Abstract

Introduction: Obtaining and maintaining high social status in one's peer group is often a critical developmental goal during adolescence. The present study investigated factors that predict trajectories of cool status for middle school adolescents as well as how different cool status trajectories affect depressive symptoms.

Methods: The participants were 5,991 adolescents (52% girls) from 26 urban middle schools in California. Using latent class growth analysis, baseline assessment occurred in the fall of sixth grade, and repeated assessments occurred in the spring of sixth, seventh, and eighth grades.

Results: Three cool status trajectories were identified: (1) a high ascending cool status group (5% of the sample); (2) a decreasing cool status group (25%); and (3) a maintaining low cool status group (70%). Differences in the three groups were explained by GPA and having a reputation as aggressive at the beginning of middle school and the level of depression at the end of middle school. Those in the high ascending cool status group experienced the most depressive symptoms at the end of 8th grade.

Conclusions: The findings suggest the need for a more nuanced perspective on maintaining cool status during adolescence that considers both its risks and benefits.

Keywords: Coolness, Aggression, GPA, Middle school

For adolescents, obtaining and maintaining a high social status in their peer group is often a critical developmental goal (Adler & Adler, 1998; Cairns & Cairns, 1991). During early adolescence, achieving high social status often takes priority over other social relationships, such as friendships and romantic relationships (LaFontana & Cillessen, 2010). Having a reputation among peers as "cool" is often used as an indicator of high social status, particularly for adolescents (Closson, 2009). Although not well studied in the peer relations literature, cool kids appear to possess characteristics related to prestige, power, and visibility (notoriety) that their classmates pay attention to and even admire (e.g., Bellmore, Villarreal, & Ho, 2011; Jamison, Wilson, & Ryan, 2015; Keifer & Wang, 2016). Coolness is conceptually similar to popularity and some researchers use the terms interchangeably. However, perceiving a classmate as cool does not require the central position in the peer network that we associate with popularity (Keifer & Wang, 2016). Some cool youth can reside on the social margins (see Dar-Nimrod, Hansen, Proulx, Lehman, Chapman & Duberstein, 2012).

Because any reputational variable, including coolness, is established by peer group consensus (Bukowski, 2011), not all students can attain or maintain it. Accordingly, several studies have found that cool reputations are moderately stable (e.g., Bellmore et al., 2011; Jamison et al., 2015), but that many adolescents have difficulty maintaining this status. Further, young adolescents with average status in the peer group have a very small probability of attaining high social status (Bellmore et al., 2011). Thus, some cool adolescents are able to maintain this coveted status, others have difficulty holding on to it once attained, and still others never achieve it at all.

What factors are related to growth and change in coolness during early adolescence? One important factor suggested by the literature is having a reputation as aggressive. Some studies

report that aggressive–high status youth (the "tough" kids) are nominated as cool by their peers and that attaining or maintaining cool status is strongly associated with aggression (Bellmore et al., 2011; Rodkin et al., 2006). Similarly, doing poorly in school during early adolescence is often a sign of being "tough" or "cool" (Adler & Adler, 1998). Thus, some youth may perceive not trying in school as a way to enhance their social status (e.g., Juvonen & Murdock, 1995; Schwartz & Gorman, 2011). Guided by these prior findings, we examined whether having a reputation as aggressive and low academic achievement were related to maintaining or attaining a reputation as cool during the critical middle school years.

Turning to consequences, few prior studies have focused on how changes in coolness during middle school impact psychological adjustment. In light of the high value attached to being cool, one might hypothesize that loss of this coveted social status would be particularly associated with adjustment difficulties. We used depression as our adjustment outcome because it is the most common internalizing symptom of adolescence, often the result of poor coping with social stressors (Graber & Sontag, 2009). Accordingly, in the current study we use a person-centered longitudinal approach to identify which factors (i.e., aggression, GPA) predict developmental trajectories of coolness and to explore how these associations subsequently predict psychological adjustment at the end of middle school.

Methods

Participants and Procedure

The current sample was drawn from the [*removed for blind review*], an ongoing longitudinal study of 5,991 adolescents recruited in the fall of sixth grade from 26 urban middle schools in California (32% Latino/a, 20% White, 18% Asian, 12% African American, and 18 % who identified as multiethnic or other). Baseline assessment occurred in the fall of sixth grade

and repeated assessments occurred in the spring of sixth, seventh, and eighth grade for a total of

four time points. Retention rates of adjacent time points were high: 95%, 89%, and 92% between

Time 1 and Time 2, Time 2 and Time 3, and Time 3 and Time 4, respectively. Retention between

Time 1 and Time 4 was 78%.

Measures

Coolness. At each wave, students were asked to list the names of the students in their

grade "who are the coolest kids." Because the time intervals between waves were not equal, we

assigned values of 0, 1, 3, and 5 rather than 0, 1, 2, and 3 (i.e., 0 = Fall of 6th grade, 1 = Spring of

6th grade, 3 = Spring of 7th grade, and 5 = Spring of 8th grade). The number of coolness

nominations each student received was standardized within school.

Aggression. In the same peer nomination measure used to assess reputation as cool, we

asked students in the fall of sixth grade to list the names of students in their grade who "pick on

other kids (e.g., hit or push others around, call them bad names, talk about them behind their

backs)." The number of nominations adolescents received was summed and standardized within

school.

Grade point average (GPA). Information on students' grades for the fall of sixth grade

was collected from their report cards at the end of the school year. Grades for all courses were

coded on a 5-point scale (A = 4 and F = 0) and then were averaged to create a composite GPA

for each student.

Depressive symptoms. An 8-item adapted version of the Center for Epidemiologic

Studies Depression Scale (CES-D; Radloff, 1977) was used to assess depressive symptoms as a

distal outcome in the spring of eighth grade. Example items were "*I felt depress*ed and *I felt*

sad," rated on 4-point scales: 1 = rarely or none of the time to 4 = almost all the time).

Participants were asked how often they had felt this way during the past seven days (α = .85).

Control Variables. The current study controlled for self-reported ethnicity. Further,

baseline depressive symptoms were controlled for at the fall of sixth grade. Given the ethnic

diversity of the sample and its known associations with peer social status (Bellmore, Nishina, &

Graham, 2011), we also took into account ethnic ingroup size (i.e., proportion of same-ethnic

peers) because lack of ethnically similar others may contribute to low cool status when students

are in the numerical minority at their school.

Data Analytic Strategy

To identify distinct classes based on different developmental trajectories, we used the

three-step method of latent class growth analysis (LCGA) in Mplus 8.0 (Asparouhov & Muthén,

2014; Muthén & Muthén, 1998-2017; Nylund-Gibson, Grimm, Quirk, & Furlong, 2014) using

all available data and robust full information maximum likelihood (FIML). Specifically, the

three-step LCGA procedure entailed the following: First, we estimated trajectories of coolness

without the predictors or distal outcome included in the model. Second, after determining the

optimal LCGA model, we examined the associations between the covariates and group

membership. Third, we added a distal outcome and evaluated the association between trajectory

(i.e., group membership) and depressive symptoms at the end of middle school.

<div align="center">

Results

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Unconditional Model

Table 1 shows the bivariate correlations between all of the variables. To identify the most

parsimonious model with respect to the number of trajectories of cool status, we examined four

unconditional models, which did not include any covariates or distal outcomes. As shown in

Table 2, we selected a three-class solution as the best-fitting model for the trajectories of

coolness (see Figure 1). The first trajectory was the smallest in terms of most-likely membership

(n = 249, 5%). The intercept of this class was significantly higher than the average intercept of

the sample (b = 2.384, *SE* = 0.122, *p* <.001) and the linear slope was significantly positive (b =

0.046, *SE* = 0.021, *p* <.05). We labeled this latent class the *high ascending cool status group*

(HAC). The initial status (intercept) of the second trajectory (n = 1248, 25%) was significantly

higher than average (b = 1.091, *SE* = 0.117, *p* < 0.001), but lower than that of the first trajectory.

It decreased, as shown by its significant negative linear slope (b = -0.053, *SE* = 0.013, *p* <.001).

For this reason, we labeled this latent class the *decreasing cool status group* (DC). Of the three

trajectories, the third trajectory class had the highest most likely membership (n = 3493, 70%).

The intercept of this trajectory was significantly lower than average (b = -0.725, *SE* = 0.066, *p*

<.001), and the decreasing slope of this trajectory was significant (b = -0.147, *SE* = 0.011, *p*

<.001). This led us to interpret Class 3 as the *maintaining low cool status group* (MLC).

Conditional Models with Covariates Predicting Class Membership

Next we added the model covariates to investigate whether the three class memberships

differed based on these covariates, controlling for ethnicity, ethnic ingroup size, and depression

at the fall of sixth grade. To obtain the multinomial logistic regression coefficients for the

predictors on latent class, the maintaining low cool status group (MLC) was fixed as the

reference class (see Table 3). Both aggression and GPA were predictors of membership in the

high ascending cool status (HAC) compared to the maintaining low cool status (MLC) group.

Adolescents who were one standard unit higher in peer-nominated aggression had 2.25 times

higher odds (b = 0.813, SE = 0.074, *p* < .001) of being in the HAC group and those with one

point higher GPA had 1.45 times higher odds (b = 0.371, SE = 0.132, *p* < .01) of being in the

HAC group compared to the MLC group. In contrast, only aggression, but not GPA, predicted membership in the decreasing cool status group (DC; b = 0.564, SE = 0.062, p < .001, OR = 1.76, p < .001).

Although we had no specific hypotheses regarding gender and ethnicity, the results indicated an effect of gender and ethnicity on class membership. Girls had 1.29 times higher odds (b = 0.256, SE = 0.098, p < .01) than boys of being in the DC group compared to the MLC group. Regarding ethnic differences, compared to Latino/a adolescents, African American adolescents were more likely to be in the DC group (OR = 1.68, b = 0.519, SE = 0.134, p < .001). Furthermore, relative to Latino/a adolescents, Asian adolescents had 0.5 times lower odds (b = -0.688, SE = 0.318, p < .05) of being in the HAC group and had 0.57 times lower odds (b = -0.558, SE = 0.140, p < .001) of belonging to the DC group, compared to the MLC group respectively. There were no significant effects of ethnic ingroup size.

Conditional Models with Covariates and Distal Outcome

Finally, we examined whether the coolness trajectory groups were associated with the probability of depressive symptoms at spring of eighth grade. The results indicated that relative to the MLC group, the HAC group was significantly more likely to report depressive symptoms during the past seven days (b = 0.227, *SE* = .082, p < 0.01). Furthermore, the DC group was significantly more likely to report depressive symptoms during the past seven days as compared to the MLC group (b = 0.091, *SE* = .039, p <.05).

<div align="center">**Discussion**</div>

The beginning of middle school, when new friendships are formed and the hierarchical structure of peer groups solidifies, is an ideal time to study cool status and its developmental course. Our results showed that cool status, measured from entry to middle school through eighth

grade, followed three distinct trajectories. To understand the characteristics associated with these three trajectories, we considered the roles of two factors that have been discussed in previous studies, namely, aggression and academic achievement, focusing especially on the fall of sixth grade (e.g., Bellmore et al., 2011; Jamison et al., 2015; Rodkin et al.,2006; Schwartz, Gorman, Nakanoto, & Mackay, 2006). Students in the high ascending cool status group and the decreasing cool status group were perceived as more aggressive at the beginning of middle school than students in the maintaining low-cool status group. Thus, aggression might be one of the critical factors in attaining cool status at the beginning of middle school. However, GPA served to distinguish between high ascending cool status and decreasing cool status. While most previous studies have found that cool status, especially when associated with aggression, tends to be negatively related to academic achievement (e.g., Rodkin, Farmer, Pearl, & Van Acker, 2000; Troop-Gordon, Visconti, & Kuntz, 2011), we found a positive relationship between the high ascending cool status trajectory and GPA. These results suggest that for most students, attaining and then maintaining cool status across the middle school years requires not only standing out (being visible, notorious) as aggressive but also fitting in well enough academically to have a high GPA at the beginning of middle school. In contrast, exhibiting aggression but not academic prowess may be associated with a loss of cool status in the peer group over the long term.

Regarding consequences, adolescents who maintained high cool status had a significantly higher level of depression than those in either the decreasing cool status group or the maintaining low cool status group. Thus, the strong pressure to be more visible and attractive in order to maintain cool status may result in a high level of depression. These results imply that although maintaining high social status in peer groups may be beneficial in the short term (e.g., Juvonen, Nishina, & Graham, 2000), it can have negative psychological effects in the long term.

Although modeled as control variables, some demographic differences emerged in the analyses. With respect to gender, girls were more likely to belong to the decreasing cool status group than boys were. Classic ethnographic research on high peer status and aggression in middle school documents that girls have a particularly hard time maintaining high social status (Eder, 1985). It might be particularly challenging for girls to figure out how to negotiate being tough and smart at the same time. We documented only a few ethnic group differences: for example, African American youth were more likely to be in the decreasing cool status group and Asian students were less likely to be in that group, compared to Latinos. However, there were no differences as a function of ethnic ingroup size, suggesting that coolness trajectories were not shaped by whether youth attended schools with few or many same-ethnic peers. It is not clear why these patterns emerged, in part because there are so few longitudinal studies of cool status in *multiple* racial/ethnic groups. We see this as an important direction for future research.

The main limitations of the study are that the aggression measure did not separately assess the characteristics of overt and relational aggression and we did not consider effects at the school-context level. Nonetheless, the current findings are the first to our knowledge to model trajectories of cool status in relation to important social, academic, and mental health variables. Results also provide initial support for the idea that maintaining cool status across the middle school years has risks as well as benefits. It can be tough at the top if chronically cool students are also at greater risk for mental health problems. Thus, teachers and researchers should closely monitor the aggressiveness and mental health of cool adolescents, as their high GPA and high peer approval could easily overshadow other challenges.

References

Adler, P. A., & Adler, P. (1998). *Peer power: Preadolescent culture and identity*. New

Brunswick: Rutgers University Press.

Asparouhov, T., & Muthén, B. (2014). Auxiliary variables in mixture modeling: Three-step

approaches using M plus. *Structural Equation Modeling: A Multidisciplinary Journal*,

21(3), 329-341. https://doi.org/10.1080/10705511.2014.915181

Bellmore, A., Nishina, A., & Graham, S. (2011). Peer popularity in the context of ethnicity. In A.

H. N. Cillessen, D. Schwartz, & L. Mayeux (Eds.), *Popularity in the peer system* (pp.

193–215). New York, NY: Guilford Press.

Bellmore, A., Villarreal, V. M., & Ho, A. Y. (2011). Staying cool across the first year of middle

school. *Journal of youth and adolescence*, 40(7), 776-785.

https://doi.org/10.1007/s10964-010-9590-x

Bukowski, W. M. (2011). Popularity as a social concept: Meanings and significance. In A. H. N.

Cillessen, D. Schwartz, &L. Mayeux (Eds.), *Popularity in the peer system*. (pp. 3–24).

New York, NY: The Guilford Press.

Cairns, R. B., & Cairns, B. D. (1991). Social cognition and social networks: A developmental

perspective. *The development and treatment of childhood aggression*, 249-278.

Cillessen, A.H.N. (2009). Sociometric methods. In K.H. Rubin, W.M. Bukowski & B. Laursen

(Eds.), *Handbook of peer interactions, relationships, and groups* (pp. 82–99). New York,

NY: Guilford Press.

Closson, L. M. (2009). Status and gender differences in early adolescents' descriptions of

popularity. *Social Development*, *18*(2), 412-426. https://doi.org/10.1111/j.1467-

9507.2008.00459.x

Dar-Nimrod, I., Hansen, I. G., Proulx, T., Lehman, D. R., Chapman, B. P., & Duberstein, P. R.

    (2012). Coolness: An empirical investigation. Journal of Individual Differences.

    https://doi.org/10.1027/1614-0001/a000088

Eder, D. (1985). The cycle of popularity: Interpersonal relations among female adolescents.

    Sociology of Education,58, 154–165. https://doi.org/10.2307/2112416

Graber, J. A., & Sontag, L. M. (2009). Internalizing problems during adolescence. In R. M.

    Lerner & L. Stein-berg (Eds.), *Handbook of adolescent psychology* (Vol. 3, pp. 642–

    682). Hoboken, NJ: John Wiley.

Jamison, R. S., Wilson, T., & Ryan, A. (2015). Too cool for school? The relationship between

    coolness and academic reputation in early adolescence. *Social Development*, *24*(2), 384-

    403. https://doi.org/10.1111/sode.12097

Juvonen, J., & Murdock, T. B. (1995). Grade-level differences in the social value of effort:

    Implications for self-presentation tactics of early adolescents. *Child development*, 66(6),

    1694-1705. https://doi.org/10.1111/j.1467-8624.1995.tb00959.x

Juvonen, J., Nishina, A., & Graham, S. (2000). Peer harassment, psychological adjustment, and

    school functioning in early adolescence. *Journal of educational psychology*, 92(2), 349.

    https://doi.org/10.1037/0022-0663.92.2.349

Kiefer, S. M., & Wang, J. H. (2016). Associations of coolness and social goals with aggression

    and engagement during adolescence. *Journal of Applied Developmental Psychology*, 44,

    52-62. https://doi.org/10.1016/j.appdev.2016.02.007

LaFontana, K. M., & Cillessen, A. H. (2010). Developmental changes in the priority of perceived

    status in childhood and adolescence. *Social Development*, *19*(1), 130-147.

    https://doi.org/10.1111/j.1467-9507.2008.00522.x

Muthén, L. K., & Muthén, B. O. (1998–2017). Mplus user's guide (8th ed.). Los Angeles, CA: Author.

Nylund-Gibson, K., Grimm, R., Quirk, M., & Furlong, M. (2014). A latent transition mixture model using the three-step specification. *Structural Equation Modeling: A Multidisciplinary Journal*, 21(3), 439-454. https://doi.org/10.1080/10705511.2014.915375

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied psychological measurement*, *1*(3), 385-401. https://doi.org/10.1177/014662167700100306

Rodkin, P. C., Farmer, T. W., Pearl, R., & Van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental psychology*, 36(1), 14. https://doi.org/10.1037/0012-1649.36.1.14

Rodkin, P. C., Farmer, T. W., Pearl, R., & Acker, R. V. (2006). They're cool: Social status and peer group supports for aggressive boys and girls. *Social Development*, *15*(2), 175-204. https://doi.org/10.1046/j.1467-9507.2006.00336.x

Schwartz, D., & Gorman, A. H. (2011). The high price of high status: Popularity as a mechanism of risk. In A. H. N. Cillessen, D. Schwartz, & L. Mayeux (Eds.), *Popularity in the peer system* (pp. 245–270). New York, NY: Guilford Press.

Schwartz, D., Gorman, A. H., Nakamoto, J., & McKay, T. (2006). Popularity, social acceptance, and aggression in adolescent peer groups: Links with academic performance and school attendance. *Developmental psychology*, *42*(6), 1116. https://doi.org/10.1037/0012-1649.42.6.1116

Staff, J., & Kreager, D. A. (2008). Too cool for school? Violence, peer status and high school

dropout. *Social Forces*, 87(1), 445-471. https://doi.org/10.1353/sof.0.0068

Troop-Gordon, W., Visconti, K. J., & Kuntz, K. J. (2011). Perceived popularity during early

   adolescence: Links to declining school adjustment among aggressive youth. *The Journal*

   of Early Adolescence, 31(1), 125-151. https://doi.org/10.1177/0272431610384488

Table 1

Correlations of Cool Status with Aggression, GPA, and Depression

Variables	1	2	3	4	5	6	7	8
1. Coolness$_{fall6th}$	—							
2. Coolness$_{spring6th}$	.712**	—						
3. Coolness$_{spring7th}$	.573**	.718**	—					
4. Coolness$_{spring8th}$	.492**	.594**	.719**	—				
5. Aggression$_{fall6th}$	.291**	.260**	.212**	.157**	—			
6. GPA$_{fall6th}$	.019	-.005	.004	.028*	-.138**	—		
7. Depression$_{fall6th}$	-.019	-.001	-.007	-.001	.035*	-.125**	—	
8. Depression$_{spring8th}$	.037*	.074**	.081**	.089**	.047*	.026	.350**	—

*Note. * $p < .05$. ** $p < .01$. *** $p < .001$.*

Table 2

Relative Model Fit Indices by Number of Latent Classes of Cool Status

| Model	LL (*npar*)	AIC	BIC	Adj. LMR-LRT (*p*-value)	BLRT (*p*-value)	Entropy
One-Class	-42227.944 (8)	84471.888	84525.472	–	–	1.000
Two-Class	-33824.516 (13)	67675.031	67762.106	<0 .01	< 0.001	0.940
Three-Class	-31128.862 (18)	62293.724	62414.288	< 0.001	< 0.001	0.920
Four-Class	-30049.371 (23)	60144.740	60298.796	0.1483	< 0.001	0.869

Note. LL = Log Likelihood*; npar* = number of free parameters; AIC = *Akaike Information Criterion*; BIC = Bayesian information criterion; Adj. LMR-LRT = adjusted Lo-Mendell-Rubin likelihood ratio test; BLRT = the bootstrap likelihood ratio test. * *p* < .05. ** *p* < .01. *** *p* < .001.

Table 3
Multinomial Logistic Regression Model for the Final LCGA Model

Covariates	HAC (n = 249, 5%)			DC (n = 1248, 25%)		
	B	*S.E.*	*Odds Ratio*	*B*	*S.E.*	*Odds Ratio*
Aggression$_{fall6th}$	0.813***	0.074	2.255	0.564***	0.062	1.758
GPA$_{fall6th}$	0.371**	0.132	1.449	0.093	0.060	1.097
Gender	0.220	0.236	1.246	0.256**	0.098	1.292
African American	0.190	0.368	1.209	0.519***	0.134	1.680
Asian	-0.688*	0.318	0.503	-0.558***	0.140	0.572
White	0.476	0.221	1.609	0.257	0.118	1.294
Other	0.308	0.240	1.361	0.174	0.123	1.190
Ethnic ingroup size$_{fall6th}$	1.344	0.783	0.750	0.227	0.361	0.600
Depression$_{fall6th}$	-0.040	0.142	0.960	-0.120	0.075	0.887

Note: S.E. = standard error; Gender: boys = 0 and girls = 1; Ethnicity: Latino is the reference group; HAC = high ascending cool status group, DC = decreasing cool status group, MLC = maintaining low cool status group is the reference group (n=3493, 70%). All values are unstandardized estimates. * $p < .05$. ** $p < .01$. *** $p < .001$.
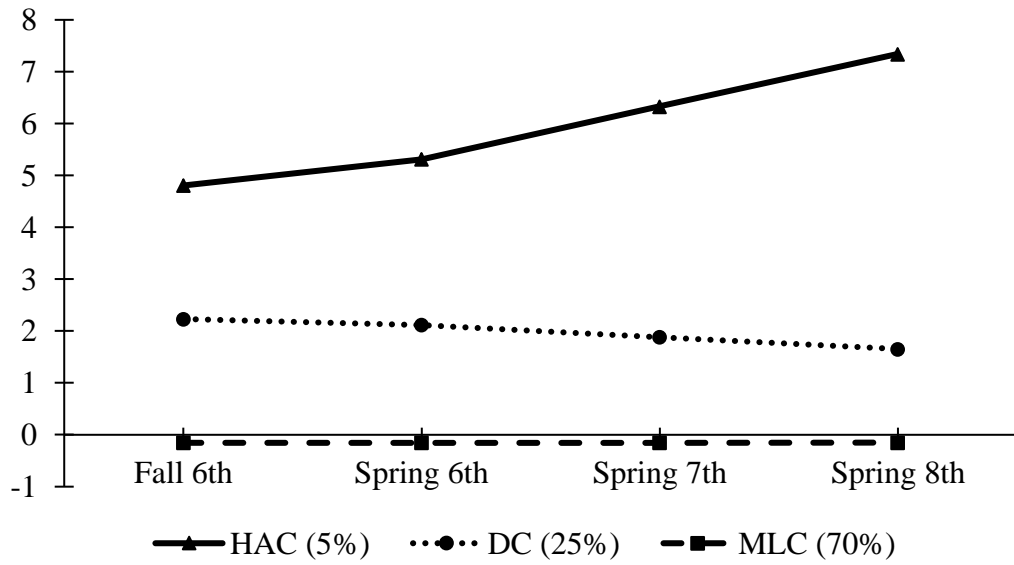
Figure 1. Cool status developmental trajectories
Note. HAC = high ascending cool status group; DC = decreasing cool status group;
MLC = maintaining low cool status group.