

# Depression as a Mediator of the Association Between Parental Attachment Security and College Student Engagement in High Risk Behaviors

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## Introduction

Engagement in high risk behaviors during young adulthood has serious implications for safety and health outcomes both immediately and into later adult years (Hingson, Heeren, Winter, & Wechsler, 2005; Wechsler, Lee, Kuo, & Lee, 2000). Thus, it is important to identify precursors of engagement in risk behaviors.

Previous research has demonstrated links between attachment security and engagement in high risk behaviors (Brennan & Shaver, 1995; Caspers et al., 2005; Feeney et al., 2000); however, the process by which parental attachment security predicts engagement in high risk behaviors among college students has not been specifically investigated.

We propose that an insecure working model, characterized by a negative view of self and other, will increase the likelihood of experiencing depressive symptoms. In turn, depressive symptoms will increase the odds of engaging in high risk behaviors as a maladaptive coping style (e.g., self-medicating), as a behavioral cry for help or attention, or because the potential negative consequences of engaging in risky behaviors are of less concern to individuals who tend to have a more negative outlook about the future. This mediational hypothesis is supported by evidence that attachment security is linked to depression (Armsden & Greenberg, 1987), and depression is linked to engagement in risk behaviors (Camatta & Nagoshi, 1995). The risk behaviors under consideration include: alcohol use, illegal drug use, high risk sexual behaviors, and physical fighting at college.

## Hypotheses

1. Students who are more securely attached to their parents prior to freshmen year of college will report less engagement in high risk behaviors at the end of the freshmen year.
2. The association between attachment security and engagement in high risk behaviors will be mediated by depressive symptoms.

## Method

**Sample:** 176 college freshmen ranging in age from 18 to 20,  $M=18.06$ ; 82% female; 67% white.

Data was collected via online surveys.

**Wave One:** Summer prior to the first semester of college.

**Parental Attachment:** The Inventory of Parent and Peer Attachment, parent subscale (Armsden & Greenberg, 1987) was completed for attachment to mothers and attachment to fathers ( $\alpha > .89$  for both)

**Wave Two:** End of the first year of college

**Depression:** The Center for Epidemiological Studies-Depression Scale (CES-D; Radloff, 1977;  $\alpha = .91$ )

**Risk Behavior Questionnaire:** 12 items adapted from the 1995 National College Health Risk Behavior Survey to assess risk behaviors (binge drinking, drinking and driving, illicit drug use, unprotected sex, and physical fighting among other things) that students engaged in within the last 30 days. Items were coded as 1 if the student engaged in the behavior or 0 if they did not and then summed to create a risk composite with high scores that indicate engagement in more risky behaviors ( $Range= 0.00 - 7.00$ ;  $M=1.09$ ).

## Results

*t*-tests indicated that white participants reported being more securely attached to their mothers ( $M=92.51$ ,  $SD=19.69$ ) than minority participants ( $M=56.25$ ,  $SD=19.26$ ;  $t [174] = 1.99$ ,  $p < .05$ ); but there were no differences in risk behaviors by race. Therefore, race was not a viable covariate.

Simple correlations were conducted to examine associations between the variables and are displayed in Table 1. All conditions necessary to test mediation were present.

## Results (cont.)

Table 1. *Correlations Among Major Variables*

Variables	1	2	3	4
1. Attachment to Mothers	1			
2. Attachment to Fathers	0.64**	1		
3. Depressive Symptoms	-0.29**	-0.35**	1	
4. Risk Behaviors	-0.21**	-0.28**	0.21**	1

Note: \*\* $p < .01$

Hierarchical multiple regression was used to test for mediation (Baron & Kenny, 1986). As illustrated in Table 2, depressive symptoms partially mediated the association between attachment to mothers and engagement in risk behaviors because depression was a significant predictor of engagement in risk behaviors, and because there was a drop in the beta for attachment to mothers when depressive symptoms was entered simultaneously.

Table 2. *Regressions Testing Depression as a Mediator of Attachment Security and Engagement in Risk Behaviors*

Predictors	Attachment to Mothers		Attachment to Fathers	
	1	2	1	2
1. Attachment security	-.23**	-.19*	-.28**	-.24**
2. Depressive Symptoms		.16*		.13
Adjusted R <sup>2</sup> Change	.04	.05	.08	.02
Total Adjusted R <sup>2</sup>		.09		.10
Indirect Effect		-.0033*		--

Note: \* $p < .05$ , \*\* $p < .01$

Bootstrapping procedures outlined by Preacher and Hayes (2004) indicated that the indirect effect of attachment to mothers on engagement in risk behaviors through depressive symptoms was statistically significant.

In contrast, the association between attachment to fathers and risk behaviors was direct, and depressive symptoms were not a significant predictor of engagement in risk behaviors independent of attachment to fathers.

## Discussion

Consistent with prediction, attachment security was linked with engagement in high risk behaviors among college students. Furthermore, depression mediated that association for attachment to mothers supporting our view that an insecure working model proliferates the experience of depressive symptoms which in turn increases engagement in high risk behaviors. In contrast, depression did not mediate the association for attachment to fathers.

Perhaps the process by which attachment is linked to engagement in risk behaviors varies depending on parent and child gender. That is, depression may mediate the association between attachment to the parent of the same sex as the child and engagement in risky behaviors. That depression did operate as a mediator for attachment to mothers in this primarily female sample is consistent with this view. However, the limited number of male participants in the current study undermines our ability to examine this moderated mediation hypothesis directly. Thus, future research should include the collection of data from more male participants in order to examine the possibility of moderated mediation.

It is possible also that other indicators of psychological wellbeing mediate the relationship between attachment to parents and engagement in these risk behaviors such as self-esteem or anxiety.

Future research should also address the limitations of this study by collecting data from multiple sources, from more racial minority and male participants, and from more high-risk samples.

Results of this study may be useful in designing screening tools to identify students likely to engage in high risk behaviors during the transition to college. Identification of factors that ameliorate the effect of insecure attachment on engagement in risky behaviors would best inform the development of intervention programs aimed at reducing engagement in risk behaviors among college students.



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