



The Longitudinal Impact of Distal, Non-Familial Relationships on Parental Monitoring: Implications for Delinquent Behavior

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Abstract

An extensive body of work shows that parental monitoring reduces the likelihood of risky behaviors among youth, yet little attention has been given to the factors compelling parents to engage in monitoring behaviors. The current study examines the association between non-familial, adolescent relationships (i.e., school connectedness, community connectedness, and peer relationships) and parental monitoring. The data used come from the Mobile Youth Survey (MYS), and from 2006 and 2011, resulting in a longitudinal sample of 3,287 adolescents. Longitudinal growth modeling reveals strong associations between non-familial relationships and parental monitoring, along with gendered effects across time. Implications for parental monitoring and delinquency in a low-income, Black American sample are discussed.

Keywords

parental monitoring, connectedness, delinquency, peer relationships

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Child and adolescent behaviors are shaped in large part by the relationships youth have with their parents (Noack & Buhl, 2004; Symonds, 1939). Although parents vary considerably in their parenting styles (Darling & Steinberg, 1993), the parent–child relationship is instrumental in promoting prosocial behaviors (Hastings, McShane, Parker, & Ladha, 2007), preventing behaviors that lead to justice system involvement (Aunola & Nurmi, 2005; Hoeve et al., 2009), preventing substance use (Nash, McQueen, & Bray, 2005), and mitigating behavioral health concerns (Branje, Hale, Frijns, & Meeus, 2010).

Youth who engage in delinquent behavior are more likely to engage in criminal behavior during adulthood (Haynie, 2001; Patterson, DeBaryshe, & Ramsey, 1989). Although there is not mutual agreement on the exact causes of delinquency, Hirschi's (1969) social control theory posits that social bonds place restraints on individuals' behavior, thus reducing the likelihood of delinquent acts. Social bonds such as the parent–child relationship (DiClemente et al., 2001; Fletcher, Steinberg, & Williams-Wheeler, 2004; Racz & McMahon, 2011; Rai et al., 2003; Spera, 2005), school connectedness (Payne, 2008; Stewart, 2003), neighborhood connectedness (Cattarello, 2000; Chen & Jacobson, 2013), and peer relationships (Church, Jagers, & Taylor, 2012) relate to or may “control” adolescent behaviors. In the absence of social controls, individuals may feel less obliged to follow norms and laws governing social behaviors. Although parental monitoring is undoubtedly critical in preventing delinquent behaviors (DiClemente et al., 2001; Racz & McMahon, 2011), little is known about the relationship among other social bonds that are important in shaping parental monitoring.

Parental monitoring is “a set of correlated parenting behaviors involving attention to and tracking of the child's whereabouts, activities, and adaptations” (Dishion & McMahon, 1998, p. 61). Although an extensive body of work shows that parental monitoring reduces the likelihood of risky behaviors among youth (Hill & Tyson, 2009; Holden & Miller, 1999; Lac & Crano, 2009), little attention has been given to the factors compelling parents to engage in monitoring behaviors. This is especially important given the influence deviant peers have in shaping delinquent behaviors absent parental monitoring (Barnes et al., 2006). There is little doubt parental monitoring restrains delinquent behavior (DiClemente et al., 2001; Racz & McMahon, 2011), and the choice to monitor an adolescent's behavior may be influenced by bonds that are situated distally to the parent–child relationship (see Figure 1). The current study examines the association between non-familial, adolescent relationships (i.e., school connectedness, community connectedness, and peer relationships) and parental monitoring. Specifically, we examine two research questions:

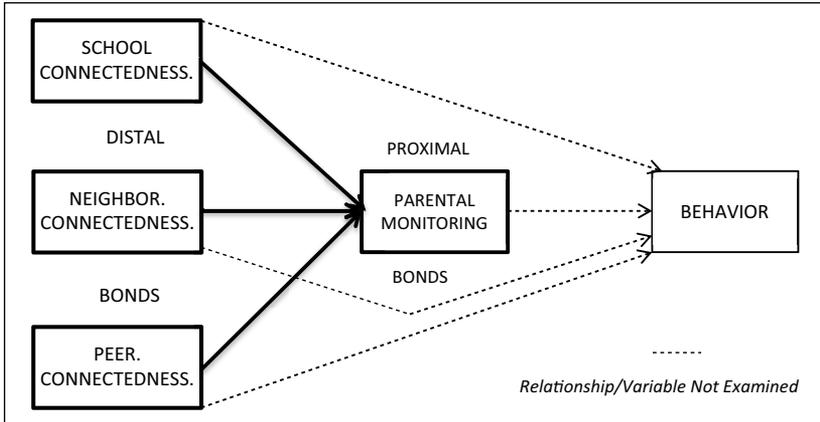


Figure 1. Theoretical model of distal and proximal social bond relationship.

Research Question 1: To what extent is there a significant association between non-familial, adolescent relationships and parental monitoring over time?

Research Question 2: Does gender moderate the association between non-familial relationships and parental monitoring?

Background

Although it is common in mid-to-late adolescence for school connectedness to decrease (Griffiths, Lilles, Furlong, & Sidhwa, 2012; Kelly et al., 2012), the decline is not universal (Wang & Dishion, 2012). The importance of school connectedness cannot be overstated, as it has been associated with academic achievement (Skinner & Pitzer, 2012), school failure (Li & Lerner, 2011), and substance use (Griffiths et al., 2012; Wormington, Anderson, Schneider, Tomlinson, & Brown, 2014). Moreover, there is an inverse relationship between delinquency and school connectedness (Chen, Voisin, & Jacobson, 2013; Loukas, Ripperger-Suhler, & Horton, 2009).

Children begin to feel connected to their school after having positive interactions with peers and teachers (Catalano, Kosterman, Hawkins, Newcomb, & Abbott, 1996). Although it is evident that the bond between the school and the adolescent is important, how these relationships affect parent–child interactions is not well understood. This is important because school connectedness may prevent delinquent behavior, yet poor connectedness may also be a result of delinquent behaviors and association with delinquent peers (Bachman

et al., 2008; Wang & Dishion, 2012). Parents who over-rely on schools to monitor their child's behavior may be poorly situated to cope with delinquent behaviors should they arise.

Similar to school connectedness, neighborhood connectedness is partially defined by community social bonds. The ecological context of communities places fewer restrictions on contacts between individuals, whereas schools restrict contact between peers to those of similar age. Impoverished neighborhoods often lack many resources for socializing youth (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Galster, Quercia, Cortes, & Malega, 2003; Leventhal & Brooks-Gunn, 2003), thus youth living in poverty are more likely to be socialized by older peers than by adults, and thus, they may be at risk for activities that result in arrest and gun violence (Bingenheimer, Brennan, & Earls, 2005), school violence (Karcher, 2004), and other delinquent behaviors (Chung & Steinberg, 2006). This socialization effect can have serious consequences for disadvantaged youth (Brody et al., 2001; Harding, 2009). However, among Black American families, some evidence exists that peer socialization may be normative and positive outcomes can result when peers are involved in the socialization process (Khafi, Yates, & Luthar, 2014).

Delinquent peer associations and subsequent criminal activities have been the focus of much research. Delinquent youth are more likely to seek out and spend time with other delinquent peers (Knecht, Snijders, Baerveldt, Steglich, & Raub, 2010), and importantly, increased time spent among delinquent youth increases the likelihood that youth will engage in delinquent behaviors (Keijsers et al., 2012). In addition, peer delinquency has been shown to mediate the impact of parental monitoring (O'Donnell, Richards, Pearce, & Romero, 2012). That is, association with delinquent peers reduces the influence of parental monitoring. Exactly how this happens is not certain, but social control theory suggests that peers oftentimes become responsible for part of the socialization process, thus becoming authority figures and influential in the adolescent's life (Hirschi, 1969).

Just as association with delinquent peers has been shown to have negative consequences, association with non-delinquent peers can also shape youth's behavior. Prior research has shown that peer support is helpful in preventing adolescent substance use (Wills, Resko, Ainette, & Mendoza, 2004), increasing school engagement (Shin, Daly, & Vera, 2007), and reducing symptoms of depression (Licitra-Kleckler & Waas, 1993). However, there is inconsistent evidence to demonstrate that peer support prevents delinquent behaviors (Charlebois, LeBlanc, Tremblay, Gagnon, & Larivee, 1995; Licitra-Kleckler & Waas, 1993). That is, peer support does not consistently reduce negative outcomes among adolescents.

Theoretical Integration

Multiple scholars have posited a theoretical linkage between Hirschi's (1969) social control and Sutherland's (1939) differential association theories (Church, Jagers, & Taylor, 2012; Church, Wharton, & Taylor, 2009; Nix et al., 1999). Social control theory posits agents of socialization such as parents build self-control and reduce the inclination to engage in anti-social behavior. Differential association theory suggests that through interaction with other deviant individuals, criminal behavior is learned. The combination of these two theories proposes that weakened socialization agents will lead to association with deviant individuals.

Parental monitoring is a type of social control exerted by parents over their children, and research has established the relationship between parental monitoring and delinquent behavior (Hoeve et al., 2009). Still, parental monitoring decreases over time (Barnes et al., 2006), and little explanation exists for this phenomenon outside the developmental perspective. Moreover, much of the theory-driven research relies on a strict interpretation of theoretical convergence as it was originally explicated. This has resulted in a largely "one-way" interpretation of the risk factors predicting delinquent behavior, especially with regard to peer and parent relationships. Theorists such as Thornberry (1987) have suggested that control, learning, and delinquency are *reciprocally interrelated*. However, the transactional nature of these relationships can be difficult to untangle because parental behaviors co-occur with other risk factors that predict delinquency (such as peer delinquency). Previous research has historically attempted to use risk factors to predict adolescent behaviors; understanding the relationship among these factors has rarely been considered.

The current study proposes parental monitoring as a consequent event. Neighborhood and school connectedness are theorized to serve as agents of socialization that encourage self-control and discourage wrongful behaviors. It is hypothesized that as other agents of socialization increase, the need for strong parental oversight decreases. Peer connectedness, especially negative peer connections, tend to encourage delinquent behaviors and are theorized to be agents of differential association. It is predicted that as strong negative peer attachments increase, parental monitoring behaviors will also increase. It is expected that this is done to mitigate the effects of negative peer influences. Although myriad research suggests the parent-child relationship is essential in promoting positive outcomes and preventing delinquent behavior (Criss et al., 2015; Loeber & Stouthamer-Loeber, 1986), few studies examine the influence of agents of socialization upon parenting.

Method

Sample

The data used in this study come from the Mobile Youth Survey (MYS), which was conducted annually between the years 1998 and 2011, resulting in a longitudinal sample of more than 12,000 adolescents between the ages of 9.75 and 19.25 contributing more than 36,000 data points. This study was conducted first in 13 of the poorest neighborhoods in Mobile, Alabama, and the town of Prichard, both part of the Mobile Metropolitan Statistical Area (MSA), where, in 1990, the median income was approximately US\$5,000. As individuals moved, they were still recruited to participate in the MYS. Additional individuals from the new neighborhoods were also recruited to participate, resulting in a sample from 51 neighborhoods. To conserve space, more information about the recruitment and sampling strategies will not be presented here but can be found in K. A. Bolland et al. (2013).

The MYS originally consisted of 294 items, but in 2006, the MYS was expanded to include additional scales (i.e., school connectedness and neighborhood connectedness). From 2006 through 2011, the MYS contained 406 items, with 2 additional items (a total of 408 items) added on the 2009 to 2011 surveys. For this study, only data from the years 2006 through 2011 were included, as the additional items in the survey contained some of the measures of interest for this study.

The participants in the MYS, and in this sub-sample, are fairly homogeneous with respect to demographics but were also found to be representative of the population of adolescents living in the neighborhoods from where participants were recruited (A. C. Bolland, 2012). Most of the participants identify as being Black American (92.2%) and most participants have received reduced-cost or free lunch for at least 1 school year during their participation in the MYS. The entire MYS and this sub-sample were both relatively equal in terms of gender, with 51.2% and 50.1% males, respectively.

For this study, participants with only one data point were excluded, due to the nature of the longitudinal analysis. Furthermore, for this sample, participants with data points at ages younger than 12 and older than 17 were excluded due to low prevalence as longitudinal models can be better estimated when participants have multiple data points. The resulting sample consisted of 3,267 participants, who had two or more data points between the years 2006 and 2011 and between the ages 12 and 17 resulting in a total of 17,839 data points.

Measures

Non-familial relationships. Non-familial relationships, in this study, consisted of three scales: school connectedness, neighborhood connectedness, and peer relationships.

School connectedness was measured using eight items adapted from Goodenow (1993), resulting in a scale with values ranging from 0 to 8, where higher scores indicate more school belonging or school connectedness. For those in school the previous year, participants were asked to either agree or disagree with these items (e.g., “most students at my school like me the way I am” and “there’s at least one teacher in my school I can talk to if I have a problem”), creating dichotomous response options. Those adolescents who did not attend school were able to check the option of “I wasn’t in school last year.” Students without a school connectedness score, or who were not in school in the previous year, were excluded from analysis. Internal reliability for the adapted scale was adequate ($\alpha = .62$).

Neighborhood connectedness was measured using 11 items adapted from the Psychological Sense of Community Scale (Glynn, 1981; Perkins, Florin, Rich, Wandersman, & Chavis, 1990), resulting in scale with possible values ranging from 0 to 11, where higher scores reflect higher neighborhood connectedness. Participants were asked to “agree” or “disagree” to items such as “I feel I am an important part of my neighborhood” and “I have friends in my neighborhood who know they can depend on me.” Internal reliability for the adapted scale was adequate ($\alpha = .66$).

Peer connectedness was measured using two scales. First, *peer pressure* to engage in risk behaviors was measured by six items developed for the MYS, resulting in a scale ranging from 0 to 12, where higher scores indicate more pressure from friends to engage in risk behaviors. Participants were asked to indicate, for example, whether most of their friends, some of them, or almost none of them “think you are a punk if you don’t drink alcohol” (or use drugs or carry a weapon). Internal reliability for the scale was good ($\alpha = .81$).

Second, *peer support* or support from friends was measured using a scale of 18 items adapted from Armsden and Greenberg (1987), resulting in a scale ranging from 0 to 23, where higher scores indicate more feelings of support. First, participants were asked to agree or disagree with several statements about their best friends (e.g., “They get irritated with me for no reason” and “I trust them”). Then, participants were asked to think about how often their best friends did things like “keep their promises” and “hit or shove . . . in anger.” Internal reliability for the adapted scale was good ($\alpha = .76$).

Gender was self-reported by the participants and coded dichotomously (0 = male, 1 = female).

Parental monitoring. Parental monitoring was measured using a scale adapted from Lamborn, Mounts, Steinberg, and Dornbusch (1991), including six items resulting in a revised scale with values ranging between 0 and 12, where higher numbers indicate more parental monitoring. Participants responded to four different types of items for the parental monitoring scale. Example items include the following: “Does your mother or father know who you hang out with?” (*no* = 0, *yes* = 2), “How much does your mother or father really know about how you spend your time?” (*They don’t know* = 0, *They know a little* = 1, *They know a lot* = 2), “Does your mother or father try to find out how you spend your time?” (*They don’t try* = 0, *They try a little* = 1, *They try a lot* = 2), and “How much does your mother or father really know about where you go at night?” (*I don’t go out at night* = 2, *They don’t know* = 0, *They know a little* = 1, *They know a lot* = 2).

Internal reliability for the parental monitoring scale was good ($\alpha = .77$).

Analysis Plan

Two longitudinal models were estimated to address the following research question:

Research Question 3: What impact do non-familial relationships have on parental monitoring among male and female adolescents across time?

Growth models are particularly robust to missing data points (Singer & Willett, 2003); however, adolescents with only one or two data points will contribute solely to the group parameter estimates, as individual parameter estimates cannot be identified for them. Due to the high prevalence of adolescents in the MYS with only a single observation (more than 50% of the full sample), these observations were removed to reduce any biases associated with these adolescents. Imputation methods were not implemented as significant computational time would be needed due to the complexity of the MYS database.

For this analysis, Singer and Willett’s (2003) suggestions for longitudinal analysis were followed. First, the unconditional growth model (Model 1) was estimated for the response variable of parental monitoring. The model is parameterized as follows:

Level 1 (Model 1):

$$Y_{ij} = \pi_{0i} + \pi_{1i}\text{Age}C_i + \varepsilon_{ij}.$$

Level 2:

$$\pi_{0i} = \gamma_{00} + \zeta_{0i},$$

$$\pi_{1i} = \gamma_{10} + \zeta_{1i}.$$

Age is centered at 12 years for ease in interpretation of parameter estimates.

Next, a full conditional growth model was created for the dependent variable, parental monitoring. In this growth model, our measures of non-familial relationships were added to Level 1 portion of the model as time-varying covariates: school connectedness (Schl), neighborhood connectedness (Nhood), peer support (PSupp), and peer pressure (PPress). Random effects were also included for the main effect terms. In addition, interaction terms were added with centered age (AgeC) for each of these effects. Dichotomized gender was added to each of the Level 2 models. The full parameterized model is shown below (Model 2):

Level 1 (Model 2):

$$\begin{aligned} Y_{ij} = & \pi_{0i} + \pi_{1i}\text{AgeC}_i + \pi_{2i}\text{Schl}_i + \pi_{3i}\text{Nhood}_i + \pi_{4i}\text{PSupp}_i \\ & + \pi_{5i}\text{PPress}_i + \pi_{6i}\text{Schl}_i \times \text{AgeC}_i + \pi_{7i}\text{Nhood}_i \times \text{AgeC}_i \\ & + \pi_{8i}\text{PSupp}_i \times \text{AgeC}_i + \pi_{9i}\text{PPress}_i \times \text{AgeC}_i + \varepsilon_{ij}. \end{aligned}$$

Level 2:

$$\pi_{0i} = \gamma_{00} + \gamma_{01} \times \text{Gender} + \zeta_{0i},$$

$$\pi_{1i} = \gamma_{10} + \gamma_{11} \times \text{Gender} + \zeta_{1i},$$

$$\pi_{2i} = \gamma_{20} + \gamma_{21} \times \text{Gender} + \zeta_{2i},$$

$$\pi_{3i} = \gamma_{30} + \gamma_{31} \times \text{Gender} + \zeta_{3i},$$

$$\pi_{4i} = \gamma_{40} + \gamma_{41} \times \text{Gender} + \zeta_{4i},$$

$$\pi_{5i} = \gamma_{50} + \gamma_{51} \times \text{Gender},$$

$$\pi_{6i} = \gamma_{60} + \gamma_{61} \times \text{Gender},$$

$$\pi_{7i} = \gamma_{70} + \gamma_{71} \times \text{Gender},$$

$$\pi_{8i} = \gamma_{80} + \gamma_{81} \times \text{Gender}.$$

The full growth model was estimated, and non-significant parameter estimates were removed one at a time through backward elimination. The final reduced growth model with only significant parameter estimates will be displayed. All analyses were conducted using SAS PROC MIXED (version 9.3), and in each model, the covariance matrix was allowed to be unstructured. To facilitate comparison of model fit, we used full information maximum likelihood (FIML).

Results

The unconditional growth model was estimated first, and parameter estimates are shown in Table 1. Parental monitoring was significantly different from 0 at age 12, $\gamma = 9.24$, $t(3266) = 155.28$, $p < .001$. In addition, there was a significant decrease in parental monitoring over time, $\gamma = -0.20$, $t(3046) = -10.76$, $p < .001$. In this sample, the mean parental monitoring was 9.62 (on a 12-point scale) at age 12, with significant decreases as the adolescent ages.

Next, gender, school connectedness, neighborhood connectedness, and the two measures of peer connectedness (peer support and peer pressure) were added to the unconditional growth model (Model 2), with non-significant parameter estimates removed through backward elimination. In addition, the random effect for neighborhood connectedness was also removed, as it was not significant. All significant parameter estimates are displayed in Table 1. The final model was a significantly better fit to the data compared with the unconditional growth model $\chi^2(8) = 1,596.5$, $p < .001$. The intercept was significant, $\gamma = 5.52$, $t(3263) = 25.63$, $p < .001$, indicating that the level of parental monitoring for both male and female adolescents with no feelings of connectedness (0 values for school connectedness, community connectedness, peer support, and peer pressure) was significantly greater than 0 at age 12.

The reported level of school connectedness was significantly positively related to parental monitoring in males, $\gamma = 0.19$, $t(1505) = 6.94$, $p < .001$, with females showing a significantly greater positive relationship than males,

Table 1. Estimated Model Parameters for School, Neighborhood, and Peer Connectedness Across Adolescence: Parental Monitoring.

Model parameter	Unconditional growth (Model 1)		Reduced conditional (Model 2)	
	Estimate	SE	Estimate	SE
Fixed effects				
Intercept	9.24**	0.06	5.52**	0.22
Schl	—	—	0.19**	0.03
Schl × Gender	—	—	0.11*	0.04
Nhood	—	—	0.03**	0.01
PPress	—	—	-0.10**	0.01
PSupp	—	—	0.14**	0.01
PSupp × Gender	—	—	-0.03*	0.02
AgeC	-0.20**	0.02	-0.29**	0.02
AgeC × Gender	—	—	0.42**	0.09
AgeC × Gender × Schl	—	—	-0.04**	0.01
Random effects				
Var (Intercept, ζ_{0i})	2.94**	0.26	16.80**	2.30
Var (AgeC, ζ_{1i})	0.08*	0.03	0.05*	0.02
Var (Schl, ζ_{2i})	—	—	0.14**	0.03
Var (PPress, ζ_{3i})	—	—	0.07**	0.01
Var (PSupp, ζ_{4i})	—	—	0.03**	0.01
Residual (ϵ_{ij})	4.98**	0.11	3.95**	0.11
Fit statistics				
Deviance	43,753.3		42,156.8	
AIC	43,761.3		42,188.8	
BIC	43,785.6		42,286.3	

Note. Schl = school connectedness; Nhood = neighborhood connectedness; PPress = peer pressure; PSupp = peer support; AIC = Akaike information criterion; BIC = Bayesian information criterion; AgeC = centered age.

* $p < .05$. ** $p < .01$.

$\gamma = 0.11$, $t(99) = 2.59$, $p = .01$. Higher levels of parental monitoring were significantly related to higher levels of school connectedness, with females showing a stronger association with school on their levels of parental monitoring. The effect of school connectedness changes across time for both genders. For males, levels of parental monitoring over time decreased, $\gamma = -0.29$, $t(3002) = -11.88$, $p < .001$, yet this change over time is not related to school connectedness; that is, males showed a decline in parental monitoring over

time regardless of their level of school connectedness. School connectedness, however, is related to females' levels of parental monitoring over time. Females who show no level of school connectedness showed a significant increase in parental monitoring over time, $\gamma = 0.42$, $t(99) = 4.85$, $p < .001$. However, as the level of school connectedness increases, females show a smaller increase in parental monitoring over time, $\gamma = -0.04$, $t(99) = -3.24$, $p = .002$, with an eventual decrease at high levels of school connectedness.

Levels of neighborhood connectedness were significantly positively related to the reported level of parental monitoring, $\gamma = 0.03$, $t(99) = 2.95$, $p = .004$. Those with higher levels of reported neighborhood connectedness also reported higher levels of parental monitoring. This effect did not significantly differ between males and females nor did it significantly change over time.

Levels of peer pressure to engage in risky behaviors were significantly negatively related to parental monitoring, $\gamma = -0.10$, $t(686) = -7.69$, $p < .001$. Those who report higher levels of peer pressure to engage in risky behaviors report lower levels of parental monitoring. There were no significant gender differences, and this effect was constant across time.

Levels of peer or friend support were significantly positively related to the reported level of parental monitoring for males, $\gamma = 0.14$, $t(382) = 12.09$, $p < .001$. Females reported a significantly weaker positive relationship, $\gamma = -0.03$, $t(99) = -2.21$, $p = .03$. Both males and females with higher peer support reported higher levels of parental monitoring, with this relationship being slightly weaker, yet still significantly positive for females. However, males' sense of parental monitoring was more strongly associated with level of peer support. These two gender effects were consistent across time.

Trajectories of parental monitoring for all four of the significant effects (school connectedness, neighborhood connectedness, peer pressure, and peer support) are displayed in Figure 2.

Discussion

The current study examined the association between social bonds distal to the parent-child relationship (school connectedness, neighborhood connectedness, and peer connectedness) and parental monitoring. As anticipated, differences existed between these distal bonds and levels of parental monitoring, especially as they pertain to adolescent gender. Differences were found in the relationship among school connectedness and parental monitoring. At age 12, the mean level of parental monitoring was 9.62 on a 12-point scale for males and females. However, parental monitoring decreased significantly for both genders over time. This is consistent with prior research showing parental monitoring

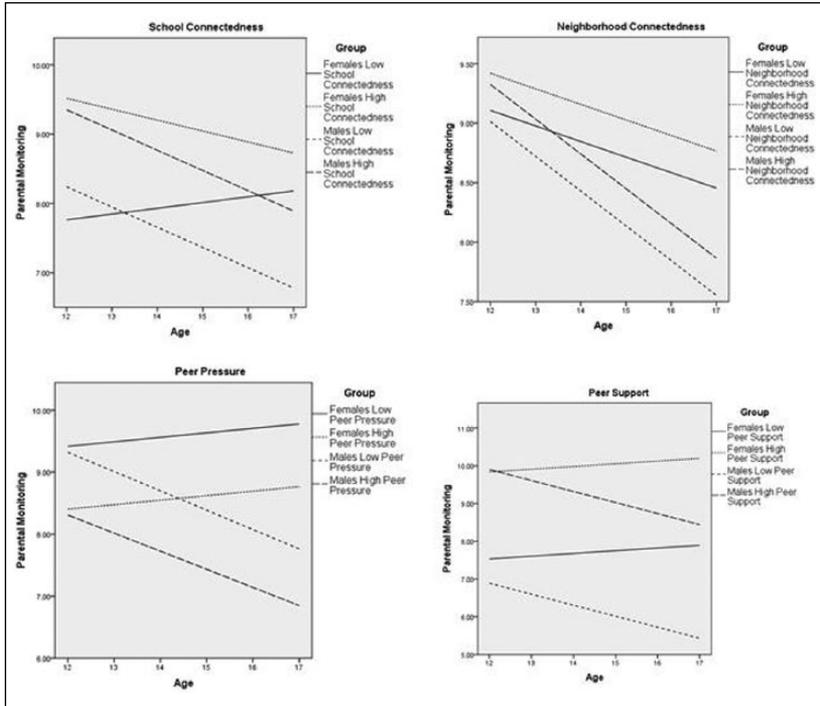


Figure 2. Trajectories of parental monitoring based on school, neighborhood, and peer connectedness.

decreases as adolescents grow older (Fletcher, Steinberg, & Williams-Wheeler, 2004; Wang, Dishion, Stormshak, & Willett, 2011).

Parental monitoring was positively associated with school connectedness for both males and females. Longitudinally, parental monitoring decreased for males, irrespective of the positive association with school connectedness. However, school connectedness was differentially related to female parental monitoring. Among females reporting lower levels of school connectedness, parental monitoring increased across time. Females reporting higher levels of school connectedness reported lower levels of parental monitoring.

Greater levels of parental monitoring among females with low school connectedness may represent an effort by parents to socialize females to community norms and customs, and prevent deviant behavior (Brody et al., 2001; Donohew, Clayton, Skinner, & Colon, 1999), a role at least partially fulfilled by schools. Moreover, parents are often responsible for socializing gender

differences by placing different expectations on boys and girls (Eccles, Jacobs, & Harold, 1990; Stewart & McDermott, 2004), and adolescent females may be more strictly monitored by their parents because of their gender. Among many Black American families, males are sometimes viewed differently from their female counterparts in that they are perceived to be more mature and require less parental monitoring (Hooper, 2013). As other agents of socialization are weakened, parental monitoring increases (Hayes, Hudson, & Matthews, 2003; Pettit, Laird, Dodge, Bates, & Criss, 2001), as in the case of adolescent females with poor school connections. Therefore, parents seem to increase their monitoring efforts when female children are less connected to their school.

Neighborhood connectedness was also found to be associated with parental monitoring. Among youth with high neighborhood connectedness, parental monitoring was also high. These results suggest that youth with strong neighborhood ties are likely to have parents who are cognizant of their child's whereabouts and activities. Previous research has also found that, among Black American families, extended kin networks often provide additional parenting support (McCabe & Clark, 1999; Pollack, Kazman, & Deuster, 2014; Scott & Black, 1989). This additional support may account for both strong neighborhood ties and strong parental monitoring. That is, extended kin residing within the neighborhood and in contiguous areas may serve both as a quasi-parent, monitoring the child in the parent's absence, and as a parental informant increasing the parent's knowledge of the child's activity (Gerstel, 2011; Taylor, 2010). The presence of extended kin in one's community may also serve as a deterrent from engaging in deviant behaviors, because such an activity would likely be observed by family members. Consequently, when connected to their community, youth are at lesser risk for engaging in delinquent activity through stronger social ties.

Peer connectedness, measured by peer pressure and peer support, was also significantly associated with parental monitoring. Consistent with previous findings (Church et al., 2012), peer pressure was negatively associated with parental monitoring among both male and female adolescents. Surprisingly, higher levels of peer pressure were associated with decreases in parental monitoring. The lack of strong parental supervision during adolescence can be problematic, as peers become more influential, parents who are less involved may have children who become involved in delinquent behavior. Although it is not clear from the present study why peer pressure had a negative effect on parental monitoring, decreased parental monitoring seems to occur as part of other adolescent and family developmental processes (see unconditional growth model).

Peer support was also associated with parental monitoring. Males reported a stronger significant relationship than did females, with higher levels of parental monitoring associated with greater peer support at age 12. Over time, there were no gender differences in parental monitoring attributable to peer support. However, those males with high peer support reported more initial parental monitoring and higher levels of parental monitoring by age 17 than those males with low peer support. Similarly, this occurred among female groups with high and low peer support. Although this relationship seems contradictory, the presence of supportive peers might not necessarily negate delinquent behavior; supportive peers may simply provide an encouraging and reassuring environment for youth regardless of behavior. Therefore, parents providing increased monitoring in the presence of supportive peer relationships do so for the same reason as with other peer relationships—the potential to influence the adolescent's behavior. Although peer support may often be positive (see Cowie & Hutson, 2005), it can manifest as support for negative behaviors (Agnew, 1991; de Kemp, Scholte, Overbeek, & Engels, 2005). Situations that present increased opportunity to engage in deviant behavior may also result in additional parental monitoring.

Strengths and Limitations

This study has several notable strengths. This is the first examination of the predictors of parental monitoring of which we are aware. Although there is an extensive body of work focusing on the importance of parental monitoring, the current study expands what is known about the tendency to engage in parental monitoring. The current study also makes use of longitudinal data that are of substantial size with multiple points of observation per participant. Next, the participants are predominantly Black American and reside in low-income housing. The homogeneity of the sample provides unique insight into the parent-child dynamics of some Black American families living in extreme poverty.

The study also has some limitations worth noting. First, measures of parental monitoring are a series of child-report items and not a report of parental monitoring as indicated by the parent or as reported by an observer of parent and child behaviors. However, this perception may be the element that relates to or informs parental decision making. Importantly, *perceived* parental monitoring and *actual* parental monitoring may differ but may be equally important to study. Next, the internal reliability of school connectedness ($\alpha = .62$) and neighborhood connectedness ($\alpha = .66$) was lower than is generally accepted. Because of the nature of the dichotomous items, it is expected that internal reliability may be lower than ideal (DeCoster, Iselin,

& Gallucci, 2009; Robinson, Shaver, & Wrightsman, 1991), although this does not indicate an unreliable measure. Finally, adolescents were included who had only two data points, thus limiting our ability to estimate individual trajectories for these adolescents. Although they contribute to the group parameter estimates, our analyses are limited in their individual estimates. Although there are often advantages to model complexity and the inclusion of multiple variables, our analysis limits the variables studied in a well-specified population.

Implications

The gender implications of the current study are striking. Previous research has consistently found that males are more likely to engage in delinquent behavior than females (Daigle, Cullen, & Wright, 2007). Yet, in every instance in this study, non-familial relationships had little noticeable impact on the parental monitoring of males across time. This is especially troubling because a decrease in parental monitoring has been associated with an increase in delinquency (Bean, Barber, & Crane, 2006; Hill & Tyson, 2009; Holden & Miller, 1999; Lac & Crano, 2009).

Evidence suggests that parental monitoring responds in explicit ways to the distal bonds surrounding the parent–child relationship. Distal associations with parental monitoring differ for males and females, suggesting the parent–child bond may also differ based on the child’s gender. The gender-related findings may be associated with specific cultural and familial factors of the study sample. It may be that in the Black American families in the current study, males were perceived as having greater levels of maturity and competence (e.g., mature minors and little adults; see Hooper, 2013) than their female counterparts and, thus, were perceived as requiring less parental monitoring than their female counterparts. Future research efforts should examine how the cultural context informs parental monitoring and how responses may differ by parent to gain a more nuanced understanding of cultural relevance, gender, level of parental monitoring, and youth living in extreme poverty.

In addition to family culture and relations, parent–child bonds are further shaped by the environmental context in which these individuals reside (Payne, 2008; Stewart, 2003). That is, school connectedness, neighborhood connectedness, and peer connectedness are all in some way shaped by the extreme poverty of the sample. Consequently, parental monitoring is, at least partially, a function of environmental context. Intervention approaches that include parental monitoring or the parent–child relationship should also consider the environmental contexts that shape this bond.

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