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Recommended Citation

Shadur, Julia; Reimuller, Alison; and Hussong, Andrea, "Parental social support moderates self-medication in adolescents" (2009). *Posters*. Paper 24 Samuel B. Guze Symposium on Alcoholism.
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Parental Social Support Moderates Self-Medication in Adolescents

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Background

Self-medication theory predicts not only who is at risk for substance use (i.e., those with increased negative affect) but also when that risk will manifest (i.e., subsequent to experiencing negative emotion; Khantzian, 1997). Fewer studies have addressed the second of these predictions among adolescents in part due to the necessary methodology required to manipulate this temporal relationship. However, studies of adults have found that an increase in an individual's state of negative affect will act as a catalyst for consequent drinking (e.g., Hussong, Hicks, Levy & Curran, 2001). Such affect-motivated alcohol use is associated with more frequent and heavier use and with more negative consequences than other forms of drinking (Cooper et al., 1988).

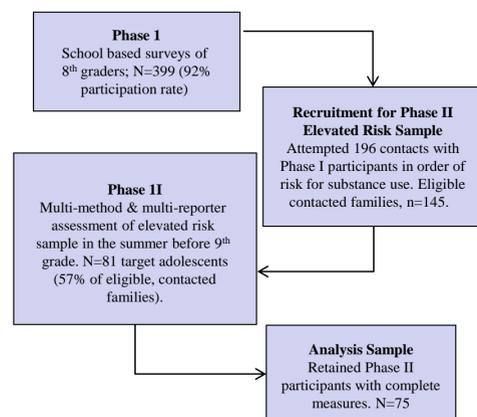
Because affect-motivated drinking is especially problematic, it is imperative to identify potential moderators that may increase the tendency for this pattern of use. Parenting factors might help identify which adolescents are at risk for self-medication. For adolescents, parents are an important source of social support and this support may help adolescents cope with negative emotions in an adaptive manner, thus reducing the motivation to use substances to cope. Parents may therefore play an important role in moderating the negative affect-drinking relationship. Specifically, we expected that parental social support would moderate the relationship between negative affect and substance use such that low levels of support increase the likelihood that an adolescent will self-medicate. In general, some evidence shows that social support from others buffers negative affect-substance use relations. For example, support from peers moderates self-medication patterns in young adults (Hussong et al., 2001). More open family communication and positive parental involvement are two components of parental social support that are negatively correlated with substance use more broadly. However, these specific parenting factors have not yet been tested as moderators of risk for self-medication in adolescents.

We examined the moderating effects of parenting on the temporal relationship between negative affect and subsequent substance use (i.e., self-medication) in adolescents transitioning to high school. Specifically, we tested whether youth were more likely to self-medicate when they received less parental social support, indicated by low levels of family communication and parental involvement.

Methods

We used a multi-method, multi-reporter strategy and an experience sampling paradigm to examine these mechanisms in an elevated risk sample preparing for the transition to high school, a time generally considered stressful for adolescents. Adolescents and their parents completed home or university based interviews and each reported their perceptions of family communication and parental involvement. Adolescents also completed a 21-day experience sampling protocol in which they reported their alcohol and substance use daily and their mood thrice daily. Participants were recruited through a two-stage design of rising 9th grade students at risk for summer substance use (n=75; 45% Male; mean age of 13.6 years; 55% Caucasian; 20% African American; 21% Multiracial; 4% Other). Measures included a Family Communication Inventory (20 items; $\alpha=.80-.86$; Olson, McCubbin, Barnes, Larsen, Muxen, & Wilson, 1985), a Parental Involvement Scale (3 items; $\alpha=.63-.77$; developed by study staff), and daily measures of drinking and mood (worried, stressed, sad and mad, $\alpha=.79$).

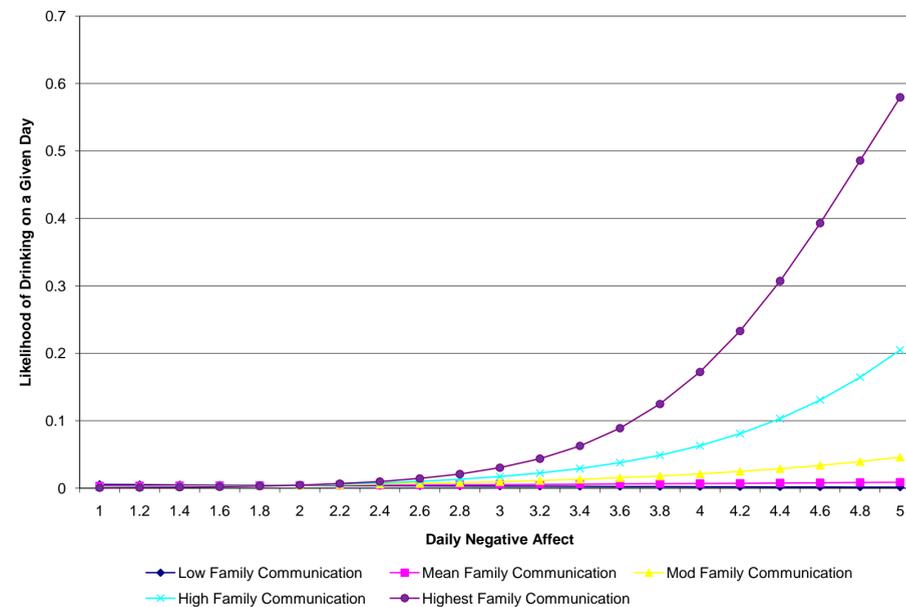
Design Overview



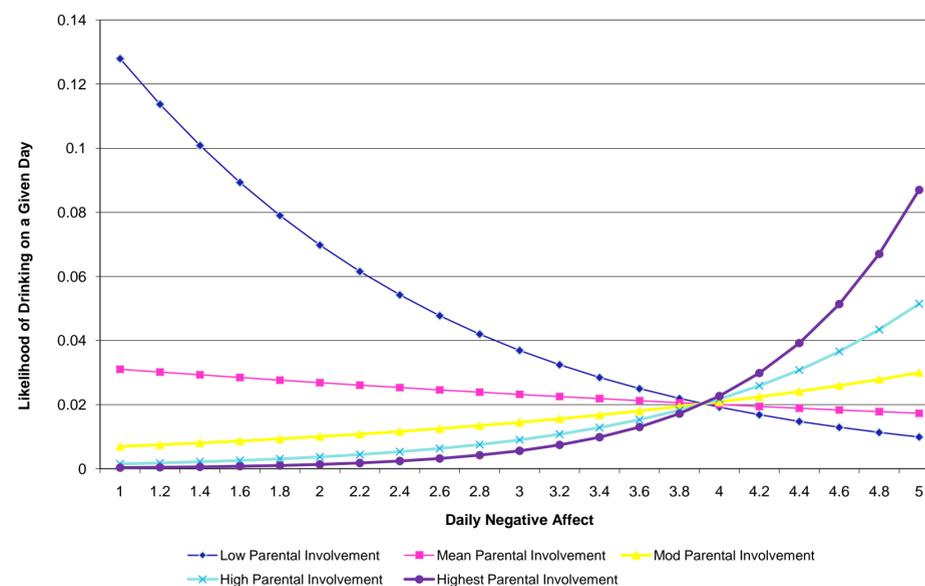
Results

We used random-coefficients modeling to test all study hypotheses for each of four moderators. Findings showed that parent-, though not adolescent-, reported family communication moderated daily affect-drinking relations and adolescent-, though not parent-, reported parental involvement was a marginally significant moderator. Plotting of interactions showed a significantly greater likelihood of substance use on days characterized by heightened negative mood only in adolescents with higher levels of parental communication. Additionally, parental involvement marginally moderated the negative affect-substance use relationship such that higher levels of involvement were associated with an increase in an adolescent's likelihood of self-medicating.

Parent-reported Family Communication Moderates Self Medication



Target-reported Parental Involvement Marginally Moderates Daily Negative Mood-Drinking Covariation



Results of HGLM analyses testing the Self-Medication Hypothesis

	Model 1	Model 2	Model 3	Model 4
PREDICTORS	β (SE)	β (SE)	β (SE)	β (SE)
Adolescent gender	-0.27 (0.72)	-0.09 (0.73)	-0.11 (0.72)	-0.21 (0.69)
Aggregated negative mood	0.60 (0.50)	1.11 (0.49)*	0.71 (0.49)	0.90 (0.48) †
Negative Mood	0.58 (0.31) †	0.68 (0.30)*	0.84 (0.32)*	0.71(0.32)*
Adolescent Report of Family Communication	-1.09 (0.71)			
Adolescent Report of Family Communication x Negative Mood	-0.33 (0.64)			
Parent Report of Family Communication		0.06 (0.99)		
Parent Report of Family Communication x Negative Mood		1.10 (0.51)*		
Adolescent Report of Parental Involvement			-1.00 (0.48)*	
Adolescent Report of Parental Involvement x Negative Mood			0.52 (0.31) †	
Parent Report of Parental Involvement				-0.42 (0.90)
Parent Report of Parental Involvement x Negative Mood				0.25 (0.53)

† p < .10 * p < .05

Discussion

The effect of daily mood on subsequent substance use was significantly higher with increasing levels of family communication. Additionally, higher levels of parental involvement were associated with a marginal increase in the negative affect-substance use relationship in adolescents. In these findings, parental support may be a response to drinking and self-medication in teens such that parents become more involved and open about discussing distress with their adolescents when they notice these patterns of behavior. Future studies may use a longitudinal design to determine the temporal ordering of parental support and adolescent self-medication. Contributions of this study include the use of experience sampling methods to elucidate the moderating role of parenting in self-medication. This daily analysis of negative mood-drinking relations provides the starting point for an important line of research informing both preventive and applied research. By pursuing our understanding of interrelated mechanisms of risk and vulnerable sub-populations, we can improve prevention and treatment efforts through better identification of risk groups (i.e., children with minimal parental social support), risk processes (i.e., alternative mechanisms), and protective and vulnerability factors (i.e., moderating factors of family communication and parental involvement) to reduce engagement in one of the more dangerous and addictive patterns of alcohol use, negative mood-related drinking.

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Acknowledgements

This research was supported by National Institute on Drug Abuse Grants R03 DA12912 to Andrea Hussong.