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Relational victimization and peer affiliate prosocial behaviors in African American adolescents: Moderating effects of gender and antisocial behavior

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Abstract

Introduction: Experiencing relational victimization (e.g., peer exclusion, untrue rumors) during adolescence can have negative social–emotional consequences, including increased antisocial behavior and substance use. The negative impact of relational victimization may be lessened by spending time with supportive, prosocial peers.

Methods: This study examined the concurrent and predictive associations between relational victimization and peer affiliates' prosocial behaviors in 244 predominately African American adolescents (ages 13–14) living in U.S. urban neighborhoods. Questionnaires were collected every six months for two years. Overt victimization was controlled for in the analysis and the moderation of gender and antisocial behaviors were tested.

Results: Peer affiliates' prosocial behavior was stable across the two years. Relational victimization was not associated with peers' prosocial behavior at baseline or across time. Gender did not moderate the association between relational victimization and peers' prosocial behavior. Moderating effects were found for antisocial behavior; relational victimization was positively associated with peer affiliates' prosocial behavior but only for adolescents who were low on antisocial behavior at baseline.

Conclusions: For African American youth, efforts to reduce relational aggression and increase peer support in prosocial activities prior to adolescence may be useful for preventing social–emotional problems.

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Keywords

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1. Introduction

Rates of peer victimization are greater for middle school students compared to high school students, impacting about a third of middle school youth (Robers, Kemp, Truman, & Snyder, 2013). In the school crime and safety report, Robers et al. (2013) found that 37% of 6th graders, 30% of 7th graders, and 31% of 8th graders reported having been victims of physical, verbal, or relational aggression in the past six months. Although overt victimization (victimization of physical and verbal peer aggression, such as threatening to hit and name calling) appears to decrease during adolescence, some studies show an increase in relational victimization during this developmental period (Troop-Gordon, 2017). Relational victimization involves peers' attempts to harm the reputation and peer relationships of the victim, such as peer exclusion and untruthful rumor spreading (Crick & Bigbee, 1998; Crick, Bigbee, & Howes, 1996; Putallaz et al., 2007). Although relational aggression is not a crime or type of aggression that causes direct physical harm to the victim, understanding its potential harmful social and psychological consequences for adolescents is essential, particularly during this developmental period, when peers are increasingly salient and during the transition from middle school to high school when peer social networks are likely to change.

There is accumulating evidence that relational victimization during adolescence is associated with psychological and behavioral difficulties. Studies have found that relational victimization during adolescence was associated with symptoms of depression and anxiety (Dempsey & Storch, 2008; Juvonen, Graham, & Schuster, 2003), loneliness (Prinstein, Boergers, & Vernberg, 2001) and poorer psychological adjustment (Smithyman, Fireman, & Asher, 2014). These associations were confirmed in a recent meta-analysis (Iyer-Eimerbrink, Scielzo, & Jensen-Campbell, 2015). Additionally, adolescents who experienced relational victimization were more likely to use alcohol and drugs compared to those who were seldom victimized (Espelage, Low, & De La Rue, 2012; Sullivan, Farrell, & Kliewer, 2006) and to engage in antisocial behavior (e.g., truancy, vandalism, lying, aggression) one year later (Light, Rusby, Nies, & Snijders, 2014). Experiencing relational victimization was also associated with greater negative psychological reactions to stress (Kliewer, Dibble, Goodman, & Sullivan, 2012) and more negative self-evaluations which later predicted aggression (Taylor, Sullivan, & Kliewer, 2013).

This body of research suggests that experiencing relational victimization promotes social exclusion during early adolescence, when peers are quite important to one's well-being. Research on the developing adolescent brain has shown that exclusion during early adolescence is not only related to increased sadness and anxiety, but also with changes in the brain showing decreased impulse control (Blakemore & Mills, 2014). Moreover, greater peer exclusion during this developmental period has predicted higher susceptibility to peer

influence (Sebastian et al., 2011). Those excluded from peers are rewarded by avoiding social exclusion, aligning with the “social augmentation” theory (Dishion, Ha, & Véronneau, 2012) in which a dynamic process occurs—if accepted into a peer group that engages in antisocial behavior, the socially rejected adolescent is susceptible to its influence and will also choose to spend more time with the antisocial peer group. Converging evidence supports this theory for adolescents experiencing overt victimization (physical and verbal attacks); these adolescents are more likely to affiliate with deviant peers, and to increasingly engage in alcohol use and antisocial behaviors (Rusby, Forrester, Biglan, & Metzler, 2005; Sullivan et al., 2006; Wormington, Anderson, Tomlinson, & Brown, 2012). This hypothesis has also been supported for young adolescents experiencing relational victimization; relational victimization was associated with antisocial behavior one year later, and this relationship was stronger for those who were in school peer networks exhibiting higher relational aggression (Light et al., 2014). This theory highlights the importance of understanding the behavior of peer affiliates for those who experience relational victimization during early adolescence.

Much less is known about the social dynamics between victims of relational aggression and peers who provide support and engage in prosocial behaviors. There is evidence indicating that support from prosocial peer has a protective moderating role. Peers’ prosocial behavior and support moderated the association between relational victimization and loneliness (Storch, Nock, Masia-Warner, & Barlas, 2003) and between relational victimization and oppositional and disruptive behaviors (Prinstein et al., 2001). It is likely, unfortunately, that support from prosocial peers will decline for those who are relationally victimized. A review of bullying research reported that peers fear retaliation for defending the victim, and peers’ rejection of the victim increases over time (Salmivalli, 2010). We expect that similar fear of providing support occurs for victims of peer relational aggression as well, similarly leading to increased rejection from peers who engage in prosocial behaviors. A recent meta-analysis provides some support, concluding that relational victimization was associated with less support from prosocial peers (Casper & Card, 2017).

We expect that prosocial behavior of peer affiliates for those experiencing relational victimization will be somewhat low during early adolescence and affiliation with prosocial peers will decrease over time during midadolescence. Moreover, given the propensity for adolescents who are relationally victimized to engage in antisocial behaviors in order to obtain social acceptance, we hypothesize that victims of relational aggression who engage in antisocial behaviors will be less likely to affiliate with prosocial peers over time.

1.1. Gender differences

Results are mixed as to whether there are gender differences in peer victimization. A meta-analysis of 135 studies found no significant gender differences in relational victimization (Casper & Card, 2017). On the other hand, a longitudinal study examining relational victimization and aggression throughout adolescence (published after the inclusion date for the meta-analysis) found that more boys perpetrated relational aggression than girls, whereas more girls experienced relational victimization than boys (Orpinas, McNicholas, &

Nahapetyan, 2015). This held true throughout adolescence. These mixed results demonstrate the importance of including gender as a moderator in our analyses.

Although the evidence is mixed as to whether girls experience more relational victimization than boys, the association between relational victimization and peer affiliates' prosocial behavior could differ by gender. Earlier work has shown that girls have a stronger orientation towards relationships than boys; hence, perceived low acceptance and/or criticism from peers are expected to have a great impact on girls' moods and behaviors (Cyranowski, Frank, Young, & Shear, 2000; Rudolph & Hammen, 1999). On the other hand, this focus on social relationships could increase the likelihood that girls who experience relational victimization receive more social support from prosocial peers than boys. There is some evidence for gender differences in the associations among peer rejection, problem behavior, and affiliation with antisocial peers (e.g., van Lier, Vitaro, Wanner, Vuijk, & Crijnen, 2005), but research is lacking on associations between peer rejection and peers' prosocial behaviors. We explore this question in the present study.

1.2. The present study

The purpose of the present study was to examine concurrent and predictive associations between relational victimization from peers and prosocial behaviors of peer affiliates (peers they spent time with) from early adolescence to midadolescence. The sample was predominately African American youth residing in urban neighborhoods, an understudied population with regard to relational victimization. We expected that high relational victimization would be associated with less prosocial behavior of peer affiliates, and would predict declines in affiliation with peers who engage in prosocial behavior over time. We included gender and antisocial behavior as moderators. We expected the negative association between relational victimization and peer affiliate prosocial behavior to be stronger for adolescents who engaged in more antisocial activities.

2. Methods

2.1. Participants

Study participants were a community sample of 248 adolescents who were recruited from outpatient medical clinics in an urban area of Virginia, USA. To be eligible for participation adolescents had to be 13–14 years old (typically in 8th grade, the last year of U.S. middle school). The clinic sites included an adolescent primary care clinic and a city health satellite clinic in Richmond, Virginia. Adolescents came to the clinics for routine as well as acute health care. Eligible adolescents were invited to participate in the study by a research assistant in the clinic waiting room and those from the satellite clinic were referred to the study by their patient advocate. Written informed assent was obtained from adolescents and consent was obtained from their parents prior to commencing any research activities and enrollment procedures were the same at each clinic site. Study enrollment took place from November 2012 to February 2014. Of those invited, 248 (57%) enrolled in the study (72% of those enrolled were recruited from the primary care clinic). Participant youth were 57% female and predominantly African American (87%); 3% were white, 3% were Hispanic/Latino, and 7% were of another race.

2.2. Study design and data collection methods

The study was longitudinal and followed participating youth for two years, with data collected every six months (a total of five time points). Participating youth completed a baseline questionnaire on a project laptop in a private room at the clinic after consenting to participate. The questionnaire asked for demographic information (e.g., gender, race, ethnicity) and their reports of peer victimization, the behavior of their peer affiliates, and their own antisocial behavior. An embedded web-link was sent to participants via text message or email to complete the follow-up questionnaires. Participants received increasing monetary incentives for completing the questionnaires (from \$10 to \$60). The Virginia Commonwealth University and the Richmond City Health Department's institutional review boards approved the research protocol.

2.3. Measures

All questionnaire measures were the same across the five assessment periods. The adolescent self-report measures pertinent to the present study included sex, relational victimization from peers, peer network health, and engagement in antisocial behavior. Baseline questionnaires were completed by 100% of participating youth, 81% completed T2, 77% completed T3, 81% completed T4, and 84% completed T5.

2.3.1. Relational victimization—The Relational Aggression and Victimization Assessment (Rusby, 2009) measures the extent of peer relational victimization experienced in the last 30 days on a scale of 0–7, from not at all to 10 or more times per day. Six items measured relational victimization (e.g., social exclusion, threatening to withdraw friendship, and gossiping, spreading rumors, and telling lies about them) and items were averaged to create the scale. The relational victimization scale has good reliability ($\alpha = .89$) and was associated with depressive symptoms and deviant peer affiliation during early adolescence (Rusby, 2009). Relational victimization was also associated with increased antisocial behavior during early adolescence (Light et al., 2014). In the present study, the relational victimization scale had good reliability at each assessment time point, with α ranging from .86 to .91.

2.3.2. Overt victimization—Items measuring victimization of verbal and physical aggression in the past 30 days were utilized: “how many times did a student call you names, swear at you, or say meant things to you at school” and “how many times did a student hit push, or physically fight you at school” (Rusby et al., 2005). These items were answered on the same 0–7 scale as the items for relational victimization (described above). Verbal and physical peer victimization were significantly associated ($r = .58$ to $.65$) during early adolescence and predicted aggression and antisocial behavior in midadolescence (Rusby et al., 2005). In the present study, we controlled for overt victimization in the models.

2.3.3. Peer affiliate behavior—The Adolescent Social Network Assessment (ASNA; Mason, Cheung, & Walker, 2004) was used to measure the prosocial behavior of youth's peer affiliates. Adolescents are asked to select three closest friends who they “typically hang out with” and answer questions about each one. All participants selected three closest friends on the ASNA. Questions pertained to supportive, prosocial peer behaviors in the past

30 days: a) offering support and helping, b) encouraging involvement in prosocial activities, and c) discouraging substance use. The prosocial peer behaviors were scored positively on a scale from 0 to 3 (0 = *no*, 1 = *a little*, 2 = *some*, 3 = *a lot*). Scores were summed, and given three selected friends, the prosocial ASNA score could range from 0 to 18. The ASNA internal consistency has good reliability (Mason, Mennis, & Schmidt, 2011).

2.3.4. Antisocial behavior—Youth self-report of antisocial behavior was measured with 10 items from the Oregon Healthy Teens (OHT) survey (Smolkowski, Biglan, Dent, & Seeley, 2006). Youth were asked to report how many times in the past three months they did each behavior on a scale of 0 (*0 times*) to 7 (*40 or more times*). Behaviors included selling illegal drugs, vandalism, stealing items worth more than \$10, using a weapon, and gambling. A total score was computed to create the antisocial behavior score. The OHT measure of antisocial behavior was associated with the probability of other risky behaviors, such as substance use, risky sexual behaviors, and depression in 8th grade and 11th grade youth (Boles, Biglan, & Smolkowski, 2006). A high level of variance in youth self-report of antisocial behavior was found, as well as a significant variance of antisocial behavior for same-grade school peers (Smolkowski et al., 2006), indicating the importance for measuring the behaviors of peers in relation to an adolescent's own antisocial behavior. In the present study, the antisocial behavior measure had good internal consistency ($\alpha = .92$).

2.4. Statistical methods

Prior to analyzing the models, distribution plots of peer affiliates' prosocial behavior were evaluated and extreme outliers removed. Descriptive statistics were examined, rates of missing data summarized, and mechanisms of missing data explored. Next, latent growth models estimated with maximum likelihood using the Mplus 7.1 software (Muthén & Muthén, 1998–2012) were used to assess change in peer affiliates' prosocial behavior from baseline through the two-year follow-up assessment. Time was coded in months, and the baseline assessment was coded zero and represented the intercept. Unconditional linear and quadratic growth models were specified. Model fit was assessed with the chi-square test of model fit and based on recommended cutoff values by Hu and Bentler (1999), comparative fit index (CFI) > 0.95, root mean square error of approximation (RMSEA) < 0.06, and standardized root mean square residual (SRMR) < 0.06.

The baseline measure of relational victimization was added to the model as a predictor of the intercept and growth factors of peer affiliates' prosocial behavior. Two hypothesized moderators of the relationship of relational victimization to the intercept and growth factors in peer affiliates' prosocial behavior, gender and the mean-centered baseline measure of antisocial behavior were tested, separately, by regressing the intercept and growth factors on the main effect of the moderator and the two-way interaction with victim of relational aggression. Next, the three-way interaction term of relational victimization, gender, and antisocial behavior was tested. Model constraints were used to test simple slopes for significant interaction terms. Predictive and moderation models were adjusted for the baseline measure of overt victimization by regressing the intercept and slope parameters on the baseline value. Maximum likelihood procedures during model estimation accommodated

missing peer prosocial behavior data. Missing data for predictors and moderators was minimal as described below.

3. Results

3.1. Preliminary analysis

The distributions of peer affiliates' prosocial behavior approximated normality; skew was 0.89–1.06, and kurtosis –0.20 to 0.36. Rates of missing data from T1 to T5 ranged from 0% to 21% for peer affiliates' prosocial behavior; 67% had complete data, 14% four data points, 7% three data points, 5% two data points, and 7% had only one data point. Rates of missing data were 4% for relational victimization, 3% for overt victimization, and 2% for antisocial behavior. Chi-square tests showed no significant associations between youth characteristics (i.e., gender, race, age) and the number of reports assessed. Additionally, exploration of missing data showed the missing completely at random (MCAR) assumption remained plausible as per Little's MCAR test ($\chi^2[84] = 85.56, p = .432$) (Little, 1988).

The means, standard deviations, and minimum and maximum values of baseline measures for girls and boys are shown in Table 1 and correlations between all baseline measures in Table 2. Baseline peer affiliates' prosocial behavior was somewhat low on average, indicating that the selected peers did the prosocial behaviors "a little." Plus 15% of youth reported a score of zero, indicating that their peer affiliates did not engage in any of the prosocial behaviors. At baseline 64% of youth reported some relational victimization, ranging from one or two times in the past month to frequently (6–9 times per day). At baseline 55% of youth reported some victimization of peer overt aggression, ranging from one to two times in the past month to 10 or more times a day. Gender differences were not found for any of the baseline variables, although differences for antisocial behavior were nearly significant with girls showing a lower average than boys. Antisocial behavior scores were highly variable for boys and girls (ranging from none to frequent occurrences of many types of behaviors). One or more antisocial behaviors were reported by 50% of participating youth. Relational victimization was significantly associated with overt victimization and antisocial behavior at baseline.

3.2. Unconditional and conditional growth model for peer prosocial behavior

The linear-only peer affiliates' prosocial behavior model showed excellent fit indices ($\chi^2[10] = 10.34, p = .411$; CFI = 0.99, RMSEA = 0.012, SRMR = 0.043) and the linear plus quadratic model failed to converge. A visual inspection showed the model-implied mean linear trajectories approximated the observed mean linear trajectory for the unconditional peer prosocial behavior model; thus, the linear-only model was retained. Parameter estimates (see Table 3) for peer affiliated prosocial model show a significant mean intercept, but nonsignificant slope suggesting that peer affiliation with prosocial peers differed among youth at baseline, but over time peer affiliates' prosocial behavior was generally stable. Significant variation was found in the intercept, but not the linear slope term. When added to the model, relational victimization, adjusting for baseline overt victimization, was not a significant predictor of the peer affiliates' prosocial behavior intercept or slope terms.

3.3. Test of moderation

Participant gender did not significantly moderate the association of relational victimization with the intercept ($p = .054$) or linear slope ($p = .870$) of peer affiliates' prosocial behavior, although the association with the intercept was near statistical significance.

Baseline antisocial behavior moderated the association of relational victimization and the intercept of peer affiliates' prosocial behavior ($p = .002$), but not the association of the relational victimization with the linear slope of peer affiliates' prosocial behavior ($p = .101$). To help interpret this moderation, simple slopes were estimated at two standard deviations (SD) below the mean, at the mean, and two SD above the mean of antisocial behavior and are shown in Fig. 1. Since the moderator is a continuous variable, the purpose of the figure is to provide representation of the direction of the moderation effect and the significance of the moderation is not tied to any of the groupings shown in Fig. 1 (see Hayes, 2018). For youth with lower antisocial behavior, baseline relational victimization was more highly associated with youth's peer affiliates' prosocial behavior than for youth with greater antisocial behavior.

The three-way interaction between relational victimization, gender, and antisocial behavior was tested and was not significant for the intercept and linear slope for peer affiliates' prosocial behavior.

4. Discussion

This two-year longitudinal study investigated the associations between relational victimization and peer affiliate prosocial behavior in a sample of predominantly African American youth. Baseline data were collected during early adolescence (when youth were ages 13–14). On average, youth rated their peer affiliates' prosocial behavior to have occurred “a little” at baseline and peer prosocial behavior was stable over time. Contrary to our expectations, relational victimization was not universally associated with either peer affiliates' prosocial behavior or with a decline in peer affiliates' prosocial behavior across the two-year study period (into middle adolescence, ages 15–16). It may be fruitful to start examining these associations earlier, as peer prosocial behavior was quite low at baseline. Quite possibly, in this population, the dynamic processes between peer exclusion and changes in peer affiliation may have taken place earlier. One longitudinal study following children aged 9 to 12 supports this notion; more positive and fewer negative peer interactions were associated with prosocial relationships with peers during this period (Monahan & Booth-LaForce, 2015). Moreover, in a study on aggression, prosociality, and peer networks, Berger and Rodkin (2011) found that more changes in peer affiliations and peer networks occurred in the year following the transition from elementary school to middle school (grade 6) than in the year prior to the transition (grade 5). The present study purposefully focused on the transition from middle school (grade 8) to high school (grade 9) to capture potential changes in peer affiliations during the transition; however, peer group affiliations and network status may have already been established by then. The results showing stability in peers' prosocial behavior supports this concept. Further investigations regarding the nature of the associations between relational victimization and the behavior of peer affiliates during middle childhood could establish more clearly the most critical period

during which interventions could reduce the prevalence of social–emotional problems during adolescence.

We expected that a significant negative association between relational victimization and peer affiliate prosocial behavior for youth who exhibited more antisocial behaviors, but that was not the case. Instead, the association was positive between higher relational victimization and higher peer prosocial behavior for those who reported lower rates of antisocial behavior, than for those who reported higher rates of antisocial behavior. It may be that youth who were experiencing social rejection from their peers who did not join an antisocial peer group were able to maintain affiliation with some prosocial peers. It also may be that affiliating with some prosocial peers while experiencing social rejection protected youth from spending time with an antisocial peer group in search of acceptance.

The lack of association for highly antisocial youth may be that the youth who were more highly antisocial were viewed as being more “cool” and were victimized less due to increasing popularity. This phenomenon was found for antisocial boys prior to adolescence (Rodkin, Farmer, Pearl, & Van Acker, 2000) and antisocial adolescents tended to be more popular when their peer networks were more highly cohesive (Haynie, 2001). Another study found that the extent of an adolescent’s prosocial or antisocial behavior may not matter for popularity as long as you are friends with a popular peer (Marks, Cillessen, & Crick, 2012). In order to develop an effective peer-related intervention to reduce externalizing and internalizing problems during adolescence, much more research is needed about how the nature of peer affiliate prosocial behavior, position in the peer network, and peer network cohesiveness affects the outcomes of peer relational victimization.

The present study adds to the sparse research on relational victimization in African American youth living in urban neighborhoods. Diverging from studies with ethnically and racially diverse samples (e.g., Orpinas et al., 2015; Robers et al., 2013), African American girls and boys experienced similar rates relational victimization during early adolescence. The associations between relational victimization and peer prosocial behavior also did not differ by gender.

4.1. Study limitations

The present study relies on youth self-report. Results would be strengthened with a multi-informant approach. However, even if the perceptions may be exaggerated, they are still likely to impact outcomes for youth, such as self-perceptions and emotions. Moreover, self-report is particularly useful for measuring the more clandestine behaviors, such as relational victimization and antisocial behavior that others may not be aware of.

This study also is limited as to the age range studied. Although a strength of the study is that it is longitudinal, the data collection period extends for only two years. Given the study findings, a similar investigation that begins during middle childhood and extends through early adolescence is advocated.

Study results generalize to an understudied population, adolescents living in urban communities who are predominantly African American. This is a unique strength of the

study; however, caution is warranted to not overgeneralize findings to other populations of youth, such as youth in rural areas, or to Hispanic/Latino youth.

Another caution pertains to the interpretation of results in this study. Only concurrent associations between relational victimization and peer affiliate prosocial behavior for those who rarely engaged in antisocial behavior were found; therefore, causality cannot be ascertained. It is possible that some yet unidentified mechanism or characteristic is simultaneously impacting these associations.

4.2. Implications for prevention and policy

Even though relational victimization occurs more frequently in middle school than at earlier ages, it may be that experiencing relational victimization earlier could be the catalyst for the development of less prosocial peer affiliates. Alternatively, affiliations with peers who are not supportive and are involved in antisocial activities may increase the prevalence of relational victimization. Efforts to reduce relational aggression and increase friendship support in prosocial activities during middle childhood may be useful for preventing social–emotional difficulties and substance use. Schools can extend their policies prohibiting violence and physical aggression to more covert forms of relational aggression. Moreover, prevention efforts could focus on providing prosocial recreational opportunities for youth who live in urban areas.

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Fig. 1.
Relationship Between Baseline Measures of Peer Affiliates' Prosocial Behavior and
Relational Victimization at Three Levels of Youth Antisocial Behavior.

Table 1

Descriptive Statistics for Baseline Measures by Gender.

Measure	Girls (n = 141)				Boys (n = 107)				<i>t</i>	<i>p</i>
	Mean	SD	Min	Max	Mean	SD	Min	Max		
Peer affiliates' prosocial behavior	6.15	5.10	0.00	18.00	5.74	5.49	0.00	18.00	0.56	.573
Relational victimization	0.88	1.35	0.00	6.17	0.76	1.19	0.00	5.33	0.68	.497
Overt victimization	0.87	1.39	0.00	7.00	0.99	1.30	0.00	6.00	0.66	.509
Antisocial behavior	2.06	7.41	0.00	70.00	3.77	6.86	0.00	31.00	1.84	.067

Table 2

Pearson Correlations among All Baseline Study Continuous Measures.

	1	2	3	4
1. Peer affiliates' prosocial behavior	1.00			
2. Relational victimization	.11	1.00		
3. Overt victimization	.13	.60	1.00	
4. Antisocial behavior	-.01	.51	.13	1.00

Note. Correlations greater than the absolute value of 0.14 are significant at $p < .05$.

Table 3

Parameter Estimates from Final Unconditional Latent Growth Model for Peer Affiliates' Prosocial Behavior.

	Unstandardized	SE	P
Peer Affiliates' Prosocial Behavior			
Latent growth factor means			
Intercept	5.695	0.313	< .001
Linear slope	−0.010	0.018	.583
Variances & Covariances			
Intercept	10.022	2.485	< .001
Linear slope	0.013	0.009	.133
Intercept with linear slope	−0.166	0.127	.191