of peer status over a 6-month interval was also a strength of this study to the extent that it allowed us to distinguish students with consistency in their status (stayers) versus the ones whose status had changed during one academic year (T1–T2). This distinction is important because assuming that peer status is a stable attribute in adolescence might lead to biased conclusions with regard to the effect of rejection on behavior. We encourage future studies on the effects of peer status on behavior to also consider stable categories of peer status. Our study did not find significant differences in the stability of status across status profiles, which might be related to the small sample size used, an important factor to consider in replication studies using a similar approach. Likewise, it would be valuable to further investigate adolescents whose status profile changed (movers). It is important to detect factors explaining changes in their status and the profiles into which they moved, as well as the implications of these changes for their prosocial and aggressive behaviors.

As noted above, this study used a measure of rejection obtained by peer nominations rather than self-report, which might have important implications for future research. As other studies have shown, adolescents are more likely to be aggressive when they are aware of being rejected or believe that they are rejected (e.g., Malamut et al., 2022). Therefore, the potential moderating role of self-perceived status (or awareness of one's status) should be considered in future studies that examine associations between peer rejection and social behaviors, with particular attention to aggressive behavior. Likewise, protective factors such as peer support or quality of friendship at the individual level and teacher support and school climate at the classroom level should also be considered as factors potentially moderating the link between rejection and social behaviors.

Finally, this study has some limitations that should be considered. First, the number of nominations for the peer status measures was limited to three classmates, which prevented the selection of other peers who might also have fit the descriptions for acceptance and rejection. This is an important limitation, especially since the class sizes were relatively large (n = 36 to 45): some participants might have obtained higher acceptance or rejection scores if unlimited nominations had been allowed, which could have affected their status profile membership. Second, we assume that affiliation motivation is a possible explanation for why moderately rejected adolescents increased in prosocial behavior, but we did not assess motivations and test their effects. Third, we only used one wave of data after the transition to a new academic year to assess changes in prosocial and aggressive behaviors. The wave was collected at the beginning of the new school year, and therefore, we do not know whether the observed changes in behaviors were sustained over the whole academic year. Fourth, given the person-oriented approach, the small sample size could be considered a limitation, since some of the profiles identified were comprised of a relatively small number of students. Last, given the complexity of the models estimated, it was not possible to control for sociodemographic variables such as socioeconomic status or gender.

In sum, peer status based on acceptance and rejection has important implications for the development of both prosocial and aggressive behaviors in adolescence. Peer relationships are embedded in classroom dynamics that may provide opportunities to be kinder to others during the transition to a new academic year. In order to promote positive peer interactions for adolescents with low peer status, it is important to provide them with more opportunities to share and interact with others (for instance, in extracurricular activities) that contribute to their integration through displaying more kind and prosocial actions and/or reducing their aggressiveness, setting up a positive reinforcing cycle of acceptance and favorable peer interactions more generally.

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Appendix A

Table A1. Within-profile variance-covariance structures

Model	Σ_k
A: Profile Invariant θ_{mm}, diagonal Σ_k	$\begin{bmatrix} \theta_{11} & & & \\ 0 & \theta_{22} & & \\ 0 & 0 & \ddots & \\ 0 & 0 & 0 & \theta_{MM} \end{bmatrix}$
B: Profile Varying θ_{mm}, diagonal Σ_k	$\begin{bmatrix} \theta_{11k} & & & \\ 0 & \theta_{22k} & & \\ \vdots & \vdots & \ddots & \\ 0 & 0 & \cdots & \theta_{MMk} \end{bmatrix}, \forall k \in \begin{pmatrix} 1,\ldots,K \end{pmatrix}$
C: Profile Invariant θ_{mm}, Class Invariant Unrestricted Σ_k	$\begin{bmatrix} \theta_{11} & & & \\ \theta_{21} & \theta_{22} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1} & \theta_{M2} & \cdots & \theta_{MM} \end{bmatrix}$
D: Profile Invariant θ_{mm}, Class Varying Unrestricted Σ_k	$\begin{bmatrix} \theta_{11} & & & \\ \theta_{21k} & \theta_{22} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1k} & \theta_{M2k} & \cdots & \theta_{MM} \end{bmatrix}, \forall k \in \begin{pmatrix} 1,\ldots,K \end{pmatrix}$
E: Profile Varying θ_{mm}, Class Invariant Unrestricted Σ_k	$\begin{bmatrix} \theta_{11k} & & & \\ \theta_{21} & \theta_{22k} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1} & \theta_{M2} & \cdots & \theta_{MMk} \end{bmatrix}, \forall k \in \begin{pmatrix} 1,\ldots,K \end{pmatrix}$
F: Profile Varying θ_{mm}, Class Varying Unrestricted Σ_k	$\begin{bmatrix} \theta_{11k} & & & \\ \theta_{21k} & \theta_{22k} & & \\ \vdots & \vdots & \ddots & \\ \theta_{M1k} & \theta_{M2k} & \cdots & \theta_{MMk} \end{bmatrix}, \forall k \in \begin{pmatrix} 1,\ldots,K \end{pmatrix}$

Note. θ_{mmk} is the variance of the latent profile indicator variable m in Profile k, and θ_{mjk} is the covariance between the latent profile indicator variable m and j in Profile k. In Model A, the within-profile variance is constrained to be profile-invariant, and covariances are constrained to be 0 in all profiles (i.e., equal variances across profiles and no covariances among indicator variables). In Model B, the within-profile variance profile-varying and covariances are constrained to be 0 in all profiles (i.e., unequal variances across profiles and no covariances among indicator variables). In Model C, the within-profile variance is constrained to be profile-invariant, and covariances are constrained to be equal in all profiles (i.e., equal variances and covariances across profiles). In Model D, the within-profile variance is constrained to be profile-invariant, and covariances are profile-varying (i.e., equal variances across profiles and unequal covariances across profiles). In Model E, the within-profile variances are profile-varying, and covariances are constrained to be equal in all profiles (i.e., unequal variances across profiles and equal covariances across profiles). In Model F, the within-class variance and covariances are both profile-varying (i.e., unequal variances and covariances across profiles).

Appendix B

Table B1. Attrition analyses

Variable	Attrition	*n*	Mean (*SD*)	Mean Difference	Sig.
Peer Acceptance T1	Valid	241	5.96% (4.48)	3.76%	.007
	Attrition	83	2.19% (3.33)		
Peer Acceptance T2	Valid	241	6.06% (4.97)	3.90%	.007
	Attrition	83	2.17% (0.04)		
Peer Acceptance T3	Valid	241	6.31% (4.87)	5.22%	.000
	Attrition	83	1.10% (2.28)		
Peer Rejection T1	Valid	241	5.61% (7.34)	2.31%	.468
	Attrition	83	3.29% (6.99)		
Peer Rejection T2	Valid	241	5.88% (8.16)	3.32%	.006
	Attrition	83	2.57% (6.31)		
Peer Rejection T3	Valid	241	6.21% (8.31)	4.99%	.000
	Attrition	83	1.22% (3.45)		
Prosocial Behavior T1	Valid	241	3.05 (0.52)	0.047	.910
	Attrition	40	3.00 (0.53)		
Prosocial Behavior T2	Valid	241	3.12 (0.52)	–0.005	.736
	Attrition	40	3.12 (0.49)		
Prosocial Behavior T3	Valid	241	3.21 (0.48)	0.119	.515
	Attrition	32	3.09 (0.44)		
Aggressive Behavior T1	Valid	241	2.00 (0.56)	–0.184	.134
	Attrition	40	2.18 (0.67)		
Aggressive Behavior T2	Valid	241	2.14 (0.56)	0.018	.861
	Attrition	40	2.12 (0.60)		
Aggressive Behavior T3	Valid	241	2.05 (0.52)	0.251	.033
	Attrition	32	1.79 (0.37)		

Note. Proportion score means and standard deviations of peer acceptance and rejection are presented in percentages.

Appendix C

Table C1. Mean differences between stable profiles in prosocial behavior at Time 3

Transition	Reference profile at Time 1	Time 3		Comparison profile at Time 1								
				Moderated rejected			Controversial			Highly rejected		
		Mean	*SD*	Diff	SE	*p*	Diff	SE	*p*	Diff	SE	*p*
Stayer (*n* = 149)	Moderately accepted	3.61	0.34	**−0.58**	**0.09**	**<.001**	−0.17	0.09	.055	**−1.39**	**0.14**	**<.001**
	Moderately rejected	3.02	0.24				**0.41**	**0.08**	**<.001**	**−0.81**	**0.15**	**<.001**
	Controversial	3.43	0.21							**−1.22**	**0.14**	**<.001**
	Highly rejected	2.22	0.25									

Note. Diff = mean difference of comparison profile at Time 1 minus reference profile at Time 1. Significant differences are displayed in boldface.

Appendix D

Table D1. Mean differences between stable profiles in aggressive behavior at Time 3

Transition	Reference profile at Time 1	Time 3		Comparison profile at Time 1								
				Moderately rejected			Controversial			Highly rejected		
		Mean	*SD*	Diff	SE	*p*	Diff	SE	*p*	Diff	SE	*p*
Stayer (*n* = 149)	Moderately accepted	1.45	0.13	**0.67**	**0.07**	**<.001**	**0.85**	**0.08**	**<.001**	**1.91**	**0.04**	**<.001**
	Moderately rejected	2.11	0.22				0.19	0.10	.059	**1.25**	**0.08**	**<.001**
	Controversial	2.30	0.23							**1.06**	**0.09**	**<.001**
	Highly rejected	3.36	0.06									

Note. Diff = mean difference of comparison profile at Time 1 minus reference profile at Time 1. Significant differences are displayed in boldface.