Peer Reputation Among Affluent Middle School Youth:

Ramifications for Maladjustment Versus Competence by Age 18

by

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ABSTRACT

Given the major investment young people make in earning and maintaining a peer reputation, our goal in this study was to explore the association between dimensions of negative and positive peer reputation in middle school and adjustment several years later, by the end of high school, among upper middle class youth. Prior research has shown negative reputations such as aggressive-disruptive and sensitive-isolated to be associated with maladjustment later in life, whereas reputations like popular and prosocial-leader have been related to positive future outcomes. However, there are contrary findings that reveal a more complex relationship between peer reputation and adjustment, showing certain "negative" reputations to be tied with better outcomes in some domains and the converse in others. Using a sample of middle school students, a confirmatory factor analysis (CFA) was performed to test a four-factor model of the Revised Class Play, a peer report measure on peer reputations. CFA findings supported the four-factor model with the following reputations: popular, prosocial, aggressive, and isolated. Structural equation models were used to predict 12th grade adjustment outcomes (academic achievement, psychopathology, substance use) from middle school peer reputation. Prosocial reputation in middle school was connected to higher academic achievement and fewer externalizing symptoms in 12th grade. Both prosocial and isolated peer reputation were negatively associated with alcohol, cigarette, and marijuana use, whereas a popular reputation was related to higher levels of alcohol use. Middle school reputation did not predict internalizing symptoms in 12th grade. Findings are discussed in terms of adaptive

and maladaptive adjustment outcomes associated with each peer reputation and implications for future research.

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The central question addressed in this study is as follows: among upper middle class youth, might dimensions of negative and positive peer reputation, measured through peer nominations in middle school, have significant repercussions for adjustment several years later, by the end of high school? There is a perception that affluent youth should generally be well adjusted; the greater social support, increased material resources, and high quality education associated with higher socioeconomic status would place affluent children on a positive developmental path (Bradley & Corwyn, 2002). However, research has suggested that by late adolescence, upper middle class youth exhibit elevated rates of substance use as well as increased rule breaking and externalizing symptoms (for a review, see Luthar, Barkin, & Crossman, 2013). One possibility is that peer reputations among affluent youth can affect the development of later problems, as will be outlined in the sections that follow.

Middle School Peer Reputation

Middle school is a time when youth care greatly about their reputation in the eyes of peers (Hartup, 2009) and are highly invested in being seen as popular (Cillessen, Schwartz, & Mayeux, 2011). From a developmental standpoint, this increased concern with peers' opinions takes place as part of the process of working toward autonomy and individuation from parents as described in the situation-individuation theory (SIT; Blos, 1967). Starting in early adolescence, youth begin to place more importance on the evaluations of peers rather than parents (Rosenberg, 1979) making the views of peers

increasingly influential. Given the major investment young people make in earning and maintaining a positive peer reputation (dimensions described more in the next section), the goal of this study is to explore the long term effects associated with peer social labels.

The construct of peer reputation, as measured by classmate nominations, reflects a young person's social behaviors, characteristics, and influence among his or her peers (Masten, Morison, & Pellegrini, 1985; Luthar & McMahon, 1996). Importantly, this is not whether the child is liked or disliked, but rather represents the major behavioral profiles, both negative and positive, that tend to define him or her in the eyes of peers (Parker & Asher, 1987, Prinstein, 2007).

In developmental research, peer reputation has typically been measured by an instrument called the Class Play. This assessment asks the participant to place his or her classmates into different roles for a play which he or she is directing. The roles for the play map onto specific attributes that underlie dimensions of peer reputation (Masten et al. 1985). Analyses of peer nominations for the Class Play roles have typically revealed three or four dimensions of peer reputation: isolated-sensitive, aggressive-disruptive, popular, and prosocial; the last two sometimes combined into one positive reputation labeled sociability-leader (Luthar & McMahon, 1996; Realmuto, August, & Hektner, 2000; Gest, Sesma, Masten, & Tellegen, 2006). Zeller, Vannatta, Schafer, and Noll (2003) compared peer reputation across samples of elementary, middle, and high school age children and found a four-factor model to be valid and reliable across all age groups.

In terms of characteristics of these different dimensions, a *popular* reputation describes youth who are socially central and prominent as well as emulated by their

peers. Examples of roles in this category include "everyone likes to be with" and "makes new friends easily". This differs from a *prosocial* reputation which is characterized by friendliness, trustworthiness, and helpfulness as demonstrated in the roles "helps others when they need it" and "polite" (Zeller et al. 2003). Of the negative reputations, *aggressive-disruptive* encompasses hostile and antisocial behavior exemplified in the roles "gets into a lot of fights" and "teases other children too much". Lastly, an *isolated* reputation represents youth who do not interact often with their peers as illustrated by the roles "has trouble making friends" and "often left out" (Gest et al. 2006). Studies have shown that each of these four dimensions of peer reputation is related with personal and behavioral adjustment, not just concurrently but over time as well, as will be outlined next.

Isolated Peer Reputation and Adolescent Adjustment

An isolated peer reputation has been connected with negative outcomes later in life. When studied in a large community sample of middle-class elementary school children, sensitive-isolated reputation predicted internalizing problems four years later as reported by teachers (Realmuto, August, & Hektner, 2000). Additionally, research focused on social isolation has shown that children who are isolated from peers show higher odds of suicide attempts, higher depressive symptoms, and lower self-esteem (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007).

Conversely, there are studies that report no significant relationship between an isolated reputation and internalizing symptoms. In one of the original studies using the RCP by Morison and Masten (1991), isolated reputation was unrelated to internalizing

symptoms, and work by Gest and colleagues (2006) suggested that only a subgroup of peers with an isolated reputation were at higher risk for internalizing symptoms.

Furthermore, peer isolation can be associated with positive adjustment outcomes. For instance, Luthar and McMahon (1996) found that an isolated reputation among inner-city high school students was related to concurrent academic success rather than failure. Another group of researchers suggested that a sensitive-isolated reputation in elementary school predicts fewer externalizing problems four years later if the youth is not also seen as aggressive (Realmuto, August, & Hektner, 2000). Adolescents or children who are isolated may be protected from deviant influences because they avoid the negative behaviors of their peers (Kramer & Vaquera, 2011), possibly minimizing externalizing problems as well as focusing more attention on academic endeavors.

The relationship between isolated reputation and substance use is unknown and research on isolation from peers and substance use is mixed. Some of the literature on rejection from peers connects peer isolation to greater risk of substance use (see Prinstein, Rancourt, Guerry, & Browne, 2009). However, using data from the National Longitudinal Study of Adolescent Health, Kramer and Vaquera (2011) found that isolated youth, defined by zero friend nominations, were protected from substance use, particularly alcohol use. Drug use outcomes for children with isolated *reputations* have not been explored. It is conceivable that youth viewed as on the fringes of the peer group may be protected from negative outcomes such as marijuana use, since they might avoid the deviant influences of their peers.

Aggressive Peer Reputation and Adolescent Adjustment

The majority of studies concerning peer reputation reveal that youth with aggressive-disruptive reputations manifest elevated maladjustment. Of the three behavioral dimensions determined by researchers in a study with middle-class Caucasian elementary school children, aggressive-disruptive reputation significantly predicted teacher-reported externalizing symptoms four years later (Realmuto, August, & Hektner, 2000). Other researchers investigated peer reputations and outcomes seven years later among socioeconomically and ethnically diverse children. This research showed that a childhood aggressive-disruptive reputation was positively associated with externalizing symptoms and antisocial behaviors in adolescence as well as negatively associated with academic performance (Morison & Masten, 1991). In a 10-year follow-up study of the same sample, an aggressive-disruptive reputation in childhood predicted worse academic achievement, lower job competence, and more externalizing behavior (Gest et al., 2006).

Although negative outcomes have been generally associated with aggressive reputations, surprisingly, an aggressive-disruptive reputation has been positively linked to social competence and higher status among peers (Morison & Masten, 1991; Luthar & McMahon, 1996; Prinstein & Cillessen, 2003). Unlike youth labeled with an isolated reputation, youth seen as aggressive frequently interact with their peers (Bagwell, Coie, Terry, & Lochman, 2000), and this could lead to important social feedback and possibly higher social status. Indeed, several studies with different sample populations of elementary school children demonstrated that an aggressive peer reputation, although associated with deviant behavior, could also be linked to admiration or higher status among peers (Prinstein & Cillessen, 2003; Becker & Luthar, 2007; Waasdorp, Baker,

Paskewich, & Leff, 2013). In a longitudinal study of 10 to 14 year-olds in a diverse sample of middle-class youth, Cillessen and Borch (2006) found aggression positively predicted perceived popularity, indicating high social status.

Few studies have explored the relationship between peer-reported aggressive reputation and substance use. However, one study of middle-class pre-adolescent girls revealed peer-nominated aggressive behavior to be predictive of late adolescence cigarette use, heavy episodic drinking, and marijuana use (Prinstein & La Greca, 2004). These findings based on peer report coincide with the literature on the positive relation between teacher, parent and self-reported childhood aggression and substance use (Fite, Colder, Lochman, & Wells, 2007; Jester, Nigg, Buu, Puttler, Glass, et al., 2008; Wiens, Haden, Dean, & Sivinski, 2010).

Popular Peer Reputation and Adolescent Adjustment

Youth with popular reputations have been shown to thrive as well-adjusted individuals. A longitudinal study following adolescents from age 13 to 26 showed that popular youth were more likely to be employed and had attained higher education as adults (Sletten, 2011). Additionally, research with an ethnically and socioeconomically diverse sample showed that youth with sociable-leader reputations as children were found seven years later to be more socially competent and lower on both externalizing and internalizing symptoms than either aggressive-disruptive or sensitive-isolated labeled peers (Morison & Masten, 1991). Although this study had only one positive reputation which encompassed prosocial attributes as well as popular, in a 10-year follow up study using the same sample, the positive reputation was divided into prosocial and popular,

and a popular reputation was still positively associated with social and romantic competences during adulthood (Gest et al., 2006).

Unfortunately, popular reputations, both independently and when combined with aggressive behavior, have also been connected to unexpected negative outcomes. A sociable reputation among urban, mostly ethnic minority high school youth was associated with the greatest academic declines over a six-month period (Luthar, 1995). Youth labeled popular and aggressive may be at even greater risk for poor academic performance (Schwartz, Gorman, Nakamoto, & McKay, 2006). Additionally, a year-long middle school study with a diverse sample demonstrated that popular adolescents were highly likely to behave in deviant ways that met with peer approval (Allen, Porter, McFarland, Marsh, & McElhaney, 2005). Indeed, striving for social recognition has been reported to put youth at increased risk for antisocial behaviors (López-Romero & Romero, 2010).

Increasingly, connections have been documented between peer-reported popularity and elevated substance use, with associations operating in both directions; popularity presaging increasing substance use, as well as the converse. For example, in a sample of 7th grade students, popularity, as measured by asking youth to nominate 'popular' peers, at the beginning of the school year was positively associated with alcohol use at the end of the year; popular youth who were also aggressive were at a particularly high risk for alcohol use (Guyll, Madon, Spoth, & Lannin, 2014). A similar study with older adolescents showed that perceived popularity based on "most popular" and "least popular" nominations in 10th grade predicted increased alcohol use two years later

(Mayeux, Sandstrom, & Cillessen, 2008). Researchers examining risky behavior among youth – where 18 of the 23 risky behavior questions concerned drug use – found that perceived popularity averaged across four years of high school was linked to high levels of risky behavior three years after graduation (Sandstrom & Cillessen, 2010).

Interestingly, a study of urban 15 to 17 year-olds reported that peer-nominated popular adolescents chose friends with high levels of alcohol use (Mathys, Burk, & Cillessen, 2013) suggesting that substance use is viewed as a way to maintain a prominent reputation. In fact, in a study of 7th grade students, substance users were likely to be rated as popular, as indicated by nominations by their peers for "the most popular in seventh grade"; in addition, they maintained their social status over one school year (Killeya-Jones, Nakajima, & Costanzo, 2007). Thus, substance use may be a tool for youth to increase their popularity, and popularity may lead to an increase in the use of substances, possibly as a way to maintain social status.

Youth seen as popular may be particularly prone to high substance use in the context of affluence, partly because overall, substance use is more common in upper middle class settings. In an early study on relatively affluent teens, Luthar and D'Avanzo (1999), found that they had higher rates of alcohol, marijuana, and illicit drug use compared to national norms and compared to inner-city youth. Elevated rates of use were subsequently replicated across several samples (see Luthar & Goldstein, 2008; Luthar & Barkin, 2012). Within the context of affluence, these elevated rates may be connected to a desire for peer approval. Indeed, peer-perceived admiration has been

associated with substance use in wealthy, suburban boys (Luthar & D'Avanzo, 1999; Becker & Luthar, 2007).

Prosocial Peer Reputation and Adolescent Adjustment

The fourth dimension of peer reputation, prosocial, frequently foretells positive adjustment outcomes. For instance, a prosocial reputation among a large community sample of middle-class elementary school children predicted the highest teacher-reported ratings of adaptive functioning (Realmuto, August, & Hektner, 2000). A study of peer reputations in elementary school and outcomes ten years later with a diverse sample showed that children with prosocial reputations had better academic and job outcomes (Gest et al., 2006).

Insufficient information exists on the relationship between prosocial reputations and substance use. Prosocial *behaviors*, however, have been associated with lower levels of drug use (Carlo, Crockett, Wilkinson, & Beal, 2011). Therefore, conceptually, one would expect an inverse relationship, wherein youth known to be prosocial among their peers will show infrequent substance use over time.

Illuminating the Long-term Implications of Peer Reputation

Given the mixed evidence on several peer reputation dimensions, and the potentially strong influence of peers during the middle school period, it is important to further explore the long-term implications of peer reputation. In view of the evidence described thus far, the goal of this study is to investigate the long-term effects of peer reputation in middle school on substance use, academic outcomes, and internalizing-

externalizing symptoms in late adolescence in a sample of affluent youth. Specifically, the hypotheses are:

1. Popular reputation in middle school will be positively associated with substance use and externalizing symptoms and negatively associated with internalizing symptoms and academic outcomes in late adolescence.
2. Aggressive reputation in middle school will be positively associated with substance use and externalizing symptoms and negatively associated with internalizing symptoms and academic outcomes in late adolescence.
3. Isolated reputation in middle school will be negatively associated with substance use and externalizing symptoms and positively associated with academic outcomes and internalizing symptoms in late adolescence.
4. Prosocial reputation in middle school will be negatively associated with substance use, internalizing symptoms, and externalizing symptoms and positively associated with academic outcomes in late adolescence.

Method

Sample

Data for this study from 6th, 7th, and 12th grades (1999, 2000, & 2005 respectively) came from a larger longitudinal study in which data were collected annually in multiple school settings (Luthar & Barkin, 2012). At the beginning of the study, of the eligible 346 sixth grade students, 319 participated (152 females and 167 males), producing a 92% initial participation rate. Another 37 students joined the study in 7th grade. When long-term outcome data were collected in 2005 at the end of 12th grade, 209 of the original

participants completed the questionnaires, generating a 59% retention rate (Luthar & Barkin, 2012).

The sample originates from a suburban community in the Northeast, of which the majority of students were Caucasian (92% white non-Hispanic). The average age of the 319 participants at wave one (6th grade) of the study was 11.57 (S.D. = .54) years old for boys and 11.56 (S.D. = .50) years old for girls. According to the U.S. Census Bureau (2000), the approximate mean and median annual family income at the first wave of the study were $188,000 and $152,000, respectively, classifying this community as affluent. More recently, according to the U.S. census bureau (2014), the estimated mean and median annual family income of the community were $250,000 and $152,000, respectively.

Procedure

Participants' rights were protected at each step of the research process, and the study received Institutional Review Board approval. Participants were recruited for the study through passive consent. Letters were mailed home to parents informing them about the study. Parents could request that their children not participate, and students were told that they could stop taking the survey at any point and did not have to answer questions that made them upset or uncomfortable. All survey materials have been stored by subject number, and data have been presented in aggregate form to further protect participants' confidentiality in accordance with the approved IRB protocol.

Data collection in the 6th and 7th grades occurred during school hours over a two-day period in classrooms with 20–25 students each. Questions were read aloud to

students by a member of the research team while two additional team members answered individual student questions and monitored students' abilities to keep pace with the reader. The questionnaires were read in the same order in each classroom over a two-hour period with a 5-minute break in the middle. Twenty minutes were left at the end for team members to assist students who were unable to finish the questionnaires in the allotted time.

Classroom teachers were gifted $1 per participating student toward a pizza party, a recommendation from the school administration. Teachers were compensated $5 for each student rating form completed. With permission from parents and the school administration, class grades were collected for all participating students. Students reported their demographic information (e.g., date of birth, gender, ethnicity, and parental marital status) during the first wave of data collection.

In the 12th grade, data were collected in the cafeteria. All students were seated at tables, with approximately six students per table. Packets had been placed on the tables in advance, alphabetized by name. Once students opened their packets, the cover sheet containing their name was removed and destroyed; the packets were then identified only by subject ID. Class grades, as well as SAT scores, were collected from the school.

Predictors

Class play ratings in 6th and 7th grades. To measure social reputation, an adaptation of the Revised Class Play (RCP; Masten, Morison, & Pellegrini, 1985) was used (See Appendix A). Students were asked to choose classmates that best fit particular roles for an imaginary play they were directing. Each student received a list of

participating classmates from their English classes and could nominate up to three peers, boys or girls, for each role as well as nominate the same peer for more than one role. Students were not allowed to self-nominate. Roles in the play included both positive ("is a good leader") and negative ("can't get others to listen") attributes. In 6th grade, there were 40 roles for which students could nominate classmates, 30 from the original RCP and 10 newly added during this study. The 7th grade protocol included 20 new roles totaling 50 roles in all.

The total number of nominations each student received on each item of the play was standardized by classroom size and gender (Luthar & McMahon, 1996, Realmuto, August, & Hektner, 2000). Good psychometric properties of the RCP have been documented with middle school children, including high factor structure reliability and internal consistency of factor scores measured by coefficient alpha (Zeller et al., 2003; Morison & Masten, 1991), as well as construct validity when compared to related adjustment indices (Luthar & McMahon, 1996). When measured in middle school, the RCP was found to have predictive validity of psychosocial adjustment during adolescence and early adulthood (Gest et al., 2006; Morison & Masten, 1991).

12th Grade Outcome Variables

Substance use. To measure substance use, the frequency of drug use grid from the Monitoring the Future study (See Appendix B) was employed (Bachman, O'Malley, & Johnston, 1984). This measure asks participants to endorse how often a substance was used over the preceding year, as well as how often the substance was used over the preceding month. Responses were on a 7-point Likert scale ranging from "never" to

"40+ times." Self-report has been previously documented as a valid method of measuring drug use, showing construct validity, external validity, and internal validity (O'Malley, Bachman, & Johnston, 1983) as well as test-retest reliability (Ali, Awwad, Babor, Bradley, Butau, et al., 2002). In this study, use of alcohol, cigarettes, and marijuana served as outcome measures of drug use, given that these three drugs have the highest rates of use among high school students (Johnston, O'Malley, & Bachman, 2002).

Internalizing and externalizing symptoms. The internalizing and externalizing scales of the Youth Self Report (YSR), a 112-item measure (Achenbach & Rescorla, 2001), were used to determine symptom severity. The three alternative responses to each item were as follows: 0 "Not True", 1 "Somewhat or Sometimes True, and 2 "Very True or Often True". Internalizing symptoms were computed using the YSR subscales Anxious-Depressed, Withdrawn-Depressed, and Somatic, whereas externalizing symptoms consisted of Rule Breaking and Aggressive Behavior subscales. This widely used measure has been shown to be reliable and valid (Achenbach & Rescorla, 2001). In this study, Cornbach's alpha coefficients for girls and boys, respectively, were as follows: Anxious-Depressed .78 and .86, Withdrawn-Depressed .72 and .76, Somatic .70 and .85, Rule Breaking .68 and .77, and Aggressive Behavior .82 and .82. For the combined internalizing subscale, there was good internal consistency, as measured by coefficient alpha .85 for girls and .92 for boys; the same was true for the combined externalizing subscale, with coefficient alpha of .84 for girls and .88 for boys.

Academic outcomes. A *cumulative grade point average* (GPA) was calculated for each student using grades from four classes (English, Math, Science, and Social

Studies) from the previous three school-year quarters. GPA was used as an indicator of academic achievement. Letter grades were re-coded such that a grade of A+ received a score of thirteen and a grade of F received a score of one.

Scholastic Aptitude Test (SAT) scores assess a high school student's academic college readiness. The SAT is a standardized test taken by high school students in the United States and is a widely used criterion for college admissions. When SAT data were collected in this study, tests were scored by ETS on a scale from 400 to 1600, higher scores equating to higher college readiness.

Statistical Analyses

Mplus 7.11 (Muthén & Muthén, 2013) was used to evaluate the extent to which the models fit the data within a structural equation model framework. Two classes of analyses were performed. The first was a series of confirmatory factor analyses (CFA) examining the factor structure of the class play. The second was a series of structural models predicting 12^{th} grade outcomes from middle school peer reputations (i.e. from the class play measures). Variance-covariance matrices were analyzed to estimate parameters for the measurement model and later to estimate parameters for both the measurement and structural models. To evaluate the goodness of fit of each model, root mean square error of approximation (RMSEA), comparative fit index (CFI), standardized root mean square residual (SRMR) or weighted root mean square residual (WRMR), and chi-square tests were used. Adequate fit was based on the following cut-off scores: RMSEA < .08 and CFI > .95, SRMR < .05, and WRMR < 1.0 (Hu & Bentler, 1999; Yu & Muthén, 2002).

Results

The results section is organized into three parts: missing data, measurement model, and structural equation models.

Missing Data

Of the original 356 participants with data from 6th, 7th, or both grades, 147 cases were eliminated because data were not collected in 12th grade. To test for attrition bias, 186 participants with 12th grade data were compared to 133 participants without 12th grade data on grade 6 variables (N=319). No evidence of selective attrition was found based on 6th grade GPA ($t(317) = -1.37$, $p = .17$), depression symptoms ($t(313) = 0.91$, $p = .37$), anxiety symptoms ($t(310) = -0.36$, $p = .72$), or delinquency ($t(308) = 0.28$, $p = .78$). Substance use was almost nonexistent in 6th grade so was not used in attrition analyses. When comparing reputations in 6th grade, prosocial and isolated reputations did not differ between children who were retained in the study and children who left the study, $t(317) = -1.37$, $p = .17$; $t(317) = 0.33$, $p = .74$, respectively. However, differential attrition was found for popular ($t(317) = 2.35$, $p = .02$) and aggressive ($t(317) = 3.42$, $p < .01$) reputations, with both groups more likely to have dropped out, over time, than other peer reputation groups.

Cases that were missing peer reputation data from only one of the middle school grades, 6th or 7th grade, were handled in all analyses with full information maximum likelihood estimation (FIML) in Mplus 7.11 (Muthén & Muthén, 2013). Of the 186 sixth graders with 12th grade data, 10 were missing 7th grade peer reputation data, and 23

students who joined the study in 7th grade with 12th grade data were missing 6th grade peer reputation data.

Besides these 33 cases without an entire grade of data, all peer reputation data were complete. This is because the revised class play measure is based on nominations from peers, not on responses of the participant. Therefore, students with permission to participate in the study did not have to be present to be nominated by their peers for roles in the class play.

For the outcome variables, alcohol, cigarette, and marijuana use were each measured by a single question, and only one participant did not respond. The school provided student GPA and SAT scores of which 5 and 14 data points were missing, respectively. Substance use and academic outcomes missing data were handled with FIML estimation. Gender was available for all participants.

Finally, 0.5% of data were missing for the items of the internalizing and externalizing subscales of the YSR with 12 participants missing 1% to 15% of data and 1 participant missing 49% of data. For the 12 participants with less than 15% missing data, the YSR subscales were calculated with the items that were available. The case missing 49% of the YSR data did not have sufficient information to calculate subscale, and therefore was handled with FIML.

Measurement Model

Factor analytic research on the RCP supports a four factor model (Luthar & McMahon, 1999; Realmuto, August, & Hektner, 2000; Zeller, Vannatta, Schafer, & Noll, 2003; Gest, Sesma, Masten, Tellegen, 2006). In an exploratory factor analysis by Luthar

& McMahon (1996), four reputations emerged in a sample of diverse high school adolescents. Moreover, Zeller and colleagues (2003) performed a confirmatory factor analysis with a large sample of elementary, middle, and high school students and found the data did not fit the originally proposed three-factor model well. Exploring an alternative four-factor structure, these researchers found a much improved model fit. Based on this research, a model with four latent class variables was expected in both 6th and 7th grades. The observed items predicted to load on the four reputations were selected based on conceptual match to the known respective constructs and previous factor analytic work by Luthar and McMahon (1996) and Zeller and colleagues (2003).

The measurement model for the class play was a four factor model that characterized middle school peer reputations: popular, prosocial, isolated, and aggressive. Four observed items served as indicators of each of the four latent factors. The observed items were the standardized number of nominations a student received on each item of the play. Items were standardized within each gender and classroom size at each grade (Luthar & McMahon, 1996). Tables 1 and 2 show the items hypothesized to compose each reputation along with the mean, standard deviation, skew and kurtosis of each item. Correlations among the 16 items within each grade are shown in Tables 3 and 4. Maximum likelihood estimation (specifically FIML) was used as the estimation method given that the skew and kurtosis of the individual items of the class play were within the cutoffs provided by West, Finch, and Curran (1995) as acceptable for use with maximum likelihood estimation, that is, skew less than or equal to 2 and kurtosis less than or equal to 7.

Initial confirmatory factor analysis. The class play measure allowed for multiple nominations per student, producing more than one nonzero peer reputation per child; therefore, it was determined a priori that the latent variables would be allowed to covary in the model as shown in Figures 1 and 2. To identify the model, variances of the latent variables were set to equal one. The initial CFAs were estimated on 6th and 7th grades separately; identical models were estimated in the two grades.

Hypothesized four-factor models for 6th and 7th grades. The 6th grade model exhibited inadequate fit ($\chi 2$ (98, N = 186) = 239.90, $p < .01$; CFI = .91; RMSEA = .09 [90% CI = .07, .10]; SRMR = .08). Although the 7th grade model exhibited better fit ($\chi 2$ (98, N = 199) = 148.62, $p < .01$; CFI = .97; RMSEA = .05 [90% CI = .03, .07]; SRMR = .07), it was still considered only adequate. The factor loadings for the 6th and 7th grade models are shown in Tables 5 and 6 along with composite reliabilities. Composite reliabilities were calculated by dividing the sum of the squared standardized factor loadings by the sum of squared standardized factor loadings plus the sum of the residual error variances according to Raykov's (1997) suggested equation.

One modification index indicated that two items that loaded on the aggressive reputation factor were more highly correlated with one another than was implied by the factor loadings, specifically, "picks on other kids" and "teases other children too much". These items appeared conceptually very similar and consequently one was removed from the model ("picks on other kids"). Modifications for another item suggested crossloadings on the other factors. This item ("will wait their turn") was also removed.

Respecified model. The accepted modifications changed the number of measured items per grade to 14 (4 popular, 4 isolated, 3 prosocial, 3 aggressive) as shown in Figures 3 and 4. The model fit in 6th grade was much improved ($\chi 2$ (71, N = 186) = 116.04, $p < .01$; CFI = .97; RMSEA = .06 [90% CI = .04, .08]; SRMR = .05) as well as in 7th grade ($\chi 2$ (71, N = 199) = 87.24, $p = .09$; CFI = .99; RMSEA = .03 [90% CI = .00, .06]; SRMR = .04); according to these fit indices both models fit the data well with all items loading on their anticipated factors in each grade (see Tables 7 and 8). The factor loadings for popular reputation ranged from .77 to .86 in 6th grade and .82 to .92 in 7th grade. Loadings for prosocial reputation ranged from .73 to .80 and .59 to .66 in 6th and 7th grades, respectively. Isolated reputation factor loadings ranged from .73 to .92 in 6th grade and .69 to .94 in 7th grade. For aggressive reputation, loadings ranged from .64 to .72 and .63 to .84 in 6th and 7th grades, respectively. Composite reliabilities for each factor are also included in Tables 7 and 8.

Intercorrelations of the latent factors across the two grades were high, popular $r = .65$, prosocial $r = .75$, aggressive $r = .76$, and isolated $r = .65$, supporting temporal consistency of the constructs.

Invariance analyses. In order to create a single model that included both 6th and 7th grade peer reputations, a test of temporal configural invariance and a test of temporal weak (loading) invariance were conducted. Models that are temporal configural invariant and temporal loading invariant can be said to measure the same construct at different time points. Configural invariance requires items to load on the same factors in the two

grades, whereas loading invariance requires the loadings of the items to be the same in the two grades.

The temporal configural invariance tests of the models estimated that the same items would load on each factor in 6th grade and in 7th grade. Tests were performed separately for each of the four peer reputations. The 6th and 7th grade latent factors were allowed to covary, and error terms of corresponding items (e.g. 'polite' in 6th grade and 'polite' in 7th grade) were allowed to correlate. These models which constrained the same three to four items to load on the same factor in 6th and 7th grade fit the data adequately. Fit statistics of the models are displayed in Table 9.

Temporal weak invariance tests of the models were also performed separately for each reputation. These models constrained the factor loadings of corresponding items to be equal across the 6th and 7th grades. Once again, latent factors were allowed to covary and error terms of corresponding items were allowed to correlate. Fit statistics for the weak invariance tests are included in Table 9 and suggest adequate fit of the model to the data, implying that the same construct is measured by the same items in each grade.

After establishing configural and loading invariance across the two time points, the same tests were performed for gender. A total of eight models were needed to test configural invariance and eight models were needed to test weak invariance between boys and girls separately for each reputation at each grade level. The gender configural invariance tests estimated that the same items would load on each reputation for both boys and girls (stacked models). Gender weak invariance tests constrained the factor loadings to be equal in the boys' and girls' models for each reputation at each grade. Fit

statistics for these models are also shown in Table 9 and suggest adequate fit of the models. The same construct can be assumed to be measured by the class play for both boys and girls allowing both genders to be included in the same model.

Specification of combined-grades model. Items loading on each reputation in each grade were summed separately to create four reputation scale scores per grade level. Correlations of 6th and 7th grade items are shown in Table 10. This strictly data-based approach (i.e., unit weighting of items with high loadings) was used in accordance with the findings of Grice (2001) for small sample sizes.

As shown in Figure 5, the reputation scale scores in the 6th and 7th grades became the indicators of the latent class play factors for the new model. In the new model, the unstandardized latent factor loadings for the pairs of 6th and 7th grade reputation scale scores (e.g. 6th grade popular and 7th grade popular) were constrained to be equal. This constraint was necessary for model identification given that there were only two indicators per factor. Intercorrelations of the reputation scale scores in 6th and 7th grades are presented in Table 11.

Variances of the latent variables were specified to equal one and the latent variables were allowed to covary. The 6th grade measured indicators of the four constructs were permitted to correlate to account for shared time of measurement. The same was done for the 7th grade indicators.

The combined-grades model fit the data well ($\chi 2$ (6, N = 209) = 8.42, p = .21; CFI = .99; RMSEA = .04 [90% CI = .00, .11]; SRMR = .04) without further adjustments to the model. As presented in Table 12, standardized factor loadings were greater than .50

for 6th and 7th grade reputation scores, respectively: popular, .80 and .70; prosocial, .72 and .77; isolated, .78 and .75; and aggressive, .81 and .77; and all were statistically significant ($p < .01$), supporting the predicted model.

The latent variables from the combined-grades model were used in all subsequent structural equation models (SEMs). All factors were specified with the same basic structure including error term covariances as described in the CFA for the combined-grades model.

Structural Equation Models

A total of seven path models were used to predict adjustment outcomes at grade 12 from the four class play scores (see Figure 6). Continuous outcomes included academic achievement (GPA and SAT scores) and psychopathology (internalizing and externalizing), and ordered categorical outcomes included alcohol, cigarette, and marijuana use.

Descriptive data. Descriptive statistics of the adjustment outcome variables are reported in Table 14, including the percent of the sample which reported zero use for the substance variables. Estimated correlations based on the SEM were generated for the adjustment outcome variables and peer reputation latent constructs are presented in Table 15. All peer reputation latent factor intercorrelations were significant at $p < .05$ with the exception of the correlation between isolated and aggressive (Table 13).

GPA and SAT scores in 12th grade were positively correlated with prosocial reputation and negatively correlated with aggressive reputation. On the other hand, 12th grade externalizing symptoms were negatively correlated with prosocial reputation and

positively correlated with aggressive reputation. Internalizing symptoms in 12th grade were uncorrelated with middle school peer reputation.

All four peer reputations were correlated with 12th grade cigarette use, positively with popular and aggressive reputations and negatively with prosocial and isolated reputations. Alcohol and marijuana use were both positively correlated with popular reputation and negatively correlated with isolated reputation.

Externalizing symptoms were positively associated with internalizing symptoms, and all substance use outcomes. Internalizing symptoms were positively associated with cigarette use. As would be expected, 12th grade GPA and SAT scores were highly positively correlated. GPA was also negatively associated with externalizing symptoms, cigarette use, and marijuana use. SAT scores were negatively correlated with cigarette use. Substance use outcomes were all positively correlated.

Continuous outcomes model fit. Fit indices supported adequate model fit for the path analyses with continuous variables[1]: GPA, $\chi 2$ (10, N = 209) = 10.86, p = .37; CFI = .99; RMSEA = .02 [90% CI = .00, .08]; SRMR = .04; SAT, $\chi 2$ (10, N = 209) = 9.94, p = .45; CFI = 1.00; RMSEA = .00 [90% CI = .00, .08]; SRMR = .03, internalizing symptoms, $\chi 2$ (10, N = 209) = 10.67, p = .38; CFI = .99; RMSEA = .02 [90% CI = .00,

[1] Analyses for the internalizing and externalizing variables were conducted with two different estimators. Besides maximum likelihood (ML) estimation, maximum likelihood robust (MLR) estimation was used given that skew and kurtosis for the two variables were close to the cutoff scores provided by West, Finch, and Curran (1995) as acceptable for use with maximum likelihood estimation, that is, skew less than or equal to 2 and kurtosis less than or equal to 7. The models converged and results using ML estimation are reported.

.08]; SRMR = .04, and externalizing symptoms, $\chi 2$ (10, N = 209) = 12.17, p = .27; CFI = .99; RMSEA = .03 [90% CI = .00, .09]; SRMR = .04.

Categorical outcomes model fit. For categorical outcomes, path models specified an ordered categorical dependent variable and were estimated with weighted least squares means and variances adjusted (WLSMV) estimator[2] (Yu & Muthén, 2002). Fit statistics from the WLSMV models suggested that the models fit the data adequately: alcohol ($\chi 2$ (10, N = 209) = 20.59, p = .03; CFI = .97; RMSEA = .07 [90% CI = .03, .12]; WRMR = .49), cigarettes ($\chi 2$ (10, N = 209) = 18.19, p = .05; CFI = .98; RMSEA = .06 [90% CI = .00, .11]; WRMR = .46), and marijuana ($\chi 2$ (10, N = 209) = 18.47, p = .05; CFI = .98; RMSEA = .06 [90% CI = .01, .11]; WRMR = .46).

Path coefficients predicting each 12th grade outcome from the four class play constructs. Path coefficients for all seven models are shown in Table 16. GPA, SAT score, and externalizing symptoms were predicted only by prosocial reputation: a prosocial reputation in middle school predicted a higher GPA, higher SAT score, and fewer externalizing symptoms in 12th grade. Middle school reputation did not predict internalizing symptoms in 12th grade.

All four middle school peer reputations were predictive of 12th grade alcohol use. A popular reputation was connected to an increased frequency of alcohol use. Prosocial, isolated, and aggressive reputations were associated with a lower frequency of alcohol use.

[2] Two types of models were run for each of the three substance use variables: a model which specified the variable as an ordered categorical dependent variable and a model which specified the variable as a continuous dependent variable. The two models converged and results from the ordered categorical dependent model are reported.

For cigarette and marijuana use, both prosocial and isolated peer reputation predicted a lower frequency of use. Popularity was marginally significant for both cigarettes and marijuana, predicting increased probability of use.

An apparently anomalous negative prediction of alcohol use by aggressive reputation was observed, as was a trend toward negative prediction of marijuana use as well. These anomalous negative path coefficients are attributable to statistical suppression, with aggressive reputation serving as a suppressor variable. As shown in Table 15, aggressive reputation manifested small, nonsignificant model estimated positive correlations with alcohol and marijuana use (r=.06, .07, respectively) while being substantially correlated with both popular and prosocial reputation (r= .33, -.47, respectively). When aggressive reputation was included as a predictor of alcohol use in the model containing all the reputation latent variables, the standardized path coefficient for popular (path coefficient =.46) exceeded its correlation with alcohol use (r=.35). In turn, aggressive reputation manifested a negative path (path coefficient = -.31) that exceeded its correlation with alcohol use (r=.06) and was of reversed sign of this close to zero correlation coefficient. This pattern well represents the general pattern of statistical suppression (Tzelgov & Henik, 1991). The suppression effect can be interpreted to mean that aggressive reputation is partialed out of the popular reputation, and that this partialed measure of popular reputation unconfounded with aggressiveness predicts alcohol use.

Discussion

Consistent with prior work, our analyses supported a four factor model of the Revised Class Play, and dimensions of middle school peer reputation were significantly

related to multiple adjustment outcomes several years later on the cusp of high school graduation. Most importantly, a middle school peer reputation of high prosocial behavior was associated with relatively good academic outcomes, low psychopathology symptoms, and low substance use, by late adolescence. A peer reputation of isolated was also associated with relatively low substance use, whereas a reputation of popularity connoted greater risk for use of drugs and alcohol several years later, in the final year of high school.

Prosocial Reputation

A prosocial reputation in middle school was associated with healthy adjustment outcomes later in life. Consistent with previous work, a prosocial reputation was negatively related to externalizing symptoms and positively related with formal measures of academic outcomes, both GPA and SAT, in late adolescence. Additionally, this research uncovered the novel finding that a prosocial middle school peer reputation had a negative relationship with alcohol, cigarettes, and marijuana use in 12th grade according to model path coefficients, further supporting the notion that being viewed as prosocial by peers can be beneficial for later adjustment.

One reason a prosocial reputation may be associated with positive future outcomes is that prosocial *behaviors* are associated with positive adjustment. For example, prosocial spending has been linked to increased well-being among individuals in both rich and poor countries (Aknin, Barrington-Leigh, Dunn, Helliwell, Burns, et al., 2013). Helping others is also associated with better levels of mental health, (Schwartz, Meisenhelder, Yusheng, & Reed, 2003) such as fewer symptoms of depression (Musick

& Wilson, 2003), greater life satisfaction, and higher self-esteem (Weinstein & Ryan, 2010). Additionally, a positive relationship seems to exist between children's prosocial behavior and academic accomplishments (Caprara, Kanacri, Gerbino, Zuffiano, Alessandri, et al. 2014; Arnold, Kupersmidt, Voegler-Lee, & Marshall, 2012).

Not only prosocial behaviors, but the values underlying the behaviors of young people with prosocial reputations may foster well-being. In an environment where competition is rife and getting ahead is everything (Luthar, Barkin, & Crossman, 2013), affluent youth who value helping others and showing kindness, rather than personal gain and status, may in some way be protected from a subcultural risk. For instance, prosocial values have been shown to be negatively associated with delinquency, drug use, and risky sexual behavior among diverse groups of adolescents (Ludwig & Pittman, 1999) suggesting that valuing prosocial activities decreases the likelihood of risk-taking behavior. Furthermore, prosocial values have been tied to intrinsic values such as friendship, community, and personal growth, which are thought to fulfill basic psychological needs, whereas extrinsic values such as status and wealth are less likely to meet these needs (Sheldon, Ryan, Deci, & Kasser, 2004). In the United States, where youth place great importance on extrinsic goals such as attaining money and fame (Twenge & Kasser, 2013), a greater focus on intrinsic goals such as building relationships and gaining knowledge may be a key part in improving the well-being of adolescents.

Popular Reputation

Many middle school children do not actively strive for a prosocial reputation, but instead endeavor to be viewed as popular (Cillessen, Schwartz, & Mayeux, 2011). As the peer relationship literature suggests, popularity can be helpful or harmful to adolescent well-being depending on the outcome being studied. For example, the social skills needed to attain a popular status are considered beneficial to social functioning (Gest et al., 2006), but the association of popularity with delinquent behavior and drug use can be damaging to adjustment (Allen et al., 2005; López-Romero & Romero, 2010). Model path coefficients as well as Pearson product-moment correlations suggest a popular reputation is positively associated with drug use in late adolescence but unrelated to internalizing, externalizing, or academic outcomes among affluent youth.

The relationship between drug use in 12th grade and pre-adolescent popularity may derive from third variables that assist youth in gaining a popular reputation and also increase risk for drug use or delinquent behavior. For instance, children in 6th and 7th grades who have less parental monitoring or who spend time with older children may be viewed as popular by peers and also may be at greater risk for drug use in the future (Dishion, Nelson, & Kavanagh, 2003; Sampson & Laub 2003).

Alternatively, according to Reputation Enhancement Theory, as youth develop a reputation among their peers, their behavior is not only influenced by their emerging identities, but also by the desire to maintain that identity (Emler & Reicher, 1995). In accordance with this theory, children who gain a popular reputation may behave in ways that meet with peer approval, such as drug use. Indirectly, popular children seeking to maintain their high social standing may behave in ways that put them at greater risk for

substance use, including seeking out friendships with older children and disregarding authority figures (López-Romero & Romero, 2011; de Bruyn & Cillessen, 2006).

Isolated Reputation

Peer reputations of isolated are generally viewed as connoting risk for later maladjustment, but our findings showed that this type of reputation can actually be protective against experimentation with substances. An isolated reputation was nonsignificant in relation to internalizing, externalizing, and academic outcomes, but results of the study revealed a significant negative relationship between an isolated reputation and frequency of using alcohol, cigarettes, and marijuana at the end of high school.

Limited interactions with peers may be one possible explanation for this relationship. Specifically, reduced peer interaction may decrease the risk of using substances as there is less opportunity for contagion of high-risk behaviors and unmonitored time by adults (Dishion, Nelson, & Kavanagh, 2003; Tani, Chavez, & Deffenbacher, 2001; Kramer & Vaquera, 2011). These low levels of high school substance use could have a major beneficial impact on youth with isolated reputations given that the age of initial use for alcohol and other drugs is associated with future substance dependence, such that the younger the initial age of use, the greater the odds of a substance use disorder as an adult (Pitkänen, Lyyra, & Pulkkinen, 2005; Grant & Dawson, 1998; Grant & Dawson, 1997).

Whereas several past studies have shown that youth who are isolated from peers are at greater risk for elevated internalizing problems (Hall-Lande et al., 2007; Gest et al.,

2006; Realmuto et al., 2000), the current findings did not show an association between isolated peer reputation and internalizing symptoms. Importantly, our study differed from prior work in several ways, including the use of a longitudinal design. In addition, the methods of measuring peer isolation varied in past studies, possibly capturing different constructs. It is also possible that the *reason* children are seen as isolated may be more important than the peer reputation of isolated. Work by Gest and colleagues (2006) showed that subcategories existed within the isolated peer reputation (sad-sensitive, shy-withdrawn, and peer isolated) and that the different subcategories predicted different relationships with adjustment outcomes. An isolated peer reputation due to voluntary withdrawal from social interactions had different implications for internalizing symptoms than an isolated reputation due to active rejection by peers. Although our findings suggest no significant relationship between the entire category of isolated peer reputation and internalizing problems, this does not preclude more complex relationships existing between different types of isolated students and internalizing symptoms.

Aggressive Reputation

Unexpectedly, model path coefficients from an aggressive reputation in middle school to internalizing symptoms, externalizing symptoms, academic outcomes, and cigarette use were nonsignificant. Although aggressive reputation showed a significant negative path coefficient to alcohol use and a marginally significant path coefficient to marijuana use in 12th grade, there is evidence for statistical suppression. Pearson product-moment correlations revealed a different association. An aggressive reputation was significantly negatively correlated with both academic outcomes, GPA and SAT;

was significantly positively correlated with externalizing symptoms and cigarette use, and had nonsignificant correlations with alcohol and marijuana use.

These findings support the idea that when viewed independently, aggressive reputation is related to lower academic achievement and more externalizing symptoms and cigarette use. However, when aggressive reputation is placed in a model that also includes popular, prosocial, and isolated reputation, there is no added prediction over and above the other reputations. This finding should be treated with caution, however, bearing in mind that some youth with aggressive reputations did not complete the study (selective attrition), leaving uncertainty about the exact relationships with adjustment outcomes at grade 12. A possibility that might be considered in future research is that stronger links might be found for reputations of aggression that are relational in nature.

Internalizing Symptoms

Our findings indicated that internalizing symptoms in 12th grade did not relate to any of the peer reputation dimensions in middle school. Thus, our findings suggest that early adolescent peer reputation plays a limited role in the development of internalizing symptoms several years later. Instead, perceptions of peers and parents in terms of how they treat the child, as reflected in feelings of victimization by peers and criticism by parents, may impact internalizing symptoms to a much greater degree than being known as prosocial or isolated (see Arseneault, Bowes, & Shakoor, 2010; Luthar, Shoum, & Brown, 2006; Luthar & Latendresse, 2005). In sum, it is possible that concurrent links exist between peer reputation dimensions in middle school and internalizing symptoms but a long-term risk for elevated symptoms of depression or anxiety may not.

Correlations among Reputations

Although peer reputations differ in their relationships with adjustment outcomes, it is notable that peer reputations are not independent from one another suggesting children are not viewed as one-dimensional by their peers in terms of reputation. All correlations among peer reputations were significant with the exception of isolated and aggressive. For example, prosocial and popular reputations were positively correlated. This may most closely resemble the sociometric status of "most liked" – children who have many friends and are also helpful and cooperative (Cillessen & Rose, 2005).

Popular and isolated were strongly negatively correlated, as might be expected, as popularity includes attributes like 'having many friends' whereas isolated includes "has trouble making friends". Prosocial and isolated reputations were also, unsurprisingly, negatively correlated. Researchers suggest that individuals who feel alone or socially excluded are less likely to behave in a prosocial manner (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007; Wentzel & McNamara, 1999).

Additionally, popular and aggressive reputations were positively correlated as suggested by past research (LaFontana & Cillessen, 2002). Cillessen and Rose (2005) found that popular youth are savvy with social interactions, learning when to be kind and when to employ aggression to maintain their social standing, leading to an association between popularity and aggression.

On the other hand, prosocial and aggressive reputations were negatively correlated. Whereas admiration, an attribute of popularity, and aggression can both be present in relation to social prominence (Becker & Luthar, 2007), it is, arguably, more

difficult to be both liked, an attribute of prosocial reputation, and aggressive (Hawley, Little, & Card, 2007).

Finally, isolated and aggressive reputations were uncorrelated, possibly because some aggressive children are rejected by peers whereas another set of aggressive children interact often with peers (Schwartz, 2000) leading to an inconclusive relationship between aggressive and isolated reputations.

Limitations, Implications, and Future Directions

Generalizability of the current study is limited given the participants came from one school, were mostly Caucasian, and raised in relatively affluent families. Furthermore, a moderate retention rate of the original sample of 6th and 7th graders at grade 12 assessments may increase the risk for bias, although there was no evidence of selective attrition based on 6th grade GPA, depression symptoms, anxiety symptoms, or delinquency. Differential attrition of youth with popular and aggressive reputations may have precluded detection of some associations for these two subgroups that did in fact exist, but did not achieve statistical significance due to limited power.

Offsetting these weaknesses are several strengths of the study. The measurement approach involved multiple informants and included peer ratings over two middle school years for peer reputation. Adjustment indicators spanned subjectively experienced distress, official grade point average, and scores on a standardized national examination, the SAT. The use of SAT scores is particularly important given the emphasis placed on academic achievement among youth, specifically affluent youth. The longitudinal design

further strengthened the study and encompassed the developmentally critical years from preadolescence to late adolescence.

Confirmatory factor analyses attested to the four-factor structure of peer reputation dimensions, and structural invariance testing was completed across both gender and grades. These analyses allowed for the inclusion of both 6th grade and 7th grade peer reputation data to create inclusive middle school reputations. To our knowledge, psychometric work of this kind has not been completed for the RCP.

Study findings corroborated some associations previously noted in the literature and also demonstrated several new associations, important from both a conceptual and practical perspective. Especially noteworthy in this regard are associations showing that what is ostensibly "positive" peer reputation – popularity – connotes risk for frequent substance use several years later, whereas what is thought of as negative – isolated reputation – can mitigate risk for frequent substance use. Future research with diverse samples is needed to understand the impact of peer reputation across socioeconomic status and ethnicity, but our findings are important as preliminary work on the relationship between peer reputation and substance use.

Perhaps most important are the findings on the long term ramifications of prosocial behavior. In operationalizing "wellness" among children and adolescents, resilience researchers have exhorted greater consideration of behaviors that reflect kindness, altruism and doing for the greater good (Luthar, Lyman, & Crossman, 2014). The present findings show that such behaviors, as judged by peers in their everyday

environments, can reflect salutary effects for the children behaving prosocially over the course of several years.

From an intervention perspective, it could be useful to share these findings with parents of middle schoolers. The transition to junior high brings several significant developmental challenges for children, including intense preoccupation with their status in the eyes of their peers (Cillessen, Schwartz, & Mayeux, 2011) and, with increasing independence from parents, greater opportunities to engage in at-risk behaviors such as experimenting with substance use (Steinberg, 2004). Concomitant with the angst experienced by preteens is parallel stress in their parents (Luthar & Ciciolla, 2016). It could be somewhat reassuring for parents to know that if their children tend to be on the fringes of the high status or popular group, then this can actually indicate some relatively positive outcomes over time, such as low experimentation with drugs and alcohol.

Also likely useful would be dissemination of our findings on prosocial behaviors specifically within upper middle class settings. In high achieving schools where competition is widespread, there tends to be benefits to youth when their own parents are perceived as valuing their decency and kindness every bit as much as their grades and achievements (Ciciolla, Curlee, & Luthar, under review). If parental values of prosociality are translated into children's actual everyday behaviors, there can, apparently, be significant benefits not only for their psychological adjustment but also for what is so highly prized in such communities – high academic grades and SAT scores. Thus, encouraging parents to model prosocial behaviors could improve their children's chances of adaptive functioning and, even, material success.

Future studies should address the issue of generalizability by seeking out participants from ethnic minority groups as well as different socioeconomic backgrounds. It would also be useful for future research to evaluate the impact of middle school peer reputation on participants who have entered adulthood to determine the long-term effects of youth peer reputations. It is possible that significant long term benefits exist for preteens able to maintain everyday prosocial behaviors even when this may not be "cool" in the eyes of the wider peer group.

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APPENDIX A

REVISED CLASS PLAY

Revised Class Play
Instructions for administration

What we'll be doing today is having you pretend you are going to direct a play. Other students your age have enjoyed doing this; we think you might enjoy it too.

Now what we want each of you to do is to pretend that you are a director of a play starring the students in this classroom. The director of a play has to do many things, but the most important job is to select the right people to act in the play. So, your job is to choose the students who could play each part or role best. Try to pick the students who seem to fit each part in real life.

For each question you can choose one, two, or three people for each role. Since some students may fit more than one role, you may choose the same person for more than one part. That's fine, as long as you think carefully about your choices.

As the director of the play, you would be too busy to play a part, so you can't choose a part for yourself.

Each of you is to work on this by yourself. Don't show the other kids your choices and please don't talk about your choices out loud.

Now, before we start, look at this example. The first role is: "is a good leader." I can choose one, two, or three people for this role. Let's say I thought Tom, Mary, and Joe were the best people to play this role. I would put a circle around each of their names and the numbers next to their names, like this (demonstrate). Remember to circle all the way across.

If you have any problems or questions as we go along, just raise your hand and one of us will help you.

Now let's get started. There are thirty-nine roles in this play, and each role will be read out loud. We are going to read all the roles out loud even though it takes a little longer that way, so everyone has time to think about each role and choose carefully. Also, this way, everyone finishes at the same time. Be sure to wait for the next role to be read before choosing someone for that part.

The first role is: someone who could play the part of a person who "is a good leader." Look down the list of names, and find one, two, or three people who you think should play that role, and remember – you can't choose yourself.

APPENDIX B

SUBSTANCE USE GRID

USE

The next section of this survey is a short list of questions about cigarettes, alcohol, and other drugs you may have used **during the past year and during the last 30 days**. Please answer each question honestly. Remember your answers will be kept private, and the information you give us will help us understand what is happening with young people during their teenage years.

On how many occasions (if any) have **you**:	0 Never	1-2 Times	3-5 Times	6-9 Times	10-19 Times	20-39 Times	40+ Times
1. Smoked cigarettes or used smokeless tobacco							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
2. Sniffed glue, or inhaled other gases, fumes, or sprays to get high							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
3. Had alcohol (including beer, wine, and liquor) to drink--more than just a few sips							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
4. Been drunk or very high from drinking alcohol							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
5. Used marijuana (grass, pot, weed) or hashish (hash)							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
6. Used crack or cocaine in any other form, or heroin							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
7. Used LSD (acid) or other psychedelics (like PCP, mescaline, peyote)							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
8. Used club drugs such as Ecstasy, or Ketamine ("Special K")							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○

For items 9-12 below please describe how frequently you have used the drug listed <u>without a doctor's prescription.</u>

On how many occasions (if any) have **<u>you</u>**:	**0 Never**	**1-2 Times**	**3-5 Times**	**6-9 Times**	**10-19 Times**	**20-39 Times**	**40+ Times**
9. Taken uppers or speed (amphetamines, Ephedrine)							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
10. Taken downers or pain killers (barbituates, OxyContin), or tranquilizers (Librium, Valium)							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
11. Taken steroids							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○
12. Used Ritalin or Adderol							
…during the last 12 months?	○	○	○	○	○	○	○
…during the last 30 days?	○	○	○	○	○	○	○

Table 1.

Distribution of 16 items from the RCP at 6th Grade

	M	*SD*	Skew (SE)	Kurtosis (SE)
Popular				
has many friends	1.87	2.85	1.83 (.18)	3.04 (.36)
everyone listens to	1.41	2.15	1.43 (.18)	1.43 (.36)
makes new friends easily	1.61	2.08	1.15 (.18)	.72 (.36)
everyone likes to be with	1.62	2.38	1.35 (.18)	1.77 (.36)
Prosocial				
plays fair	1.82	1.84	.90 (.18)	.13 (.36)
polite	1.93	2.35	.98 (.18)	.29 (.36)
will wait their turn	1.89	1.76	.59 (.18)	-.37 (.36)
helps other people when they need it	2.02	1.99	.77 (.18)	-.02 (.36)
Isolated				
rather play alone than with others	1.11	2.50	1.98 (.18)	3.64 (.36)
has trouble making friends	1.46	3.08	1.97 (.18)	3.28 (.36)
can't get others to listen	1.29	2.35	1.69 (.18)	2.68 (.36)
often left out	1.52	3.12	1.97 (.18)	3.14 (.36)
Aggressive				
interrupts when other children are speaking	1.12	2.29	1.92 (.18)	3.28 (.36)
gets into a lot of fights	1.04	2.10	1.84 (.18)	2.61 (.36)
teases other children too much	1.04	2.28	1.95 (.18)	3.31 (.36)
picks on other kids	1.00	2.17	2.37 (.18)	5.83 (.36)

Table 2.

Distribution of 16 items from the RCP at 7th Grade

	M	*SD*	Skew (SE)	Kurtosis (SE)
Popular				
has many friends	1.94	3.44	1.78 (.17)	2.28 (.34)
everyone listens to	1.39	2.21	1.58 (.17)	1.76 (.34)
makes new friends easily	1.74	2.51	1.49 (.17)	1.47 (.34)
everyone likes to be with	1.63	2.55	1.68 (.17)	2.23 (.34)
Prosocial				
plays fair	1.81	1.64	.62 (.17)	-.26 (.34)
polite	2.03	2.09	.80 (.17)	-.04 (.34)
will wait their turn	2.11	2.04	.65 (.17)	-.33 (.34)
helps other people when they need it	1.94	1.92	.63 (.17)	-.38 (.34)
Isolated				
rather play alone than with others	1.06	2.09	1.68 (.17)	1.96 (.35)
has trouble making friends	1.39	2.80	1.92 (.17)	2.94 (.34)
can't get others to listen	1.36	1.99	1.30 (.17)	.92 (.34)
often left out	1.45	2.57	1.70 (.17)	2.22 (.34)
Aggressive				
interrupts when other children are speaking	1.26	2.75	1.88 (.17)	2.61 (.34)
gets into a lot of fights	0.93	1.83	1.74 (.17)	2.60 (.34)
teases other children too much	0.99	2.02	1.68 (.17)	1.99 (.35)
picks on other kids	1.00	1.99	1.78 (.17)	2.69 (.34)

Table 3.

Within-Grade Pearson Product-moment Correlations: 16 Items of the RCP in 6th Grade

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. has many friends	-														
2. everyone listens to	**.71**	-													
3. makes new friends	**.78**	**.68**	-												
4. everyone likes	**.80**	**.72**	**.78**	-											
5. plays fair	**.25**	**.41**	**.35**	**.45**	-										
6. polite	**.25**	**.39**	**.29**	**.44**	**.65**	-									
7. will wait their turn	.00	.14	.08	.13	**.52**	**.67**	-								
8. helps other people	**.38**	**.45**	**.46**	**.53**	**.61**	**.65**	**.45**	-							
9. rather play alone	**-.23**	**-.20**	**-.24**	**-.23**	-.12	-.11	-.03	**-.22**	-						
10. trouble making friends	**-.27**	**-.26**	**-.29**	**-.29**	**-.23**	**-.26**	-.12	**-.33**	**.79**	-					
11. can't get others to listen	**-.25**	**-.24**	**-.26**	**-.26**	**-.17**	**-.19**	-.11	**-.27**	**.71**	**.85**	-				
12. often left out	**-.29**	**-.27**	**-.31**	**-.29**	**-.22**	**-.23**	-.09	**-.31**	**.82**	**.93**	**.81**	-			
13. interrupts	.08	.09	.03	-.05	**-.23**	**-.27**	**-.32**	**-.21**	.02	.10	**.20**	.05	-		
14. gets into fights	.09	.07	-.02	-.03	**-.23**	**-.25**	**-.31**	**-.21**	**.15**	**.25**	**.27**	**.17**	**.60**	-	
15. teases other children	.07	.12	.03	-.07	**-.23**	**-.25**	**-.31**	**-.23**	-.04	.04	.10	-.04	**.68**	**.75**	-
16. picks on other kids	**.15**	**.18**	.06	.00	**-.19**	**-.19**	**-.31**	**-.21**	-.04	.00	.07	-.05	**.66**	**.70**	**.92**

Note. Bolded correlations are significant at the 0.05 level.

Table 4.

Within-Grade Pearson Product-moment Correlations: 16 Items of the RCP in 7th Grade

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. has many friends	-														
2. everyone listens to	**.76**	-													
3. makes new friends	**.83**	**.73**	-												
4. everyone likes	**.87**	**.80**	**.86**	-											
5. plays fair	-.02	.05	.08	.11	-										
6. polite	.04	.08	.16*	.11	**.38**	-									
7. will wait their turn	-.14	-.08	-.03	-.02	**.45**	**.69**	-								
8. helps other people	**.17**	**.22**	**.24**	**.21**	**.33**	**.52**	**.40**	-							
9. rather play alone	**-.26**	**-.21**	**-.25**	**-.24**	-.11	-.12	.03	-.07	-						
10. trouble making friends	**-.26**	**-.21**	**-.28**	**-.25**	**-.14**	**-.19**	.03	-.12	**.78**	-					
11. can't get others to listen	**-.24**	**-.22**	**-.25**	**-.22**	-.08	-.12	.08	-.14	**.57**	**.66**	-				
12. often left out	**-.29**	**-.25**	**-.29**	**-.26**	-.13	**-.19**	.04	**-.16**	**.77**	**.87**	**.72**	-			
13. interrupts	**.22**	**.31**	**.16**	**.26**	**-.17**	**-.29**	**-.35**	**-.17**	-.06	-.05	-.02	-.08	-		
14. gets into fights	**.17**	**.17**	.10	.11	**-.16**	**-.27**	**-.33**	**-.16**	.07	.05	-.04	-.01	**.61**	-	
15. teases other children	**.22**	**.25**	**.17**	**.20**	**-.17**	**-.32**	**-.38**	**-.28**	-.07	-.10	-.08	**-.14**	**.68**	**.73**	-
16. picks on other kids	**.22**	**.26**	**.17**	**.18**	**-.18**	**-.30**	**-.36**	**-.27**	-.09	-.09	-.08	-.12	**.64**	**.76**	**.90**

Note. Bolded correlations are significant at the 0.05 level.

Table 5.
The 6th Grade Standardized Factor Loadings on Peer Reputation Latent Constructs for the Initial Confirmatory Factor Analysis Model with Four Indicators per Factor

Popular				
has many friends	0.85			
everyone listens to	0.77			
makes new friends easily	0.86			
everyone likes to be with	0.85			
Prosocial				
will wait their turn		0.59		
plays fair		0.79		
polite		0.78		
helps other people when they need it		0.76		
Isolated				
rather play alone than with others			0.73	
has trouble making friends			0.89	
can't get others to listen			0.77	
often left out			0.92	
Aggressive				
interrupts when other children are speaking				0.54
picks on other kids				0.80
gets into a lot of fights				0.60
teases other children too much				0.87
Composite reliability	0.90	0.82	0.90	0.80

Note. Composite reliability calculated as suggested by Raykov (1997).
Latent variables were allowed to covary and latent factor variances constrained to one for identification.

Table 6.

The 7th Grade Standardized Factor Loadings on Peer Reputation Latent Constructs for the Initial Confirmatory Factor Analysis Model with Four Indicators per Factor

Popular				
has many friends	0.89			
everyone listens to	0.82			
makes new friends easily	0.89			
everyone likes to be with	0.91			
Prosocial				
will wait their turn		0.75		
plays fair		0.55		
polite		0.74		
helps other people when they need it		0.58		
Isolated				
rather play alone than with others			0.82	
has trouble making friends			0.90	
can't get others to listen			0.70	
often left out			0.94	
Aggressive				
interrupts when other children are speaking				0.65
picks on other kids				0.82
gets into a lot of fights				0.66
teases other children too much				0.85
Composite reliability	0.93	0.75	0.91	0.84

Note: Composite reliability calculated as suggested by Raykov (1997).
Latent variables were allowed to covary and latent factor variances constrained to one for identification.

Table 7.
The 6th Grade Standardized Factor Loadings on Peer Reputation Latent Constructs for Respecified Confirmatory Factor Analysis Model

Popular				
has many friends	0.85			
everyone listens to	0.77			
makes new friends easily	0.86			
everyone likes to be with	0.85			
Prosocial				
plays fair		0.78		
polite		0.73		
helps other people when they need it		0.80		
Isolated				
rather play alone than with others			0.73	
has trouble making friends			0.90	
can't get others to listen			0.77	
often left out			0.92	
Aggressive				
interrupts when other children are speaking				0.71
gets into a lot of fights				0.72
teases other children too much				0.64
Composite reliability	0.90	0.81	0.90	0.73

Note. Composite reliability calculated as suggested by Raykov (1997).
Two RCP items removed: 'will wait turn' and 'picks on other kids'.
Latent variables were allowed to covary and latent factor variances constrained to one for identification.

Table 8.
The 7th Grade Standardized Factor Loadings on Peer Reputation Latent Constructs for Respecified Confirmatory Factor Analysis Model

Popular				
has many friends	0.88			
everyone listens to	0.82			
makes new friends easily	0.89			
everyone likes to be with	0.92			
Prosocial				
plays fair		0.59		
polite		0.64		
helps other people when they need it		0.66		
Isolated				
rather play alone than with others			0.82	
has trouble making friends			0.90	
can't get others to listen			0.69	
often left out			0.94	
Aggressive				
interrupts when other children are speaking				0.69
gets into a lot of fights				0.63
teases other children too much				0.84
Composite reliability	0.93	0.67	0.91	0.77

Note. Composite reliability calculated as suggested by Raykov (1997).
Two RCP items removed: 'will wait turn' and 'picks on other kids'.
Latent variables were allowed to covary and latent factor variances constrained to one for identification.

Table 9.

Invariance Tests

	$\chi 2$ (df), *p*	CFI	RMSEA (*p)*	SRMR
Temporal Configural Invariance				
Popular	29.58 (15), .01	0.99	0.07 (.19)	0.03
Prosocial	5.60 (5), .35	0.99	0.02 (.62)	0.02
Isolated	36.88 (15), .00	0.98	0.08 (.05)	0.03
Aggressive	8.73 (5), .12	0.99	0.06 (.34)	0.03
Temporal Weak Invariance				
Popular	32.00 (18), .02	0.99	0.06 (.27)	0.03
Prosocial	6.98 (7), .43	1	0.00 (.73)	0.03
Isolated	39.54 (18), .00	0.98	0.08 (.09)	0.04
Aggressive	10.23 (7), .18	0.99	0.05 (.47)	0.03
6th Grade Gender Configural Invariance				
Popular	5.73 (7), .57	1	0.00 (.71)	0.02
Prosocial	0.38 (2), .83	1	0.00 (.86)	0.01
Isolated	18.34 (7), .01	0.98	0.13 (.04)	0.02
Aggressive	0.42 (2), .81	1	0.00 (.85)	0.01
6th Grade Gender Weak Invariance				
Popular	7.07 (10), .72	1	0.00 (.84)	0.03
Prosocial	0.97 (4), .91	1	0.00 (.94)	0.02
Isolated	25.67 (10), .00	0.97	0.13 (.02)	0.06
Aggressive	2.40 (4), .66	1	0.00 (.75)	0.03
7th Grade Gender Configural Invariance				
Popular	17.22 (7), .02	0.99	0.12 (.05)	0.02
Prosocial	0.44 (2), .80	1	0.00 (.84)	0.01
Isolated	7.96 (7), .34	0.99	0.04 (.50)	0.02
Aggressive	2.56 (2), .28	0.99	0.05 (.36)	0.03
7th Grade Gender Weak Invariance				
Popular	18.63 (10), .05	0.99	0.09 (.13)	0.03
Prosocial	1.27 (4), .87	1	0.00 (.91)	0.02
Isolated	9.86 (10), .45	1	0.00 (.65)	0.03
Aggressive	5.04 (4), .28	1	0.05 (.41)	0.05

Note. For both temporal configural and temporal loading invariance, 6th and 7th grade latent factors were allowed to covary and error terms of corresponding items (e.g. 'polite' in 6th grade and 'polite' in 7th grade) were allowed to correlate. Latent variable variances constrained to one for identification. Gender weak invariance tests constrained the factor loadings to be equal in the boys and girls' models for each reputation at each grade. Latent variable variances constrained to one for identification.

Table 10.

Between-Grade Pearson Product-moment Correlations: 14 RCP Items in the 6th grade with 14 RCP Items in the 7th Grade

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. has many friends	**.62**	**.42**	**.61**	**.57**	.07	.09	**.19**	**-.20**	**-.22**	**-.15**	**-.24**	.11	.06	.06
2. everyone listens to	**.51**	**.52**	**.56**	**.53**	.13	.14	**.26**	-.14	**-.19**	-.14	**-.20**	.04	.04	.07
3. makes new friends	**.55**	**.45**	**.60**	**.56**	.13	.11	**.23**	**-.21**	**-.25**	**-.21**	**-.26**	.02	.05	.02
4. everyone likes	**.48**	**.41**	**.56**	**.55**	.13	.12	**.27**	**-.20**	**-.24**	**-.18**	**-.24**	.05	.00	.01
5. plays fair	-.06	.09	.04	.06	**.34**	**.19**	**.20**	-.08	**-.16**	-.10	-.11	**-.23**	**-.21**	**-.17**
6. polite	.08	**.16**	.10	**.22**	**.44**	**.61**	**.47**	-.08	-.14	-.06	-.12	**-.29**	**-.23**	**-.29**
7. helps other people	.11	**.15**	.10	**.23**	**.31**	**.39**	**.37**	.06	-.06	.06	-.04	**-.17**	**-.15**	**-.23**
8. rather play alone	**-.27**	**-.23**	**-.28**	**-.27**	**-.17**	-.13	**-.23**	**.72**	**.64**	**.47**	**.62**	.01	.07	-.07
9. trouble making friends	**-.27**	**-.25**	**-.28**	**-.27**	**-.15**	**-.20**	**-.26**	**.64**	**.75**	**.53**	**.71**	.00	.07	-.06
10. can't get others to listen	**-.25**	**-.25**	**-.29**	**-.27**	**-.17**	**-.16**	**-.25**	**.47**	**.51**	**.33**	**.54**	-.03	.04	-.05
11. often left out	**-.29**	**-.27**	**-.29**	**-.28**	-.13	**-.17**	**-.25**	**.64**	**.67**	**.45**	**.64**	-.05	.05	-.10
12. interrupts	.07	.12	**.23**	.02	-.12	**-.19**	-.09	-.03	-.01	.08	-.07	**.46**	**.40**	**.52**
13. gets into fights	**.16**	.11	.09	.03	**-.17**	**-.19**	**-.18**	.07	.06	.14	.01	**.53**	**.59**	**.64**
14. teases other children	**.19**	.15	**.20**	.05	-.13	**-.21**	**-.19**	-.09	-.08	-.02	-.11	**.53**	**.51**	**.69**

Note: Bolded correlations are significant at the 0.05 level.

Does not include the two RCP items in the initial CFA that were removed in the respecified CFA.

Table 11.

Pearson Product-moment Correlations Among Measured Reputation Scale Scores

6th Grade Scale Scores	1	2	3	4	5	6	7
1. Popular	-						
2. Prosocial	.49	-					
3. Isolated	-.40	-.34	-				
4. Aggressive	.10	-.34	.10	-			
7th Grade Scale Scores							
5. Popular	.59	.23	-.32	.08	-		
6. Prosocial	.18	.55	-.15	-.30	.15	-	
7. Isolated	-.37	-.25	.60	-.04	-.41	-.17	-
8. Aggressive	.31	-.18	-.12	.59	.41	-.28	-.14

Note. Scale scores were calculated by summing items that loaded on the same latent factor separately for each grade.

Table 12.

Factor Loadings of the 6th and 7th Grade Measured Scale Scores as Indicators of the Four Reputation Latent Constructs

	Unstandardized (SE)	Standardized (SE)	*P*
Popular → Popular 6th grade	2.33 (.16)	.80 (.04)	<.01
Popular → Popular 7th grade	2.33 (.16)	.70 (.04)	<.01
Prosocial → Prosocial 6th grade	1.76 (.13)	.72 (.04)	<.01
Prosocial → Prosocial 7th grade	1.76 (.13)	.77 (.04)	<.01
Isolated → Isolated 6th grade	2.46 (.17)	.78 (.04)	<.01
Isolated → Isolated 7th grade	2.46 (.17)	.75 (.04)	<.01
Aggressive → Aggressive 6th grade	1.64 (.11)	.81 (.04)	<.01
Aggressive → Aggressive 7th grade	1.64 (.11)	.77 (.03)	<.01

Note. Variance of latent variables constrained to one. For the purpose of identification with only two indicators per latent factor, the unstandardized loadings of the 6th and 7th grade scores on a latent factor were constrained to be equal.

Table 13.

Correlations of the Four Peer Reputation Latent Constructs

	R	*P*
Prosocial and Popular	.32 (.09)	<.01
Prosocial and Isolated	-.32 (.09)	<.01
Prosocial and Aggressive	-.47 (.09)	<.01
Popular and Isolated	-.55 (.08)	<.01
Popular and Aggressive	.34 (.09)	<.01
Isolated and Aggressive	-.13 (.10)	.18

Table 14.

Descriptive Data on Adjustment Outcomes in 12th Grade

	M	*SD*	Skew (SE)	Kurtosis (SE)	% Zeros
GPA	9.24	1.79	-.83 (.17)	.58 (.34)	
SAT	1226.92	169.08	-0.27 (.17)	-0.25 (.34)	
Internalizing Symptoms	7.89	7.4	1.93 (.17)	6.52 (.34)	
Externalizing Symptoms	10.32	7.06	1.74 (.17)	6.72 (.34)	
Alcohol Yearly Use	3.48	2.18	-.38 (.17)	-1.27 (.34)	17%
Cigarette Yearly Use	1.79	2.32	.87 (.17)	-.90 (.34)	53%
Marijuana Yearly Use	1.79	2.2	.81 (.17)	-.89 (.34)	50%

Note. GPA range (1=F to 13=A+); SAT (400 to 1600); Internalizing symptoms, Youth Self-Report (0 to 62); Externalizing symptoms, Youth Self-Report (0 to 64); Substance Use (0=never to 6=40+ times)

Table 15.
Correlations Between Measured Outcome Variables and Peer Reputation Latent Constructs

Peer Reputations	1	2	3	4	5	6	7	8	9	10
1. Popular	-									
2. Prosocial	**.32**	-								
3. Isolated	**-.54**	**-.32**	-							
4. Aggressive	**.33**	**-.47**	-.13	-						
12th Grade Outcomes										
5. GPA	.07	**.43**	-.01	**-.19**	-					
6. SAT	.02	**.34**	.00	**-.19**	**.50**	-				
7. Internalizing	-.00	-.11	.04	.07	.02	.12	-			
8. Externalizing	.05	**-.32**	.04	**.21**	**-.29**	-.01	**.58**	-		
9. Alcohol Yearly Use	**.35**	-.06	**-.34**	.06	-.13	-.00	-.00	**.33**	-	
10. Cigarette Yearly Use	**.25**	**-.18**	**-.20**	**.29**	**-.25**	**-.16**	**.17**	**.39**	**.48**	-
11. Marijuana Yearly Use	**.24**	-.10	**-.29**	.07	**-.17**	-.06	.09	**.34**	**.51**	**.49**

Note: Bolded correlations are significant at the 0.05 level.

Table 16.
Path Coefficients for Prediction of 12th Grade Outcomes from the Four Peer Reputation Latent Constructs

Parameters	Unstandardized (SE)	Standardized (SE)	*p*	R^2 (SE)
GPA[a] on:				.21 (.07)
Popular	-.08 (.23)	-0.05 (.13)	.71	
Prosocial	.94 (.24)	.53 (.13)	<.01	
Isolated	.25 (20)	.14 (.11)	.20	
Aggressive	.16 (.24)	.09 (.13)	.51	
SAT[a] on:				.13 (.06)
Popular	-12.32 (22.23)	-.07 (.13)	.58	
Prosocial	70.35 (23.78)	.42 (.14)	<.01	
Isolated	16.71 (18.83)	.10 (.11)	.38	
Aggressive	7.91 (23.08)	.05 (.14)	.73	
Internalizing[a] on:				.01 (.02)
Popular	.30 (.94)	.04 (.13)	.75	
Prosocial	-.74 (.99)	-.10 (.13)	.45	
Isolated	.24 (.81)	.03 (.11)	.77	
Aggressive	.13 (.97)	.02 (.13)	.90	
Externalizing[a] on:				.13 (.05)
Popular	1.42 (.92)	.20 (.13)	.12	
Prosocial	-2.82 (.96)	-.40 (.13)	<.01	
Isolated	.12 (.76)	.02 (.11)	.88	
Aggressive	-.27 (.93)	-.04 (.13)	.77	
Alcohol[b] on:				.26 (3.1)
Popular	.89 (.32)	.42 (.14)	<.01	
Prosocial	-.97 (.35)	-.46 (.15)	<.01	
Isolated	-.65 (.26)	-.31 (.12)	.01	
Aggressive[c]	-.64 (.33)	-.31 (.15)	.03	
Cigarettes[b] on:				.21 (.08)
Popular	.51 (.28)	.25 (.13)	.06	
Prosocial	-.79 (.34)	-.39 (.15)	.01	
Isolated	-.57 (.28)	-.28 (.13)	.03	
Aggressive	-.07 (.29)	-.04 (.14)	.80	
Marijuana[b] on:				.25 (.10)
Popular	.55 (.30)	.26 (.14)	.06	
Prosocial	-.91 (.37)	-.43 (.16)	.01	
Isolated	-.92 (.33)	-.44 (.13)	<.01	
Aggressive[c]	-.57 (.34)	-.27 (.15)	.07	

Note: [a]SEM with outcome variable treated as continuous. [b]SEM with outcome variable treated as ordered categorical. [c]statistical suppression

Figure 1. Initial CFA of the RCP for 6th Grade with Four Items Per Latent Construct

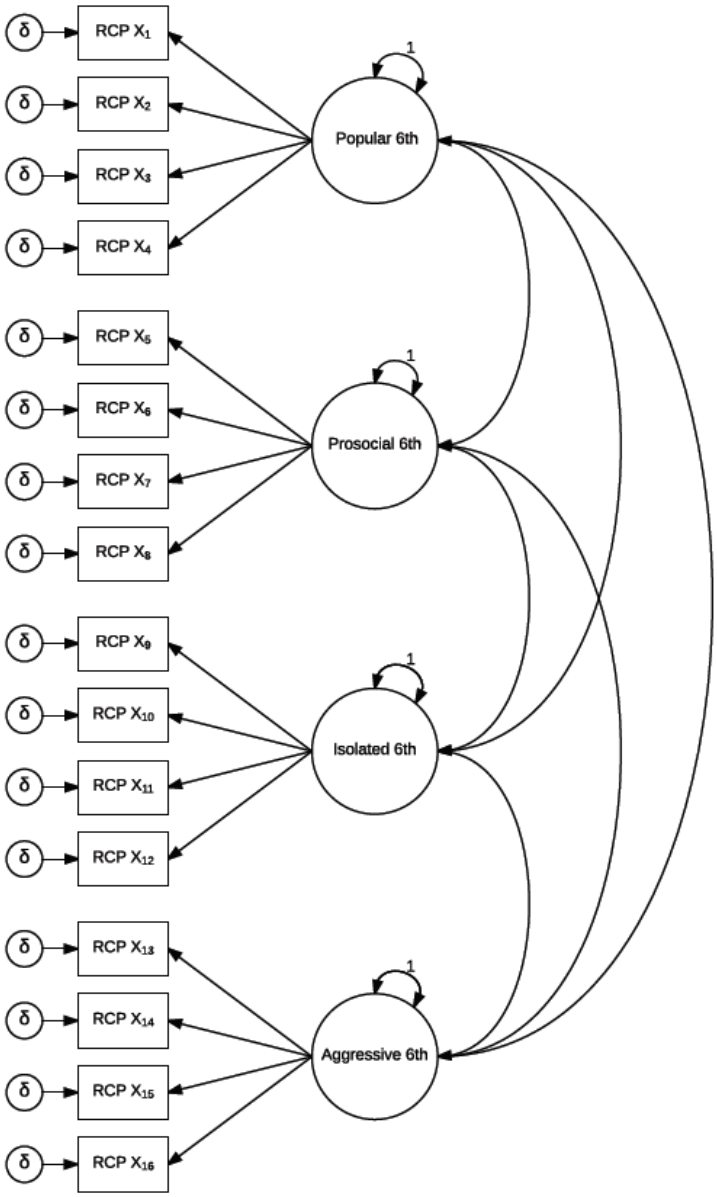


Figure 2. Initial CFA of the RCP for 7th Grade with Four Items Per Latent Construct

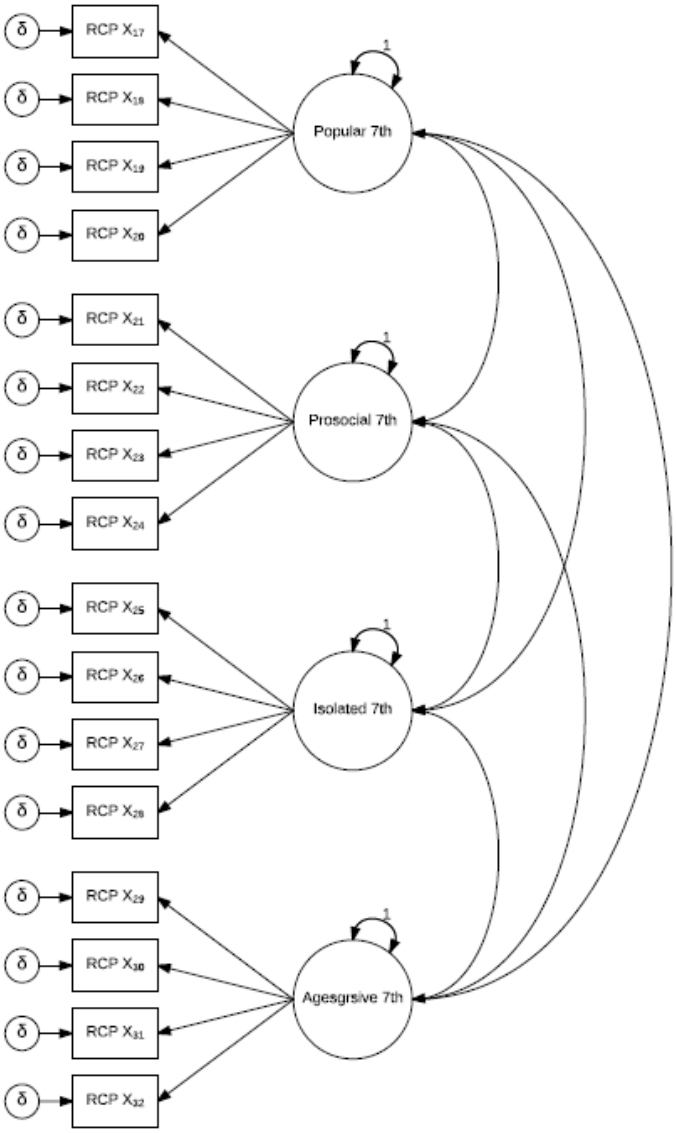
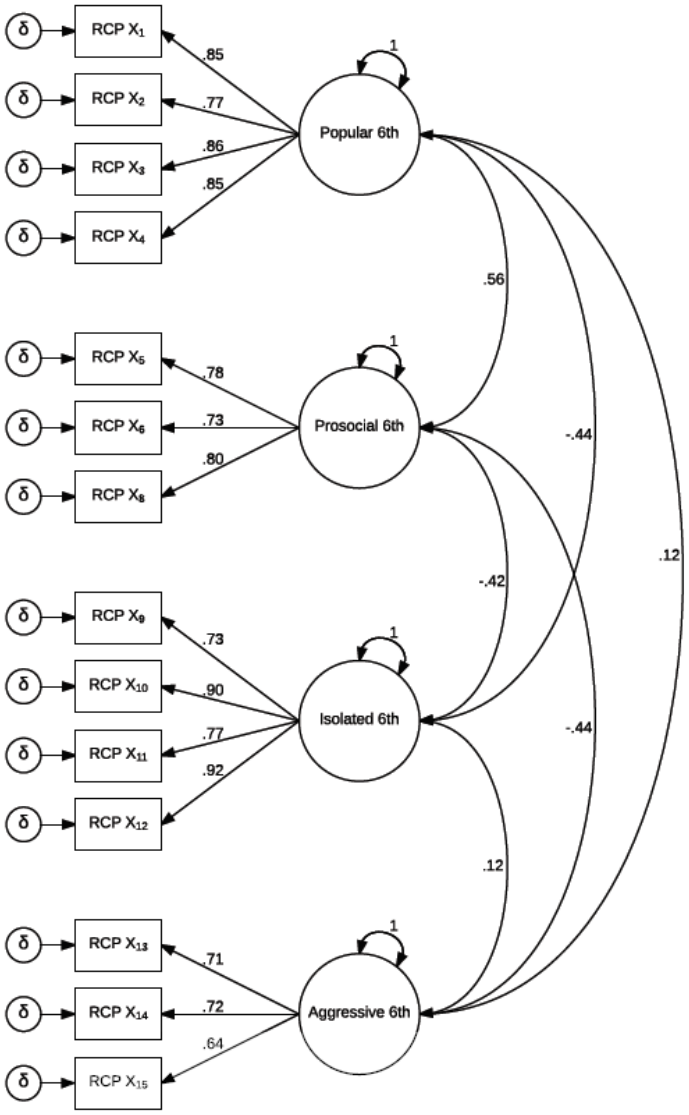


Figure 3. Respecified 6th Grade CFA Model Excluding Two Items of the RCP with Standardized Loadings



χ 2 (71, N = 186) = 116.04, $p < .01$; CFI = .97;
RMSEA = .06 [90% CI = .04, .08]; SRMR = .05)

Figure 4. Respecified 7th Grade CFA Model Excluding Two Items of the RCP with Standardized Loadings

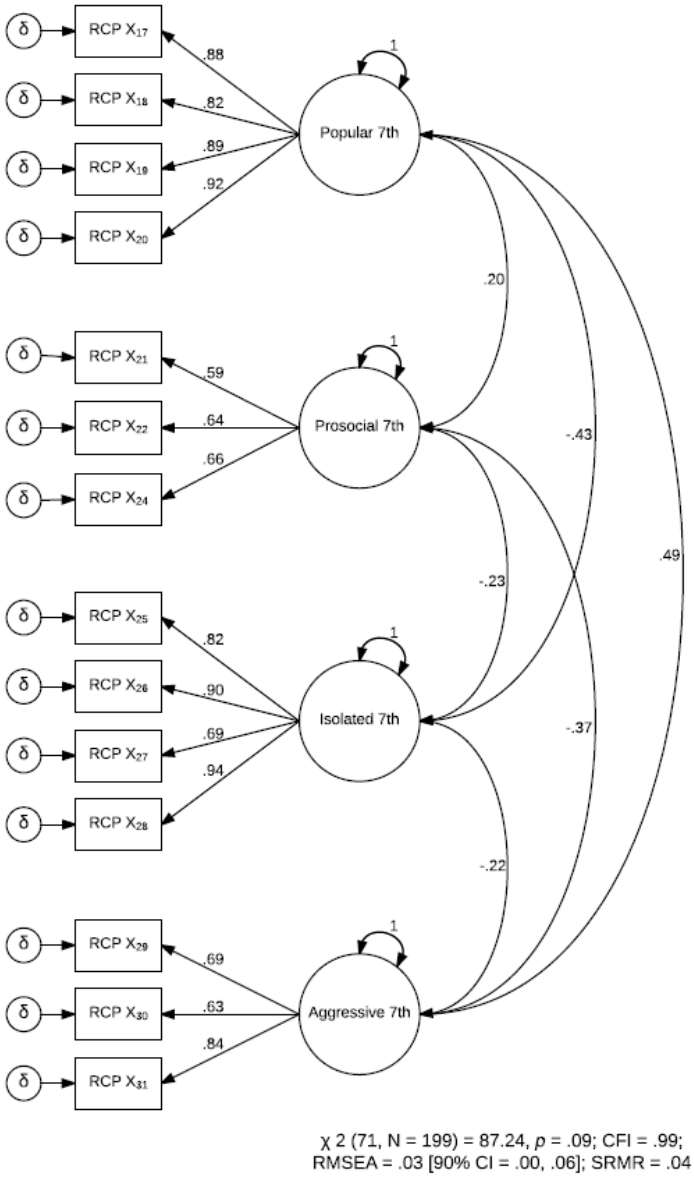


Figure 5. Combined Grades Model with Reputation Scale Scores in 6th Grade and 7th Grade as Indicators of Each Latent Factor with Standardized Loadings

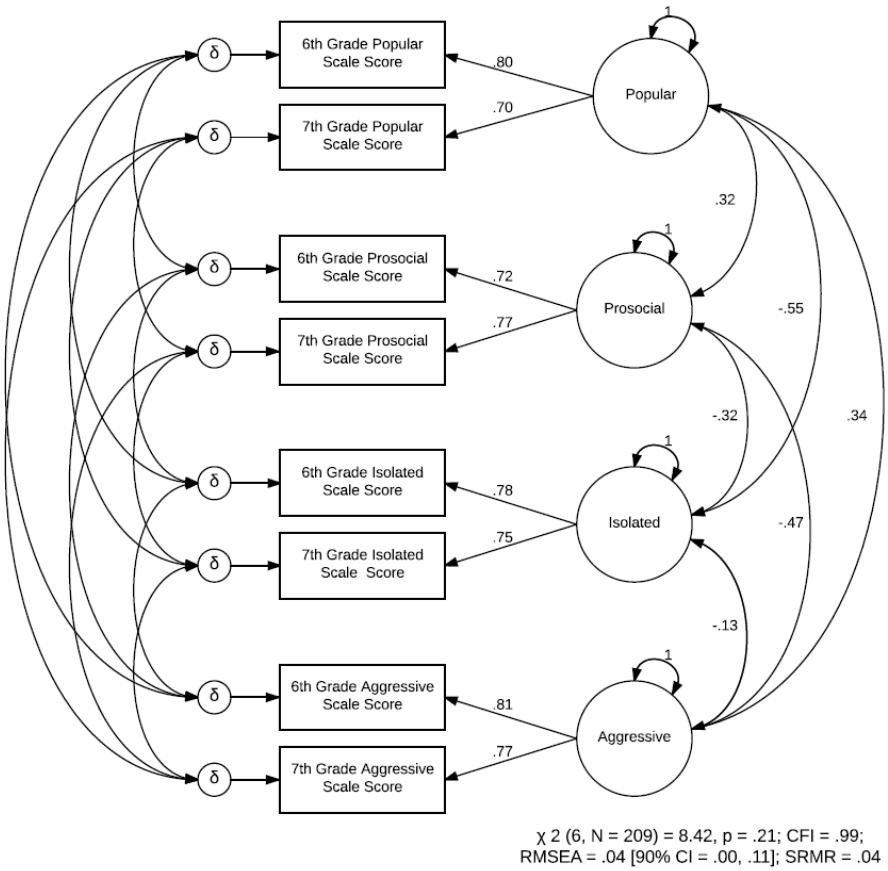


Figure 6. Adjustment Outcomes in 12th Grade from Middle School Latent Peer Reputations with Standardized Loadings