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Parental Monitoring Affects the Relationship between Depressed Mood and Alcohol-Related Problems in Adolescents

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Abstract

Background—Parental monitoring has been identified as a protective factor for adolescent drinking, while depressed mood, peer substance use and peer tolerance of substance use have been identified as risk factors. The purpose of this study was to test the association between depressed mood and alcohol-related problems in adolescents, and to test whether parental monitoring and peer substance use/tolerance of use moderate the strength of this relationship.

Methods—Participants included 227 adolescents (Mage = 15.36; 51.5% female) recruited from a hospital emergency department and surrounding community who completed self-report assessments.

Results—Hierarchical linear regression analysis demonstrated that depressed mood was associated with more alcohol-related problems. A significant interaction between depressed mood and parental monitoring indicated a moderating effect, with high levels of depressed mood being associated with alcohol-related problems when parental monitoring was low; at low levels of depressed mood, parental monitoring was not related to alcohol-related problems.

Conclusions—This study highlights the protective role that parental monitoring may play in the association between depressed mood and alcohol-related problems, and suggests that parenting practices, in addition to individual counseling, should be addressed in treatment of depressed adolescents who drink.

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AUTHOR CONTRIBUTIONS

All authors participated in the designing of the study question. Dr. O'Brien conducted the literature search and statistical analyses, and composed the first draft of the manuscript. Dr. Hernandez assisted with the statistical analyses and manuscript drafts. Dr. Spirito assisted with the manuscript drafts. All authors were involved in revising the manuscript and approved the manuscript in its final form.

INTRODUCTION

Parental monitoring has been identified as a protective factor for adolescent drinking, while peer substance use and peer tolerance of substance use have been identified as risk factors.¹ Some research has shown peer associations have a more profound impact on substance use than parent-child relationships.² Others have found parents exert more influence.³ These conflicting findings may be due to individual differences in adolescents, such as age, sex, or emotional and behavioral characteristics. For example, there is some evidence that depressed mood is associated with alcohol-related problems in adolescents⁴; however, other studies have not shown support for this relationship.⁵ No studies, to our knowledge, have examined whether parent or peer factors play a more prominent role in alcohol-related problems if an adolescent has co-occurring emotional problems.

The purpose of this study was to test the association between depressed mood and alcohol-related problems in adolescents, and to test whether parental monitoring and/or peer use/tolerance of use moderate the strength of this relationship. We hypothesized that depressed mood would be positively related to alcohol-related problems based on the self-medication hypothesis,⁶ i.e., that the more depressed an adolescent, the more likely he/she would be to use alcohol to excess which in turn, would result in alcohol-related problems. We also hypothesized that parental monitoring would buffer, and peer-related factors would exacerbate, alcohol-related problems for adolescents with depressed mood based on the assumption that parents would increase the monitoring of their adolescents if they were depressed whereas peers might encourage substance use as a way to cope with distress.

METHODS

Participants and procedures

Participants included 227 adolescents (51.5% female) between 13–17 years old ($M = 15.36$, $SD = 1.26$ years) recruited from a hospital emergency department and the surrounding community in the northeastern United States. The emergency department sample included both adolescents presenting with alcohol use and those presenting for medical care without alcohol use. The community sample had to have a history of alcohol use to be included in the study. Research staff approached potential participants and obtained written informed consent from parents and assent from the adolescents and then administered the assessment. The consent/assent procedure included assurances that parents would not be informed of any of the adolescent's responses. The overseeing university and hospital's Institutional Review Boards approved all study-related procedures. Adolescents in this sample identified themselves as non-Hispanic White (61.2%), Hispanic (25.1%), African-American (7.9%), or another race/ethnic group (5.7%).

Measures

Alcohol-related problems were examined using the *Adolescent Drinking Inventory (ADI)*, a 24-item self-report measure assessing social, psychological, loss of control and physical indicators of alcohol problems in adolescents. Items are scored on either a 3-point scale from 0 (Not like me at all) to 2 (Like me a lot) or a 4-point scale from 0 (Never) to 3 (4 or more

times). A clinical cutoff score of 16 or higher has been established as indicating a need for further evaluation of and treatment for alcohol abuse.⁷ In this sample, the Cronbach's alpha was .93. Depressed mood was assessed using the *Center for Epidemiologic Studies-Depression Scale (CES-D)*, a 20-item self-report measure of depressive symptoms⁸ which yielded a Cronbach's alpha of .90 in this sample. Peer use/tolerance of use was assessed using the *Peer Substance Use and Peer Tolerance of Substance Use* scales.⁹ Each scale consists of seven items in which adolescents estimate how many of their friends use alcohol, marijuana, and other drugs and how many would tolerate their use of each of these substances. In this study's sample, the Cronbach's alpha for peer substance use and peer tolerance for substance use were .87 and .91, respectively. Because the measures were highly correlated ($r = .68$), the items were combined into one scale. Finally, parental monitoring was measured using the *Strictness/Supervision Scale (SSS)* which consists of four questions asking adolescents the extent to which the parent knew about his/her whereabouts and friendships. Items are rated on a 4-point scale, from 1 (doesn't know at all) to 4 (always knows).¹⁰ This scale had a Cronbach's alpha of .72 for this study's sample.

Data analysis

All independent variables were mean centered for use in multivariate analyses.¹¹ Hierarchical linear regression was used to test hypotheses.. Specifically, in Step 1 of this analysis, age, sex, depressed mood, parental monitoring, and peer use/tolerance of use were entered into the model. In Step 2, parental monitoring and peer use/tolerance of use were specified as moderators with the inclusion of interactions terms. Interactions found to be statistically significant were graphed and interpreted according to established procedures.¹¹

RESULTS

To test the general relationship between study variables, bivariate correlations were executed. Depressed mood ($r = .44, p < .001$) and peer substance use/tolerance ($r = .60, p < .001$) were significantly and positively correlated with alcohol-related problems, while parental monitoring was significantly and negatively correlated with alcohol-related problems ($r = -.46, p < .001$).

As shown in Table 1, in Step 1 of the regression model, all variables except for age were significantly associated with alcohol-related problems. Higher levels of depressed mood, greater peer use/tolerance of use, and lower parental monitoring were associated with more alcohol-related problems, supporting the first hypothesis. The sex by depressed mood interaction was entered into the model, and there was a trend towards significance in its association with alcohol-related problems ($\beta = .09, t = 1.89, p = .06$). Further inspection of means showed that females with high levels of depressed mood demonstrated slightly more alcohol-related problems compared to males and females with low depressed mood and males with high depressed mood.

When interactions were added to the model to test the second hypothesis, the interaction between depressed mood and parental monitoring was significant, with the model accounting for 47% of the variance, while the interaction between depressed mood and peer use/tolerance of use was not. The statistically significant interaction, graphed in Figure 1,

reveals that in the context of low parental monitoring, higher levels of depressed mood were significantly associated with more alcohol-related problems ($\beta = .33, t = 4.58, p < .001$). However, when parental monitoring was high, the relationship between depressed mood and alcohol-related problems was non-significant ($\beta = .08, t = 1.00, p = .32$). A three-way interaction between sex, depressed mood, and parental monitoring was also examined, and was not significantly associated with alcohol-related problems ($\beta = -.09, t = 1.61, p = .11$).

DISCUSSION

Findings from this study were consistent with previous studies demonstrating associations between depressed mood and alcohol-related problems among adolescents.⁴ Also notable is that these findings held for males and females, contrary to recent research suggesting the relationship between depressed mood and alcohol-related problems is stronger for females.¹² The second hypothesis was partially supported. While peer use/tolerance of use did not significantly moderate the relationship between depressed mood and alcohol-related problems, parental monitoring did. Specifically, parental monitoring buffered problems related to drinking for adolescents with higher levels of depressed mood. At low levels of depressed mood, parental monitoring did not affect adolescent drinking problems.

Parental monitoring is typically discussed as a means of reducing externalizing behaviors, including alcohol and drug use, in adolescents. Findings from this study suggest that parents should also increase their level of monitoring when adolescents are depressed, not only to be aware of their emotional state but also as a means to reduce the chances their adolescents use alcohol to the extent that it results in alcohol-related problems. Indeed, our findings indicated that high levels of parental monitoring among depressed adolescents was associated with about a 50% lower rate of alcohol-related problems than was found with low levels of parental monitoring. Peer substance use was not related to increased alcohol use problems in the context of high levels of adolescent depression.

These findings point to the importance of clinicians treating depressed adolescents to examine the role of alcohol use in the origin and/or maintenance of the depressed mood. Although individual therapy is typically the first line of treatment for depressed adolescents, when alcohol use is noted, parenting practices may be an important target of intervention for these depressed adolescents. Results should be interpreted with caution given that findings are based on adolescent self-report and cross-sectional data, and that no other elements of parent-adolescent interactions were measured that could have affected this relationship. In addition, the added effect of the interaction only explained a small amount of the variance in predicting alcohol-related problems. Of course, these are group findings and in individual cases, peer use may either be a stronger contributor to alcohol use problems than parenting or peer alcohol use may interact with poor parental monitoring to increase risk for problematic alcohol use. Nonetheless, this study highlights the protective role that parental monitoring may play in the association between depressed mood and alcohol-related problems in adolescents.

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FIGURE 1.
Moderating Effect of Parental Monitoring on the Relationship between Depressed Mood and Alcohol-Related Problems.

TABLE 1

Hierarchical Linear Regression: Depressed Mood, Parental Monitoring, and Peer Substance Use and Peer Tolerance of Substance Use on Alcohol-Related Problems

Variables	B	SE	β	R ²
Step 1:				
Sex	-2.62*	1.13	-.12*	
Age	.68	.47	.08	
Depressed Mood	4.74**	1.17	.22**	
Peer Use/Tolerance	2.73**	.44	.40**	
Parental Monitoring	-3.58**	1.09	-.20**	.46**
Step 2:				
Depressed Mood x Peer Use/Tolerance	-.07	.78	-.01	
Depressed Mood x Parental Monitoring	-4.51*	2.19	-.12*	.47**

Note.

*
 $p < .05$,

**
 $p < .01$