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Short Communication

Parental monitoring protects against the effects of parent and adolescent depressed mood on adolescent drinking

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HIGHLIGHTS

- This study examined protective effects of parental monitoring on adolescent drinking.
- Participants were high-risk adolescents presenting to the emergency department.
- Parental monitoring was only protective for adolescents with high depressed mood.
- By contrast, monitoring was only protective for parents with low depressed mood.

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ABSTRACT

Objective: Parental monitoring is a well-established protective factor for adolescent drinking. This study examined whether parental monitoring protected against three common risk factors for alcohol use in a sample of high-risk adolescents: parental depressed mood, adolescent depressed mood, and parental alcohol use.
Methods: Participants included 117 adolescents (mean age = 15.5; 52% female) who presented to the hospital emergency department due to an alcohol-related event and their primary parent/guardian. Adolescents completed self-report measures of alcohol use frequency, depressed mood, and parental monitoring, while parents completed self-report measures of problematic alcohol use and depressed mood.
Results: Hierarchical regression confirmed that parental monitoring was associated with lower frequency of adolescent alcohol use, even after controlling for the three risk factors. Significant interactions were found between parental monitoring and both adolescent and parental depressed mood. Parental monitoring had significant protective effects against drinking frequency among adolescents with higher levels of depressed mood, but not among adolescents with lower levels of depressed mood. By contrast, parental monitoring only had protective effects among those parents with lower levels of depressed mood. Parental problematic alcohol use did not affect the relationship between parental monitoring and adolescent alcohol use.
Conclusions: Our results suggest that adolescents with high levels of depressed mood may be more likely to benefit from parental monitoring, whereas parents with high levels of depressed mood may be less likely to monitor effectively. Interventions targeting parental monitoring in high-risk adolescents should take into account the influence of both adolescent and parental depressed mood.

1. Introduction

Parental monitoring, defined as parental knowledge of their adolescent's whereabouts, activities, and peers (Dishion & McMahon, 1998), has been associated with reduced adolescent drinking in both cross-sectional (Carroll et al., 2016; Patrick & Schulenberg, 2013) and longitudinal studies (Nash, McQueen, & Bray, 2005; Ryan, Jorm, & Lubman, 2010; Tobler & Komro, 2010). In the context of risk factors, parental monitoring has demonstrated both promotive (i.e., main; Beck, Boyle, & Boekeloo, 2004) and protective (i.e., moderating) effects on adolescent drinking (Fagan, Van Horn, Hawkins, & Jaki, 2013; Molina et al., 2012; O'Brien, Hernandez, & Spirito, 2015; Wu, Hoven, Okezie, Fuller, & Cohen, 2007). It is well-established that parental monitoring protects against adolescent drinking by buffering the effects of externalizing problems (e.g., Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006). By contrast, the extent to which parental

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monitoring mitigates the effects of internalizing symptoms is not well understood. One recent longitudinal study by Schlauch, Levitt, Connell, and Kaufman (2013) with adolescents receiving comprehensive community mental health services found that parental control attenuated the effect of adolescent internalizing problems on future drinking, but only for adolescents with lower levels of internalizing problems. By contrast, another study by O'Brien et al. (2015) with youth presenting to the emergency room or community clinics for alcohol problems examined depressed mood specifically and found that parental monitoring buffered against alcohol-related problems, but only for youth with high levels of depressed mood. A key limitation of these prior studies has been lack of control for two parenting risk factors that commonly co-occur with adolescent drinking and internalizing problems: parental depressed mood (Kamon, Stanger, Budney, & Dumenci, 2006; Kane & Garber, 2004) and parental drinking (Latendresse et al., 2008; Peleg-Oren, Hospital, Morris, & Wagner, 2013).

The purpose of this study was to examine both the main and moderating effects of parental monitoring on adolescent drinking in the context of three risk factors (i.e., adolescent depressed mood, parental depressed mood, parental alcohol use) within a sample of high risk adolescents presenting to the emergency department (ED) for acute alcohol-related problems. We had two hypotheses based on prior research. First, we expected parental monitoring to have a significant protective effect on adolescent drinking even when accounting for the three risk factors. Second, we expected parental monitoring to moderate the effects of all three risk factors. Consistent with O'Brien et al. (2015) we expected adolescents with high/clinically impairing levels of depressed mood to benefit from increased monitoring. Conversely, we hypothesized that adolescents whose parents reported higher depressed mood and problematic alcohol use would not benefit from increased monitoring due to impaired parenting skills (Eckshtain, Ellis, Kolmodin, & Naar-King, 2010; Latendresse et al., 2008). We controlled for parent and adolescent gender due to evidence of substantial gender differences in depressed mood and drinking (Ohannessian, 2015; Vermeulen-Smit et al., 2012).

2. Materials and method

One hundred seventeen adolescents (52% female) between the ages of 13 and 17 ($M = 15.5$, $SD = 1.2$) were recruited from a hospital ED in the northeastern United States as part of a randomized trial (Spirito et al., 2011). To qualify, adolescents had to present to the ED for an alcohol-related problem, confirmed by either a positive blood alcohol concentration or self-reported alcohol use in the 6 h prior to admission. Research staff obtained written informed consent from parents and assent from adolescents; adolescents had to pass a mental status examination and describe the study elements to provide assent, and had to have one parent willing to provide consent and participate. Parents and adolescents completed measures in separate private rooms. Affiliated university and hospital Institutional Review Boards approved study procedures. Research staff enrolled 125 adolescents, of which 117 (94%) had complete data and comprised the current sample. Adolescents primarily identified as Non-Hispanic Caucasian (75%), Hispanic (18%), and bi-racial (4%). Parents were 78% female with a mean age of 42.7 ($SD = 5.9$).

The *Adolescent Drinking Questionnaire* (Costa, Jessor, & Donovan, 1989) is a well-validated scale that was used to assess frequency of adolescent alcohol use. A single item measured adolescent drinking days over the past three months on an 8-point scale. The *Strictness/Supervision Scale* (Steinberg, Lamborn, Dornbusch, & Darling, 1992) measured parental monitoring and contained four items asking adolescents the extent to which their parents' knew about their whereabouts at night, at school, after school, as well as who their friends are. Items were scored from 0 (not at all) to 4 (always) and a mean score was calculated. Cronbach's alpha was 0.69, comparable to the initial validation study (Steinberg et al., 1992) and other measures of parental monitoring (Shakib et al., 2003). *Problematic parental alcohol use* was a categorical variable created from three parent self-report questions about drinking behaviors; it was designed to capture problematic drinking that did not meet criteria for a disorder. Parents were classified (yes/no) as having problematic alcohol use if they reported: a) having previously stopped using alcohol because of related problems, b) frequently becoming argumentative or irritable when drinking or c) having 3 + drinks per drinking occasion "more than half the time," i.e., indicating potential misuse that did not meet criteria for binge drinking (National Institute on Alcohol Abuse and Alcoholism, 2004). Finally, both adolescent and parental depressed mood were assessed using the *Center for Epidemiologic Studies—Depression Scale* (CES-D; Radloff, 1977), a 20-item self-report measure of past week depressive symptoms. Items were scored on a four-point scale and summed to create a total score, with scores ≥ 16 indicating clinically significant depression. Cronbach's alpha for adolescents and parents were 0.91 and 0.92, respectively.

2.1. Data analysis

Variable distributions and bivariate associations were examined prior to modeling. Study hypotheses were tested via hierarchical regression. In step 1, adolescent and parent gender were entered. In step 2, main effects of parental monitoring, adolescent depressed mood, parental depressed mood, and problematic parental alcohol use were tested. Continuous variables were mean centered (Schielzeth, 2010). In the final step, we tested interactions between parental monitoring and the remaining variables: adolescent depressed mood, parental depressed mood, and parental problematic alcohol use. Significant interactions were graphed and interpreted using Aiken and West's (1991) procedures with simple slope lines of each risk factor plotted at varying levels of parental monitoring. Effect sizes of parameter estimates were interpreted using recommendations by Cohen (1988). A priori power analyses with power set to 0.8, alpha set to 0.05, and medium effect sizes ($F^2 = 0.15$) indicated a requisite sample size of 55, well below our actual sample size of 117.

3. Results

3.1. Preliminary analyses

Variable distributions met the assumptions of normality. Sixty percent of adolescents reported drinking once a month or less, and 25% of parents reported problematic alcohol use. CES-D scores indicated that 27% of adolescents and 36% of parents had clinically significant depressed mood.

Bivariate correlations revealed that parental monitoring was negatively associated with adolescent frequency of alcohol use ($r = 0.31$) and adolescent depressed mood ($r = -0.24$), but not with parental depression or problematic parental alcohol use. Parental problematic alcohol use was associated with both adolescent drinking ($r = 0.21$) and adolescent depressed mood ($r = 0.26$). Parental depressed mood was significantly related to adolescent depressed mood ($r = 0.35$), but not to adolescent or problematic parental alcohol use (non-significant r's ranging from 0.01 to 0.16).

3.2. Hierarchical linear models predicting adolescent alcohol use frequency

Table 1 depicts results of the hierarchical regression, which explained 22% of variance in adolescent drinking frequency. In Step 1, neither adolescent nor parent gender had a significant effect on adolescent drinking. In Step 2, parental monitoring had a significant medium size negative effect ($\beta = -0.30$, $t = 3.15$, $p = 0.002$) on adolescent drinking, while no other variables had main effects. In Step 3, two of the interaction terms were significant: parental monitoring × adolescent depressed mood ($\beta = -0.20$, $t = -2.11$, $p = 0.04$)