The Relation Between Adolescent Social Competence and Young Adult Delinquency and Educational Attainment Among At-Risk Youth: The Mediating Role of Peer Delinquency

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Abstract

**Objective**—We examined trajectories of adolescent social competence as a resilience factor among at-risk youth. To examine potential mechanisms of this resilience process, we investigated the putative mediating effect of peer delinquency on the relation between adolescent social competence and young adult delinquency seriousness and educational attainment.

**Method**—Participants (n = 257) were screened to be at risk for antisocial behaviour at age 13 years. Data were derived from an ongoing longitudinal study of the development of antisocial and delinquent behaviour among inner-city boys, the Pittsburgh Youth Study. We used data collected from participants when aged 13 years until they were aged 25.5 years for our study.

**Results**—Results indicated that boys with high levels of social competence decreased their involvement with deviant peers throughout adolescence, which, in turn, predicted less serious forms of delinquency in early adulthood. Social competence had a direct effect on educational attainment in early adulthood, as boys who developed social competencies in adolescence went further in school irrespective of their involvement with delinquent peers.

**Conclusions**—Results suggest that promoting the development of social competencies and reducing involvement with delinquent peers will protect at-risk youth from engaging in serious delinquency in early adulthood while increasing their educational success.

**Keywords**

resilience; antisocial behaviour; social competence; peer delinquency; mediation
Social competence is an individual-level attribute that facilitates adaptive functioning, positive adjustment, and later goal attainment despite early adversity or stressful life events.\textsuperscript{1,2} Traits associated with social competence often increase with age, suggesting a developmental process in which competence accrues from prior experiences or as a function of maturity.\textsuperscript{3}

Social competence during adolescence is related to a wide variety of positive outcomes, such as educational attainment, employment status, and lower levels of substance abuse, depression, and self-reported delinquency.\textsuperscript{3–5} Studies of adolescent social competence have typically employed cross-sectional or contemporaneous designs, and the few existing longitudinal studies have used relatively short follow-up periods and focused primarily on general population samples. Thus less is known about the prospective relations among adolescent social competence and adulthood criminal offending and educational attainment among samples at high risk for delinquency.

Social competence may explain reductions in criminal offending and increases in educational attainment among high-risk youth over time in 2 ways. First, social competence may have direct effects on criminal offending patterns and educational attainment over time. Growth in social competence may be related to reductions in delinquency as adolescents acquire the skill set necessary for entering adulthood. Social competence and related prosocial behaviours may be conducive to academic performance because it encourages positive interactions between teachers and peers and increases academic motivation.\textsuperscript{6} Prior research has supported the direct effects of social competence on reductions in criminal offending\textsuperscript{5,7} as well as academic achievement and educational attainment.\textsuperscript{3,8–10}

Second, social competence has the potential to predict other mechanisms that underlie the association between prosocial external life events and positive young adult outcomes. Social competence may act as a protective factor by buffering against risk factors for delinquency, such as affiliation with deviant peers.\textsuperscript{11,12} Although there is evidence indicating that socially competent behaviour is related to peer acceptance, few studies have examined the effects of social competence on involvement with delinquent peers.\textsuperscript{1} Recent studies examining effects of low self-control on delinquency suggest that socially competent youth have less involvement with delinquent peers. Prior findings also indicate an interaction effect between self-control and involvement with delinquent peers, suggesting that involvement with delinquent peers is more detrimental for people with lower levels of self-control.\textsuperscript{1,2,4}

Social competence may have an indirect effect on delinquency and educational attainment by decreasing affiliations with delinquent peers over time. Youth with higher initial levels of adolescent social competence may decrease their affiliations with delinquent peers more rapidly during adolescence. Social competence may explain why some at-risk youth are able to resist involvement in delinquent peer networks during adolescence, which, in turn, may reduce the risk of subsequent delinquency and increase the likelihood of pursuing more education.

Our study builds on previous research by examining trajectories of adolescent social competence as a resilience factor among at-risk youth. To examine potential mechanisms of
this resilience process, we investigated the putative mediating effect of peer delinquency on the relation between adolescent social competence and young adult delinquency seriousness and educational attainment.

**Method**

**Participants**

Participants were from an ongoing longitudinal study of the development of antisocial and delinquent behaviour among inner-city boys, the PYS. The PYS began collecting data in 1987 on a random community-based sample of boys enrolled in the first, fourth, and seventh grades of public schools in Pittsburgh. About 85% of the families randomly selected participated in the screening phase of the study. Based on information from caretakers, teachers, and youth reports during the screening session, 30% of the most antisocial boys were selected to participate and the remaining participants were randomly selected. We restricted our sample to the oldest cohort and, because we were interested in resilience, we limited our examination to boys who were determined to be at risk ($n = 257$).

**Procedures**

Through to the age of 17.5 years, data were collected from the youth, their caregivers, and their teachers. After age 17.5 years, data were collected from the youth only. The sample has 16 total assessment periods, spanning ages 13.0 to 25.5 years, with an average retention rate of 89.5%. All study procedures were approved by the Institutional Review Board at the University of Pittsburgh and all participants provided informed consent.

**Measures**

**Social Competence**—Social competence was measured at each assessment using a combined estimate of 8 items rated both by caretakers and teachers from the CBCL and the TRF. It was defined by the combined separate ratings by teacher and caretaker of 8 items on a 3-point scale (0 = very true, 1 = sometimes, and 2 = not true) reflecting social competence.

1. Fails to carry out assigned tasks.
2. Difficulty following directions.
3. Demands must be met immediately.
4. Acts too young for his age.
5. Behaves irresponsibly.
6. Does not get along well with other pupils.
7. Not liked by other pupils.
8. Quarrels with other kids for a slight reason.

Average internal consistency reliability ($\alpha$) was measured across the 8 waves of data collection ($\alpha = 0.85$).
Peer Delinquency—Peer delinquency was assessed using the Self-Reported Delinquency Scale\textsuperscript{13} and the Substance Use Scale\textsuperscript{15} when youth were aged 13.5 to 19.5 years. Peer delinquency included items such as attacking someone with a weapon and using illicit substances, with each scored from 0 = none of my peers to 5 = all of my peers. Average internal consistency reliability was measured across the 9 waves of data collection (\(\alpha = 0.88\)).

Delinquency Seriousness—The most serious level of delinquency that youth self-reported when aged 20 to 25.5 years was coded: 0 = none, 1 = minor (for example, theft of less than $5 and avoiding payments), 2 = moderate (for example, gang violence and cheque fraud), 3 = serious (for example, breaking and entering, sex offences, and physical assault), 4 = multiple serious acts (that is, when youth reported 2 or more serious delinquent acts) as used in previous studies of age–crime curves and developmental trajectories of offending.\textsuperscript{13}

In the examination of the effect of social competence on young adult outcomes, we controlled for level of delinquency in the past 6 months at the age 13 years’ assessment wave. In addition to youth reports, this earlier construct also included caretaker and teacher forms of the CBCL and TRF, respectively.\textsuperscript{15}

Educational Attainment and Academic Achievement—Education attainment was the highest level indicated during any of the youth assessments when aged 20.0 to 25.5 years: 1 = elementary school, 2 = middle school, 3 = some high school, 4 = high school diploma, 5 = some college or vocational training, 6 = college graduate, 7 = advanced level of education.

We included low academic achievement at age 13 years as a covariate. This construct reflected an average score of self-(Youth Self Report), teacher- (TRF), and caretaker- (CBCL) reported youth academic failing = 3, to above average = 0 in reading, writing, and math. At age 13 years, low academic achievement was not related to peer delinquency (\(r = 0.12, P = 0.07\)) but it was inversely associated with social competence (\(r = -0.61, P < 0.001\)).

Demographic Covariates—Participants for this study were reported as African American (57.6\%, \(n = 148\)) and Caucasian (42.4\%, \(n = 109\)). Caretaker reports of occupation and education at the initial assessment produced a Hollingshead socioeconomic index\textsuperscript{16} (mean = 31.05, SD 14.10), indicating most families were lower-middle class.

Data Analytic Plan

LGCMs were used to characterize changes in at-risk youths’ social competence during 8 waves of data collection (average ages 13.0 to 17.5 years) and peer delinquency during 9 waves of data collection (average ages 13.5 to 19.5 years). LGCMs can capture change in social competence and peer delinquency as a function of time, describing both the mean levels of change in the population as well as intraindividual variation in the rates of change.\textsuperscript{17} Owing to the skewed nature of the data, a robust maximum likelihood estimator that is relatively insensitive to deviations from normality was used in Mplus 6.0.\textsuperscript{18} Missing data on dependent variables were handled through the use of the expectation maximization
algorithm that provides accurate parameter estimates and standard errors when data are missing at random. Model fit was evaluated using the CFI, TLI, and RMSEA.

To examine whether growth processes in social competence and peer delinquency during adolescence predicted educational attainment and serious delinquency in young adulthood, we regressed these young adult outcomes onto the latent factors of each growth model, net of the effects of delinquency and low academic achievement, at age 13 years. Next, we tested whether growth processes in peer delinquency mediated the association between growth processes in social competence and positive young adult outcomes. A parallel process growth model of social competence and peer delinquency was used to test this mediation pathway. A mediator hypothesis would be supported if the indirect effects of the latent factors of social competence on young adult delinquency seriousness and educational attainment through the latent factors of peer delinquency were significant. Specifically, the intercept (age 13 years value) and (or) slope factor (mean change) of social competence would predict the intercept (age 13 years value) and (or) slope factor(s) (mean change) of peer delinquency, which, in turn, would predict lower levels of delinquency seriousness and higher levels of educational attainment in young adulthood. We used the bootstrapping method to test indirect effects.

Results

Descriptive Statistics

During young adulthood, many youth did not engage in any delinquent behaviour ($n = 107, 44.6\%$). For those youth who engaged in at least one act of delinquent behaviour during young adulthood ($n = 133, 55.4\%$), we recorded the most serious form. Minor delinquency was the most serious type of offence for $10.4\%$ ($n = 25$) of the sample, moderate delinquency was committed by $20.8\%$ ($n = 50$), serious delinquency was reported by $17.1\%$ ($n = 41$), and $7.1\%$ ($n = 17$) of the sample committed multiple serious acts during young adulthood.

At age 13 years, the majority of youth had engaged in some form of delinquency in the past 6 months ($87.9\%, n = 226$). About one-third of youth had engaged in minor delinquency as the most serious offence in the past 6 months ($35.4\%, n = 91$), $28\%$ ($n = 72$) committed a moderate form of delinquency, $19.8\%$ ($n = 51$) reported engaging in serious delinquency, and $4.7\%$ ($n = 12$) reported committing multiple serious offences.

The highest level of education achieved by most youth was graduation from high school or general educational development certification ($n = 126, 52.5\%$). About one-quarter of the sample had received some college or specialized training by young adulthood ($n = 62, 25.8\%$), and $7.1\%$ graduated from a 4-year college program ($n = 17$). No participants completed graduate or professional training. The remaining $14.6\%$ of the sample did not graduate from high school by young adulthood, with $2.9\%$ ($n = 7$) completing junior high and $11.7\%$ ($n = 28$) completing some high school.

When youth were aged 13 years, the average academic achievement was 2.28 (SD 0.58), reflecting average performance between average and below average. Average peer
delinquency ranged from 5.59 (SD 6.48) when youth were aged 14.5 years to 6.89 (SD 8.13) when youth were aged 18.5 years; average social competence ranged from 20.38 (SD 6.57) at age 13.00 to 24.69 years (SD 5.13) at age 17.5 years.

**Unconditional Latent Growth Curve Models**

**Social Competence**—The unconditional linear LGCM for social competence fit the data reasonably well (CFI = 0.94; TLI = 0.94; RMSEA = 0.06). The LGCM had a significant mean intercept (intercept mean = 22.16, \( z = 58.71, P < 0.001 \)), and linear slope (slope mean = 0.37, \( z = 2.99, P = 0.003 \)), indicating an increase in social competence across adolescence. The variances for the intercept and slope were also significant, indicating substantial variation in the initial level and growth in social competence. Initial social competence was negatively associated with the social competence slope factor (\( r = -0.63, P < 0.001 \)), indicating less increase among those high at age 13 years.

**Peer Delinquency**—The unconditional linear LGCM for peer delinquency provided an excellent fit to the data (CFI = 1.00; TLI = 1.00; RMSEA < 0.001). The LGCM had a significant mean intercept (intercept mean = 6.14, \( z = 16.76, P < 0.001 \)), but nonsignificant linear slope (slope mean = 0.03, \( z = 0.34, P = 0.73 \)), indicating a relatively flat trajectory overall for peer delinquency across adolescence and emerging adulthood. The variances for the intercept and slope were significant (intercept variance = 25.66, \( z = 6.69, P < 0.001 \) and slope variance = 0.76, \( z = 3.76, P < 0.001 \), respectively), indicating substantial variation in initial level and growth in peer delinquency among boys. The initial level of peer delinquency was negatively associated with linear change (\( r = -0.53, P < 0.001 \)) such that higher initial levels of peer delinquency were related to steeper decreases in peer delinquency across this developmental window.

**Effects of the Adolescent Developmental Trajectories on Young Adult Outcomes**

**Social Competence**—The intercept (age 13 years values) and slope (linear change) defining the trajectory of social competence across the adolescent period were included as predictors of these young adult outcomes. Low educational achievement at age 13 years was inversely related to social competence at age 13 years (\( \beta = -0.65, P < 0.001; 95\% \text{ CI} -0.74 \) to \(-0.56 \)) (Table 1). The slope (trajectory changes) in social competence significantly predicted both educational attainment (\( \beta = 0.37, P = 0.004; 95\% \text{ CI} 0.10 \) to 0.64) and delinquency seriousness (\( \beta = -0.50, P = 0.007; 95\% \text{ CI} -0.73 \) to -0.27) in young adults, indicating that growth in self-competence across the adolescent period predicted both higher educational attainment and lower serious delinquency during young adulthood.

**Peer Delinquency**—As anticipated, self-reported delinquency seriousness at age 13 years was related to peer delinquency (\( \beta = 0.33, P < 0.001; 95\% \text{ CI} 0.22 \) to 0.44) at the same age. The intercept (age 13 years value) of peer delinquency significantly predicted delinquency seriousness (\( \beta = 0.48, P < 0.001; 95\% \text{ CI} 0.29 \) to 0.67) during young adulthood. Additionally, the slope factor of peer delinquency predicted young adult delinquency seriousness (\( \beta = 0.54, P < 0.001; 95\% \text{ CI} 0.30 \) to 0.78), indicating increases in peer delinquency across adolescence and emerging adulthood were associated with more serious self-reported delinquent behaviours in young adults (Table 1).
There were not always significant direct effects between social competence and peer delinquency trajectories and young adulthood outcomes. There was no direct effect of social competence at age 13 years on young adult delinquency seriousness or educational attainment. However, research has shown that requiring a direct effect prior to testing for mediation is significantly underpowered. Analyses began with examination of the relation between social competence and peer delinquency (Figure 1). As we expected, the intercept of social competence negatively predicted the slope of peer delinquency ($\beta = -0.36, P = 0.01; 95\% \text{ CI} -0.65$ to $-0.08$), indicating that initial levels of social competence in at-risk youth predicted a faster decrease in peer delinquency across the adolescent and emerging young adulthood developmental period. However, the initial level of peer delinquency was not significantly associated with rate of growth in social competence across adolescence ($\beta = -0.05, P = 0.61; 95\% \text{ CI} -0.25$ to $0.15$).

Social competence at age 13 years was marginally negatively associated with peer delinquency ($\beta = -0.15, P = 0.06; 95\% \text{ CI} -0.32$ to $0.01$), and the social competence linear increase with age was negatively associated with the change in peer delinquency ($\beta = -0.56, P = 0.007; 95\% \text{ CI} -0.97$ to $-0.15$), indicating that increases in social competence accompanied decreases in peer delinquency. Taken together, these results suggest that the trajectory of social competence during adolescence predicted the trajectory of peer delinquency from adolescence through emerging adulthood in these at-risk youth. Thus higher levels of social competence during this developmental window may predict affiliation with less deviant peers. We next determined the indirect effects of social competence via effects on level and changes of peer delinquency. Results are presented in Table 2. The peer delinquency slope factor emerged as a significant mediator of the relation between age 13 years and changes in social competence and delinquency seriousness. Specifically, initial levels at age 13 years (intercept factor) and rate of growth (slope factor) in social competence during the adolescent period predicted a faster rate of decline in peer delinquency, which, in turn, predicted less serious delinquent offences in young adulthood (intercept factor indirect effect $= -0.03, \text{ SE} = 0.01, P = 0.03; 95\% \text{ CI} -0.05$ to $-0.01$; slope factor indirect effect $= -0.32, \text{ SE} = 0.13, P = 0.02, 95\% \text{ CI} -0.57$ to $-0.06$). Neither peer delinquency at age 13 years nor its change during the trajectory mediated the relation between social competence and educational attainment in young adulthood.

**Discussion**

Results from the current investigation indicated that at-risk boys with high levels of social competence decreased their involvement with deviant peers throughout adolescence, which, in turn, protected them from exhibiting serious forms of delinquency in early adulthood. At-risk boys whose social competencies increased across adolescence were less likely to exhibit delinquent behaviour in early adulthood, with this effect partially explained by their decreased involvement with delinquent peers. Social competence had a more direct effect on educational attainment in early adulthood, as boys who developed social competencies in adolescence went further in school by early adulthood, irrespective of their involvement with delinquent peers.
Our study found significant individual variability in the level of social competence among antisocial boys in early adolescence as well as variability in the development of their social competence across adolescence. Findings indicated that the development of social competencies over time may help explain why some antisocial boys desist from delinquent behaviour by early adulthood. Our study extends previous findings by demonstrating that significant changes in social competencies occur during adolescence for some at-risk boys, and these changes can influence the likelihood that these youth will continue to engage in delinquent behaviour.

Mediation models indicated high-risk boys with initially high social competence were less likely to exhibit severe delinquency in early adulthood primarily because they became less involved with delinquent peers. Similarly, boys who developed more social competency during adolescence experienced parallel decreases in delinquent peer group involvement, which helped to reduce the likelihood that they would exhibit severe delinquency in early adulthood. Prior studies have indicated that children with conduct problems are largely socially rejected by their peers but still tend to develop a network of friends. However, these friendships often involve other antisocial youth. Our findings suggest that high-risk adolescents who develop adequate social competencies over time may be more adept at building healthy relationships with prosocial peers, which protects them from turning to deviant peers as a means of social support.

High initial levels of peer delinquency and increased involvement with antisocial peers were robust predictors of serious delinquent behaviour in adulthood for high-risk boys. Evidence suggests that boys who become more involved with deviant peers across adolescence begin adopting more favourable attitudes toward delinquent behaviour. Deviant peers frequently communicate messages about the moral acceptability of delinquent actions through a process referred to as deviancy training in which discussions about rule-breaking behaviour form the basis for positive affective exchanges. These interactions influence subsequent escalations in serious delinquency. There are interventions for at-risk teens that are effective at reducing delinquent peer involvement, which, in turn, results in reductions in future antisocial behaviour.

In contrast to findings regarding adult delinquency, increase in social competency across adolescence was associated with higher educational attainment by early adulthood, but this effect was not mediated by peer delinquency. Longitudinal evidence suggests that social problem solving skills in childhood are associated with later improvements in academic achievement. However, the mechanism through which social competence leads adolescents to succeed in school remains unclear. It is possible that this association may be accounted for by a third factor, such as problems with hyperactivity–inattention, which has been linked to increases both in social and in academic problems in boys.

There are several limitations in our study. We focused on the high-risk sample of males and our findings may not generalize to females or general community samples. It is also important to remember that temporal precedence in longitudinal studies does not ensure causation. Nevertheless, the changes in peer delinquency during adolescence mediated the relation between the social competence at age 13 years and young adult serious delinquency.
providing support for the temporal ordering of these findings. Finally, most measures used in our study were based on adolescents’ reports, with the exception of social competence. However, the validity of self-report of social competence in delinquent adolescents is suspect because these youth often overestimate their social skills.\(^{32}\)

**Conclusion**

Our study provides potential targets for intervention for high-risk youth during early adolescence. Youth who exhibit early antisocial behaviour as well as a combination of poor social skills and peer delinquency may be at particularly high risk for engaging in serious delinquent behaviour in early adulthood. Interventions that begin earlier in development, while these risks and skills are developing, seem particularly important. Promoting the development of social competencies and reducing involvement with delinquent peers may protect at-risk youth from engaging in serious delinquency in early adulthood while increasing their educational success.

**Acknowledgments**

Our study is supported by grants awarded to Dr Loeber from the National Institute on Drug Abuse (DA411018), National Institute on Mental Health (MH48890, MH50778), the Office of Juvenile Justice and Delinquency Prevention (96-MU-FX-0012), and the Pennsylvania Department of Health (SAP #410004365). Preparation of our paper was supported by funding from the National Institute on Mental Health awarded to Dr Pardini (K01 MH078039) and Dr Stepp (K01 MH086713).

The Canadian Psychiatric Association proudly supports the In Review series by providing an honorarium to the authors.

**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>CBCL</td>
<td>Child Behavior Checklist</td>
</tr>
<tr>
<td>CFI</td>
<td>comparative fit index</td>
</tr>
<tr>
<td>LGCM</td>
<td>latent growth curve models</td>
</tr>
<tr>
<td>PYS</td>
<td>Pittsburgh Youth Study</td>
</tr>
<tr>
<td>RMSEA</td>
<td>root-mean-square error of approximation</td>
</tr>
<tr>
<td>TLI</td>
<td>Tucker-Lewis index</td>
</tr>
<tr>
<td>TRF</td>
<td>Teacher Report Form</td>
</tr>
</tbody>
</table>

**References**


Can J Psychiatry. Author manuscript; available in PMC 2015 June 03.
Clinical Implications

• Interventions for youth at risk for antisocial behaviour should focus on increasing social competencies during the adolescent period.

• Interventions targeting reductions in involvement with delinquent peers for at-risk youth are warranted to reduce delinquency seriousness in young adulthood.

• Increasing social competencies for at-risk youth may reduce delinquency seriousness and promote educational attainment during young adulthood.

Limitations

• Our study focused on at-risk boys; therefore, findings need to be replicated in female and population-based samples.

• Measures, both of peer delinquency and of young adult outcomes, were based on youth self-report.

• Other contextual factors, such as parental psychopathology and parenting behaviours, were not examined but could be considered for future work.
Figure 1. Final growth model of social competence and peer delinquency trajectories predicting young adult outcomes

\[ aP < 0.001; \quad bP < 0.01; \quad cP < 0.05; \quad 95\% \text{ CIs in parentheses; significant indirect paths in bold} \]

SES = socioeconomic status

For ease of presentation, the manifest indicators of the LGCMs are not shown and nonsignificant paths were deleted from the figure. Correlations among all possible patterns of covariates (for example, race–ethnicity and Wave 1 family SES; race–ethnicity and Wave 1 low academic achievement) and young adult outcomes (that is, young adult delinquency seriousness and young adult educational attainment) were specified. Only significant correlations are depicted.
### Table 1

Prediction of young adult delinquency seriousness and educational attainment from intercept and growth factors of social competence and peer delinquency in adolescence

<table>
<thead>
<tr>
<th>Variable</th>
<th>Delinquency seriousness</th>
<th>Educational attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>95% CI</td>
</tr>
<tr>
<td>Social competence intercept</td>
<td>−0.19</td>
<td>−0.39 to 0.01</td>
</tr>
<tr>
<td>Social competence slope</td>
<td>−0.50a</td>
<td>−0.73 to −0.27</td>
</tr>
<tr>
<td>Race–ethnicity</td>
<td>−0.02</td>
<td>−0.16 to 0.12</td>
</tr>
<tr>
<td>Family SES</td>
<td>−0.07</td>
<td>−0.22 to 0.08</td>
</tr>
<tr>
<td>Wave 1 delinquency seriousness</td>
<td>0.10</td>
<td>−0.04 to 0.24</td>
</tr>
<tr>
<td>Wave 1 low academic achievement</td>
<td>0.18</td>
<td>−0.05 to 0.40</td>
</tr>
<tr>
<td>Peer delinquency intercept</td>
<td>0.48a</td>
<td>0.29 to 0.67</td>
</tr>
<tr>
<td>Peer delinquency slope</td>
<td>0.54a</td>
<td>0.30 to 0.78</td>
</tr>
<tr>
<td>Race–ethnicity</td>
<td>−0.05</td>
<td>−0.18 to 0.09</td>
</tr>
<tr>
<td>Family SES</td>
<td>−0.12</td>
<td>−0.27 to 0.04</td>
</tr>
<tr>
<td>Wave 1 delinquency seriousness</td>
<td>0.04</td>
<td>−0.11 to 0.16</td>
</tr>
<tr>
<td>Wave 1 low academic achievement</td>
<td>0.01</td>
<td>−0.13 to 0.13</td>
</tr>
</tbody>
</table>

Coding for dichotomous variable, race–ethnicity (1 = Caucasian to 2 = African American)

*a* $P < 0.001$

* $P < 0.01$

SES = socioeconomic status
### Table 2

#### Path coefficients from final model

| Model A. Prediction of intercept and slope factors of social competence and peer delinquency |
|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|
| | Social competency trajectory | Peer delinquency trajectory |
| | Intercept | Slope | Intercept | Slope |
| Variable | | Estimate | 95% CI | Estimate | 95% CI | Estimate | 95% CI | Estimate | 95% CI |
| Race–ethnicity | | −0.02 | −0.14 to 0.10 | 0.00 | −0.16 to 0.16 | 0.10 | −0.04 to 0.25 | 0.00 | −0.17 to 0.16 |
| Family SES | | −0.05 | −0.18 to 0.07 | 0.15 | −0.02 to 0.31 | 0.03 | −0.11 to 0.17 | 0.04 | −0.13 to 0.21 |
| Wave 1 delinquency seriousness | | 0.01 | −0.11 to 0.12 | 0.02 | −0.13 to 0.17 | 0.33<sup>a</sup> | 0.22 to 0.44 | −0.01 | −0.17 to 0.15 |
| Wave 1 low academic achievement | | −0.64<sup>a</sup> | −0.73 to −0.56 | 0.21 | −0.02 to 0.43 | 0.08 | −0.06 to 0.21 | 0.16 | −0.10 to 0.41 |
| Social competence intercept | | −0.54<sup>a</sup> | −0.74 to −0.34 | −0.12 | −0.30 to 0.05 | −0.31<sup>a</sup> | −0.59 to −0.03 |
| Social competence slope | | | | | | | | |
| Peer delinquency intercept | | −0.10 | −0.29 to 0.09 | | | | |

#### Model B. Prediction of young adult delinquency seriousness and educational attainment from intercept and growth factors of social competence and peer delinquency in adolescence

<table>
<thead>
<tr>
<th>Variable</th>
<th>Delinquency seriousness</th>
<th>Educational attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>95% CI</td>
</tr>
<tr>
<td>Social competence intercept</td>
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<td>−0.14</td>
</tr>
<tr>
<td>Social competence slope</td>
<td></td>
<td>−0.43&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Peer delinquency intercept</td>
<td></td>
<td>0.31&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Peer delinquency slope</td>
<td></td>
<td>0.34&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Race–ethnicity</td>
<td></td>
<td>−0.04</td>
</tr>
<tr>
<td>Family SES</td>
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<td>−0.05</td>
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<tr>
<td>Wave 1 delinquency seriousness</td>
<td></td>
<td>0.08</td>
</tr>
<tr>
<td>Wave 1 low academic achievement</td>
<td></td>
<td>0.15</td>
</tr>
</tbody>
</table>

Coding for dichotomous variable: race 1 = Caucasian to 2 = African American.

<sup>a</sup><sub>P < 0.001</sub>

<sup>b</sup><sub>P < 0.01</sub>

<sup>c</sup><sub>P < 0.05</sub>