2020

INFLUENCES AMONG AFFECT BASED RISK FACTORS AND PROBLEM DRINKING IN COLLEGE STUDENTS

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Digital Object Identifier: https://doi.org/10.13023/etd.2020.260

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THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in the
College of Arts and Sciences
at the University of Kentucky

By

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2020

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ABSTRACT OF THESIS

INFLUENCES AMONG AFFECT BASED RISK FACTORS AND PROBLEM DRINKING IN COLLEGE STUDENTS

Broad negative affect has been consistently shown to predict problematic alcohol use. More specific affect-based constructs, though, have been shown to predict problem drinking above and beyond broad negative affectivity. The current study aims to investigate transactions among and predictive roles of broad negative affectivity and specific affective-based factors in relation to problem drinking among a sample of 358 students assessed twice during their first year of college. Participants were assessed for negative urgency (the tendency to act rashly when highly emotional), affective lability (the tendency to experience rapid and intense shifts in mood), negative affectivity, and problem drinking via self-report measures completed online. Data were analyzed using structural equation modeling (SEM). Negative urgency and affective lability predicted problem drinking above and beyond broad negative affect, and broad negative affect had no incremental predictive power. When considered together, negative urgency and affective lability significantly predicted problem drinking in a model in which their predictive pathways were constrained to be equal. Additionally, affective lability predicted increases in negative urgency, but the opposite was not true. Continued work toward the development of comprehensive affect-based risk models for problem drinking is needed.

KEYWORDS: Alcohol, Negative Urgency, Affective Lability, Problem Drinking

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4/22/2020

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CHAPTER 1. INTRODUCTION

1.1 Overview

Numerous affect-based risk factors for problem drinking have proven important in the prospective prediction of increased problems with alcohol consumption (Atkinson, Ortiz, & Smith, 2020). Among the predictive factors are broad negative affect, negative urgency (the disposition to act in rash, impulsive ways when distressed), and affective lability (the tendency to experience frequent fluctuations in intense mood states). An important next step in the risk literature is to investigate the roles of such risk factors in relation to each other. In this paper, we highlight three forms of such investigation. First, do the more specific risk factors of negative urgency and affective lability predict problem drinking above and beyond broad negative affect? Second, do negative urgency and affective lability predict problem drinking above and beyond each other? Third, do the affect-based risk factors potentiate each other; that is, do elevations in one factor predict subsequent increases in other factors?

Increases in alcohol consumption are important because heavy drinking is associated with numerous negative life outcomes. It can lead to increases in maladaptive personality traits, ineffective coping strategies, and developmental delays in young adults and adolescents (Cole, Peterson, & Smith, 2018; De Bellis et al., 2000 Riley, Rukavina, & Smith, 2016; Settles & Smith, 2015). Heavy drinking is also related to many other short- and long-term negative events such as injury, violence perpetration, sexual assault victimization, heart disease, memory problems, and early death (World Health Organization, 2014).

The possibility that high levels of negative affect increase risk for heavy drinking is supported both by theory and the empirical results of prospective studies. Early models of affective-based risk for problem drinking posit that individuals drink in order to experience the distress-reducing effects of alcohol (Conger, 1956; Sher & Levenson, 1982). In a similar vein, recent theories suggest that drinking in response to distress provides the negative reinforcement of escape from, and avoidance of, negative affect. Because drinking is reinforcing, it increases over time (Baker, Piper, McCarthy, Majeski, & Fiore, 2004).

Empirically, negative emotional states (Birkley, Zapolski, & Smith, 2015; Hussong, Gould, & Hersh, 2008; Kuo, Gardner, Kendler, & Prescott, 2006; Prescott, Aggen, & Kendler, 2000; Smith, Guller, & Zapolski, 2013) do predict subsequent increases in consumption. Interestingly, some work suggests that the relationship between negative affect and heavy drinking is reciprocal in that alcohol use predicts future negative mood states in both adults (Boden & Fergusson, 2011; Wang & Patten, 2002) and adolescents (Brook, Brook, Zang, Cohen, & Whiteman, 2002).

As fruitful as this line of inquiry has been, there is an important limitation to this work. Broad negative affect is a multidimensional construct. At the trait level, negative affect, measured by the PANAS (Watson, Clark, & Tellegen, 1988), assesses facets including anger, anxiety, sadness, fear, and guilt. The components of negative affect do correlate, but they measure a great deal of reliable but non-overlapping variance. A high score on a measure of broad negative affect does not reveal the particular facet(s) responsible for the elevation; thus, the nature of the person's psychological experience, as well as the operative predictive agent, is not clear (Strauss & Smith, 2008). This lack of

clarity slows scientific progress; even if broad negative affect is predictive of problem drinking, it is not known whether, and to what degree, any given component of negative affect specifically predicts problem drinking. Given that the use of multidimensional constructs, such as negative affect, can lead to theoretical imprecision, it is necessary to create theories related to the specific constructs of interest, as well as measure such constructs empirically. This point has been well-recognized in the psychometric literature (Edwards, 2001; McGrath, 2005; Smith, Fischer & Fister, 2003; Strauss & Smith, 2008).

With respect to problem drinking risk, it thus appears important to emphasize more specific, unidimensional affect-based risk constructs. Within the realm of broad negative affect, the construct of negative urgency has repeatedly been shown to predict subsequent drinking increases beyond broad negative affect and other constructs: (Settles, Fischer, Cyders, Combs, Gunn, & Smith, 2012; Smith & Cyders, 2016).

1.2 Negative Urgency

Negative urgency refers to the tendency to act rashly or impulsively when highly distressed (Cyders & Smith, 2007, 2008a). Urgency theory holds that the rash or impulsive acts are negatively reinforced by providing immediate relief or distraction from distress (Cyders & Smith, 2008a). As a result, they become more frequent, leading ultimately to excessive and problematic engagement in such behaviors. A number of meta-analyses have shown that negative urgency is a strong correlate of various addictive behaviors (Berg, Latzman, Bliwise, & Lilienfeld, 2016; Coskunpinar, Dir, & Ciders 2013; Fischer, Smith, & Cyders, 2008; Stautz & Cooper, 2013). Further, longitudinal studies have shown that negative urgency predicts increases in drinking quantity and frequency (Cyders, Flory, Rainer, & Smith, 2009; Settles, Cyders, & Smith, 2010;

Settles, Zapolski, & Smith, 2014). Increases in negative urgency have also been linked to subsequent increases in other addictive behaviors such as binge eating (Fischer, Peterson, & McCarthy, 2013; Pearson, Combs, Zapolski, & Smith, 2012), purging (Pearson & Smith, 2015), tobacco smoking (Doran, Khoddam, Sanders, Scweizer, Trim, & Myers, 2013), nonsuicidal self-injury (Riley, Combs, Jordan, & Smith, 2015), gambling (Cyders & Smith, 2008b), and drug use (Zapolski, Cyders, & Smith, 2009).

Negative urgency has been shown to predict problem drinking and frequency of use above and beyond broad negative affect in child and adolescent samples (Peterson & Smith, 2019; Settles et al., 2012). This has yet to be tested in an adult sample. One aim of the current paper is to test whether negative urgency also predicts problem drinking above and beyond negative affect in adults.

1.3 Affective Lability

Affective lability is another specific construct relevant to problem drinking (Atkinson et al., 2020). Studies have shown that heightened emotional states lead to impairments in decision making regardless of valence (Baker et al., 2004; Dreisbach & Goschke, 2004). It follows, then, that individuals high in affective lability, which is characterized by a tendency to experience rapidly changing intense emotional states (Harvey, Greenberg, & Serper, 1989), may be more prone to faulty decision making. Heavy drinking often reflects faulty decision making, because of its rash nature. That is, heavy drinking provides immediate reinforcement with a long-term cost. It follows that affective lability may be a risk factor for problem drinking.

Research does consistently show, both cross-sectionally and longitudinally, a significant relationship between affective lability and problem drinking. Across several

studies, Simons and colleagues found that affective lability was linked to subsequent drinking-related problems but not frequency of use (Simons, 2003; Simons, Carey, & Gaher, 2004; Simons, Wills, & Neal, 2014). Research also suggests that affective lability is associated with other dysregulated behaviors, such as other forms of substance use and bulimic behaviors (Anestis et al., 2009; Simons, Oliver, Gaher, Ebel, & Brummels, 2005).

More recently, Peterson, Atkinson, and Smith (under review) found that affective lability predicted, prospectively, problem drinking above and beyond depression and anxiety. This suggests the possibility that rapid shifts in affect may have a greater impact on problem drinking compared to negative affect alone. Further, the relationship between affective lability and problem drinking was reciprocal; problem drinking also predicted increases in affective lability, which predicted further increases in problem drinking.

1.4 Relationship Between Negative Urgency and Affective Lability

There exists a large body of work implicating negative urgency and affective lability, separately, in the alcohol risk process. More recent work has begun to investigate relationships between these two variables, and how they jointly relate to problem drinking. Coskunpinar and colleagues (2013) found results consistent with the possibility that negative urgency partially explained the effects of negative affect and affective lability on problematic alcohol use in a cross-sectional study of undergraduates. Another cross-sectional study found evidence of a moderation effect. Both sensation seeking and negative urgency concurrently predicted problem drinking, but their predictive effect was weaker at higher levels of affective lability (Karyadi, Coskunpinar, Dir, & Cyders, 2013).

To date, no studies have address prospective relationships between these variables or how they relate to problem drinking.

A central aim of the study described in this paper was to test one specific form of transaction between negative urgency and affective lability. We considered the possibility that each of these affect-based risk factors predict changes in the other over time. That is, elevations in negative urgency may potentiate heightened affective lability, and the reverse may be true as well. Negative urgency may potentiate affective lability in this way: elevations in negative urgency lead to rash acts that provide immediate relief from distress. Each time an individual acts rashly to alter a mood state, that person has missed out on an opportunity to learn more adaptive, problem-solving strategies that can result in more effective affective management (Pearson, Wonderlich, & Smith, 2015). Such individuals are thus at increased risk for ineffective affect management and hence perhaps more lability of affect than others. Affective lability may potentiate negative urgency as follows. The experience of rapidly changing emotions is likely associated with more frequent experiences of having negative moods that one does not address through planful, problem-solving coping strategies. Fewer opportunities to learn such strategies may increase the likelihood of immediate or rash action to address the occurrence of intense negative mood.

1.5 The Current Study

We studied a sample of 358 college students assessed twice, five months apart, to investigate three aims. First, consistent with the need to focus on unidimensional constructs, we tested the prediction that both negative urgency and affective lability would predict increased problem drinking above prediction from broad negative affect.

Second, we investigated the roles of negative urgency and affective lability when the two were considered together as predictors of increases in problem drinking. Given that the current study is the first to test the two predictors together, we anticipated any of three possible outcomes: (a) negative urgency may predict increased problem drinking, but affective lability would have no additional predictive power; (b) affective lability may predict increased problem drinking, but negative urgency would have no additional predictive power; or (c) negative urgency and affective lability may each predict increased problem drinking above and beyond prediction from the other. Our third important aim was to test whether there is reciprocal prediction between negative urgency and affective lability: that each variable would predict increases in the other.

CHAPTER 2. METHOD

2.1 Participants

Participants were 358 first-year college students (85% female) recruited from the University of Kentucky's psychology subject pool as part of a larger study focused on investigating risk processes for problem drinking. Mean age of participants was 18.93 years (range = 17 – 22, *SD* = 1.1). Participants identified as White (78%), Black (14%), Asian (4%), Hispanic (3%), and Other (1%). Forty-one percent of participants reported being in a romantic relationship. Participants lived with roommates (80%), family (15%), alone (3%), or some other unspecified living situation (2%).

2.2 Measures

2.2.1 Demographics

Demographics were assessed via a self-report measure that included items relating to race, gender, age, living situation and relationship status.

2.2.2 Negative Affect

Negative affect was assessed via the negative affect scale of the Positive and Negative Affect Schedule, trait version (PANAS: Watson, Clark, & Tellegen, 1988). The negative affect scale of the PANAS includes 10 items which assess the degree to which one generally experiences various forms of negative affect including feeling distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery and afraid. Items are assessed on a Likert-type scale ranging from (1) “Very slightly or not at all” to (5) “Extremely”. The trait version of the PANAS negative affect scale has been shown to have good test-retest reliability (r = .71) over the course of eight weeks (Watson et al., 1988). In the current sample at wave 1, alpha = .76.

2.2.3 Negative Urgency

Negative urgency was assessed via the negative urgency scale of the UPPS-P Impulsive Behavior Scale. We used the eight-item version of the negative urgency scale that has proven reliable and valid in samples of early and middle adolescents (Gunn & Smith, 2010; Peterson & Smith, 2019). All items are assessed on a Likert-type scale ranging from (1) “Disagree Strongly” to (5) “Agree Strongly.” Estimates for the internal consistency alphas for the UPPS-P have consistently exceeded 0.80. In the current sample at wave 1, alpha = .87. Validity evidence for the negative urgency scale includes (a)

convergent and discriminant validity across assessment methods (Cyders & Smith, 2007), (b) consistent, replicated longitudinal prediction of numerous rash, impulsive behaviors in accordance with urgency theory (Cyders & Smith, 2008a; Smith & Cyders, 2016), and (c) multiple meta-analyses documenting concurrent prediction consistent with urgency theory (Berg, Latzman, Bliwise, & Lilienfeld, 2016; Coskunpinar et al., 2013; Fischer et al., 2008; Stautz & Cooper, 2013).

2.2.4 Affective Lability

Affective lability was measured using a single scale from the Five Factor Borderline Inventory (FFBI; Mullins-Sweatt, Edmundson, Sauer-Zavala, Lynam, Miller, & Widiger, 2012). The FFBI measures emotion dysregulation and is comprised of twelve 10-item scales. The FFBI total score correlates .70 to .84 with other established measures of Borderline Personality (Mullins-Sweatt et al., 2012). This study used only the Affective Dysregulation Scale which is comprised of 10 Likert-type items assessed on a five-point scale ranging from “Strongly Disagree” to “Strongly Agree.” The Affective Dysregulation Scale includes items such as “My mood shifts rapidly from one feeling to another” and “I am unable to control my emotions.” The Affective Dysregulation Scale of the FFBI has been shown to have good convergent validity with other measures of Borderline Personality and corresponding facets of the NEO and IDCP-BPD (Carvalho, Pianowski, Bacciotti, & Reis, 2018; DeShong, Lengel, Sauer-Zavala, O’Meara, & Mullins-Sweatt, 2015). Further, a study of adults aged 25-55 years showed that the Affective Dysregulation Scale correlated .73 - .83 with the subscales of the Affective Lability Short Form (Atkinson & Smith, 2019). In the current sample at wave 1, alpha = .77.

2.2.5 Problem Drinking

Problem drinking was assessed using the Alcohol Use Disorders Identification Task (AUDIT; Babor & Grant, 1989). This 10-item measure assesses drinking frequency, quantity, and problems associated with alcohol consumption. We used the sum total of the AUDIT score (range: 0-40) to represent problematic drinking. The AUDIT has been shown to be reliable and valid and is commonly used in research and clinical practice as a measure of hazardous drinking behavior. In the current sample at Wave 1, alpha = .82.

2.3 Procedure

Participants were recruited from a psychology research subject pool at a large state university. Participants chose to enroll in the study and agreed to an electronic informed consent document prior to participation. They were informed that they needed to be at least 18 years of age and first year college students to participate and that the study would entail a series of questionnaires administered through a secure online survey website. After enrollment, participants received an email with instructions and a link to complete the online survey. Participants received a payment of $10 for participation in each of the two waves. Wave 1 occurred during the last week of November into early December of participants' first semester and Wave 2 occurred during April of participants' second semester of their first year of college. At the beginning of each wave, participants received an email and text with the link to the survey. Participants had 30 days to complete the survey. Beginning three days after the start of waves each wave, participants received the link to the study every three days via text and email if they had

not yet completed the survey, unless they opted out. All study procedures were approved by the Institutional Review Board of the university.

2.4 Analytic Approach

Descriptive statistics were calculated using SPSS (IBM Corp, 2017). Structural equation modeling (SEM) was used to test the temporal relationships between variables using Mplus (Muthén & Muthén, 2004-2017). The models assessed for (1) autoregressive prediction from each variable to the same variable at the next wave and (2) reciprocal predictions among the variables negative urgency, affective lability, negative affect and problem drinking at each wave. We allowed all reciprocal predictions to be free to vary, except that we constrained the prediction from problem drinking to negative affect to be zero, based on preliminary analyses.

To measure model fit, we relied on four fit indices: the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR). Guidelines for what is considered good fit vary. CFI and TLI values above either .90 or .95 are thought to represent very good fit (Hu & Bentler, 1999; Kline, 2005). RMSEA values of .06 or lower are thought to indicate close fit, .08 a fair fit, and .10 a marginal fit; SRMR values of .09 or lower are thought to represent good fit (Browne & Cudeck, 1993; Hu & Bentler, 1999).

CHAPTER 3. RESULTS

3.1 Attrition and Treatment of Missing Data

A total of 358 students participated at Wave 1 and 282 participated at Wave 2 (retention of 78.7%). Those who participated in both waves did not differ from those who participated in only one waves on any study variables. We therefore assumed data were missing at random and used the expectation maximization (EM) procedure to impute values for the missing data points. This procedure has been shown to produce relatively unbiased population parameter estimates and to be superior to traditional methods (Little & Rubin, 1989). As a result, we were able to make full use of the entire sample of n = 358.

3.2 Descriptive Statistics

Table 1 presents the average scores for negative urgency, affective lability, negative affect, and problem drinking at each of the two waves. Table 2 provides a correlation matrix of key study variables. Most key study variables were significantly correlated, both within and across time points.

Table 1. Means and standard deviations for negative affect, negative urgency, affective lability, and AUDIT scores for the full sample. Note: n = 358.

	Wave 1 M(SD)	Wave 2 M(SD)
Negative Affect	24.39(5.9)	23.14(5.1)
Negative Urgency	32.59(8.9)	30.78(7.3)
Affective Lability	18.61(6.6)	17.92(6.2)
AUDIT	4.55(4.2)	4.51(4.4)

Table 2. Correlations between negative affect, negative urgency, affective lability, and AUDIT scores for the full sample. Note: n = 358, *p<0.05, **p<0.01.

	AUDIT		Negative Urgency		Affective Lability		Negative Affect	
	W2	W3	W2	W3	W2	W3	W2	W3
AUDIT								
W2	1	.54**	.28**	.23**	.16**	.12*	.09	.13*
W3	-	1	.26**	.30**	.22**	.24**	.06	.29**
Negative Urgency								
W2	-	-	1	.62**	.61**	.40**	.29**	.23**
W3	-	-	-	1	.49**	.50**	.18**	.32**
Affective Lability								
W2	-	-	-	-	1	.58**	.37**	.30**
W3	-	-	-	-	-	1	.23**	.56**
Negative Affect								
W2	-	-	-	-	-	-	1	.26**
W3	-	-	-	-	-	-	-	1

3.3 Model Tests

The model fit the data well: X^2 (1) = 2.18; p = .14; CFI = 1.00; TLI = .94; RMSEA = .06 (CI: .00 to .16). SRMR = .01. We first tested the predictive roles of negative affect, negative urgency, and affective lability when all were considered together as predictors of problem drinking change. We found that negative affect at Wave 1 did not predict problem drinking at Wave 2, when considered together with negative

urgency, affective lability, and prior problem drinking (β = -.04, p = .45). Second, we found the following concerning the predictive effects of both negative urgency and affective lability in this model. Above and beyond prediction from Wave 1 problem drinking, negative urgency, and negative affect, affective lability at Wave 1 significantly predicted increases in problem drinking at Wave 2 (β = .13, p<.01). Wave 1 negative urgency was not a significant predictor of Wave 2 problem drinking (β = .05, p <.15). We note that although affective lability was significantly greater than zero and negative urgency was not, in the prediction of problem drinking, the two predictive path weights did not differ significantly from each other.

To address further the relative prediction from affective lability and negative urgency, we tested a model that constrained the predictive paths to problem drinking from those two variables to be equal. We constrained both to a beta weight of .088, the average of the two in the above model. The new model did not fit worse than the unconstrained model (χ^2 (3) = 2.62, p=.45; CFI = 1.00; TLI = 1.00; RMSEA = .00 (CI .00 to .09); SRMR = .01, and both affective lability and negative urgency predicted problem drinking significantly greater than zero. Because the constraints did not reduce model fit, we conclude the predictive power of the two risk factors was comparable in the current sample. For ease of presentation, in Figure 1 we present all statistically significant time lagged pathways. Table 3 provides the path value estimates and confidence intervals for each of those significant predictive pathways.

Third, we tested whether the relationship between negative urgency and affective lability was reciprocal such that negative urgency at Wave 1 predicted affective lability at Wave 2 and vice versa. Analyses revealed that affective lability at Wave 1 predicted

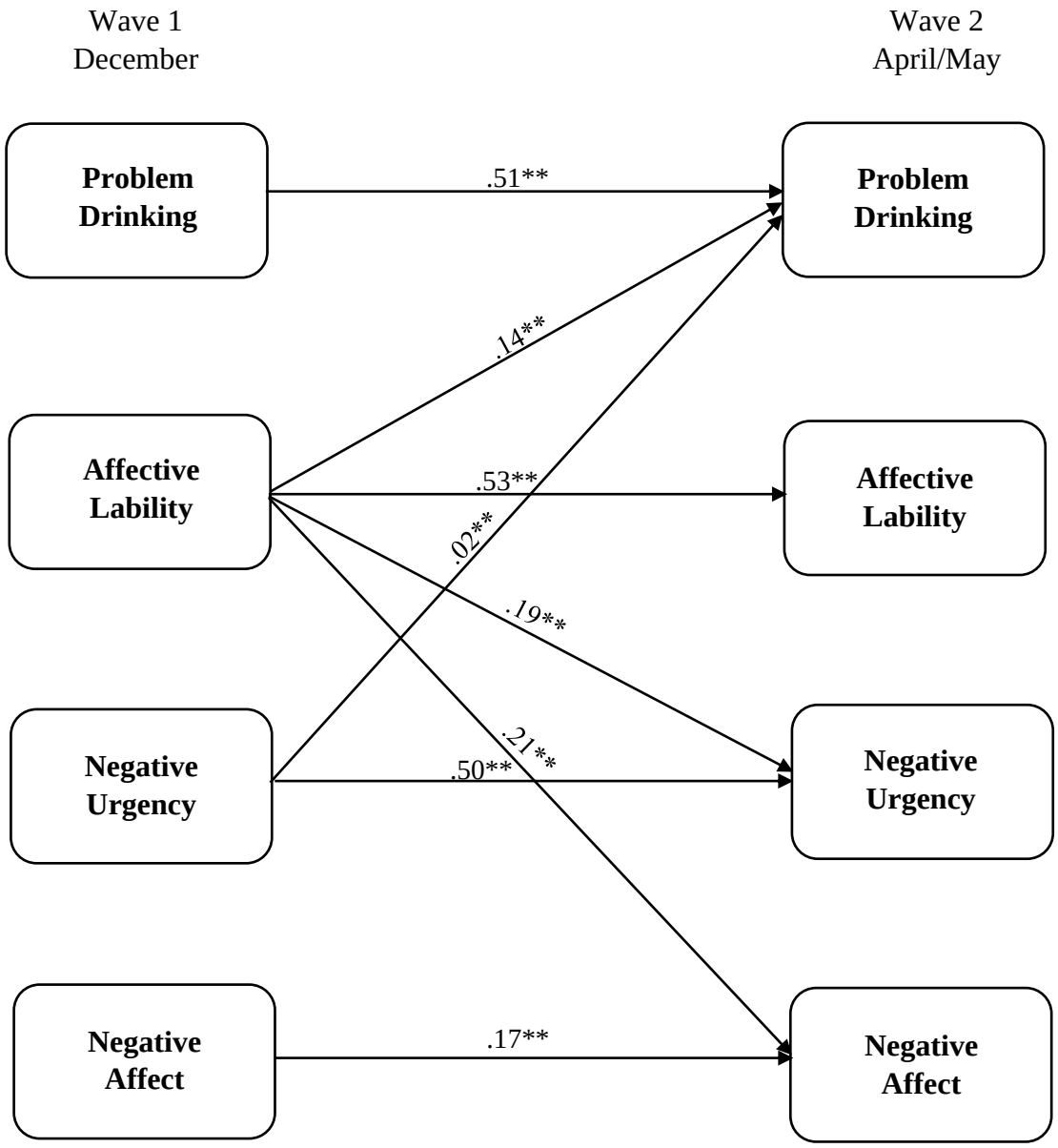
negative urgency at Wave 2 (β = .19, p < .001). Negative urgency at Wave 1, though, did not significantly predict affective lability at Wave 2 (β = .08, p <.11).

Separate from these core aims, we note that affective lability at Wave 1 significantly predicted Wave 2 negative affect, beyond prediction from Wave 1 negative affect (β = .20, p < .01).

Table 3. Path Value Estimates for Figure 1. Note: *n* = 358. Values are standardized path coefficients. *p < .05. **p < .001.

Pathway	Path Estimate	95% Confidence Interval
Predictors of Wave 2 problem drinking		
Wave 1 problem drinking	.51**	[.43, .59]
Wave 1 affective lability	.14**	[.11, .16]
Wave 1 negative urgency	.02**	[.01, .02]
Predictors of Wave 2 negative urgency		
Wave 1 negative urgency	.50**	[.42, .59]
Wave 1 affective lability	.19**	[.10, .28]
Predictors of Wave 2 affective lability		
Wave 1 affective lability	.53**	[.43, .63]
Predictors of Wave 2 negative affect		
Wave 1 affective lability	.21**	[.09, 32]
Wave 1 negative affect	.17**	[.07, .27]

Figure 1. Statistically significant time-lagged pathways for the constrained model. *p<0.05, **p<0.01, CFI=1.00; TLI=1.00; RMSEA = 0.06.



CHAPTER 4. DISCUSSION

There is increasing recognition of the importance of affect-based risk models in the prediction of problem drinking (Atkinson et al., 2020). Often, affect-based risk factors are studied in separate models from each other. To aid in the development of a more comprehensive understanding of affect-based risk, the current study addressed three issues: (1) whether the specific, unidimensional risk factors of negative urgency and affective lability predicted problem drinking prospectively beyond prediction from broad negative affect; (2) whether each of the two specific risk factors accounted for unique variance in subsequent problem drinking when considered together; and (3) whether negative urgency and affective lability each predicted subsequent increases in the other. Addressing these three questions can help advance understanding of the nature of affect-based risk for problem drinking.

Across a five-month longitudinal window, it appears that affective lability, and perhaps negative urgency, predicted increases in problem drinking when controlling for broad negative affect. Broad negative affect, itself, was non-predictive when considered together with the two specific risk factors. The current findings are consistent with prior work among adolescents, and with the psychometric literature, documenting the importance of prediction using unidimensional traits, rather than broad factors that combine unidimensional traits.

Affective lability predicted increases in problem drinking, even when considered together with negative affect, negative urgency, and prior problem drinking. Whereas the bulk of risk research has focused on specific affective states, this finding suggests that the experience of lability in one's affective states may be at least as important as any one

affective state in heightening problem drinking risk. Replication of this finding would provide clear indication of the need to include affective lability in problem drinking risk models.

Findings concerning the predictive role of negative urgency were less clear. On one hand, negative urgency did not predict increased problem drinking significantly in the model also including affective lability, negative affect, and prior problem drinking. On the other hand, the beta weight for negative urgency did not differ from the beta weight for affective lability. When we tested a model specifying the two variables to predict problem drinking equally to each other, that model fit the data as well as when that constraint was not imposed. In this more constrained model, both affective lability and negative urgency, but not negative affect, predicted problem drinking significantly. This finding suggests the predictive power of the two variables is comparable.

Affective lability did predict subsequent increases in negative urgency, but the reverse was not true. This finding is consistent with, though of course not proof of, our theoretical argument that the experience of rapidly changing emotions is likely associated with more frequent experiences of having negative moods not addressed through planful, problem-solving coping strategies. Ultimately, less learning of such strategies may increase the likelihood of immediate or rash action to address the occurrence of intense negative mood. This possibility is quite important, because extensive longitudinal evidence highlights negative urgency as a potent predictor of transdiagnostic risk (Smith & Cyders, 2016). It may be that affective lability is, at least in part, antecedent to negative urgency-based risk. A great deal of further work is necessary to test this model

fully. We found no evidence that negative urgency predicted subsequent increases in affective lability.

The current findings should be understood in light of the limitations of the study. As is true in any longitudinal study, there was attrition over the 6-month period. Although retained participants did not significantly differ from non-retained participants on any study variables, we cannot rule out the possibility that the two groups differ on variables not measured in the current study. Thus, we cannot rule out that our results might have differed had there been no attrition. All variables were measured via online questionnaire, so there was no opportunity to discuss the items with participants and answer their questions. Given this, even though there is good evidence for the validity of each measure used, we cannot know with certainty the impact of our assessment method on the results. Although our model test was driven by a priori theory, it is important to recognize that good fit of an SEM model does not preclude the possibility that alternative models may have fit the data equally well (Tomarken & Waller, 2003). The sample was heavily female; we do not know whether the same findings would emerge in a sample of men. As our design was not experimental, the finding that specific affective-based risk factors predicted increases in other specific affective-based risk factors and problem drinking does not provide confirmation of a causal process. Further, the current study examined students at the very start of college. It is possible that problem drinking may emerge later on in college for some individuals and thus, it is possible that the observed process may operate differently in an older sample with more problem drinking. Additionally, the measure of problem drinking used in the current study captures only a narrow range of drinking-related problems thus decreasing the amount of predictable variability. Future

studies should aim to use more comprehensive measures of problem drinking in order to more accurately capture affective-based risk processes.

With these limitations in mind, the current study does provide longitudinal evidence that (1) specific, unidimensional affect-based risk factors predict problem drinking better than does a multidimensional broad measure of negative affect; (2) it may be that both affective lability and negative urgency predict problem drinking, each beyond the influence of the other; and (3) affective lability predicts, and thus may potentiate, subsequent increases in negative urgency, a well-established transdiagnostic risk factor. There is a need for continued work toward the development of comprehensive affect-based risk models for problem drinking.

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VITA

EMILY A. ATKINSON

Educational Institutions Attended and Degrees Awarded

- **University of Kentucky, Lexington, KY**
- **Indiana University, Bloomington, IN**
    - Bachelor of Arts: Psychology

Professional Publications

- **Atkinson, E.A.** & Finn, P. R. (2019). Sex differences in the association between trait anxiety, alcohol problems, and borderline symptoms in emerging adults. *Journal of Substance use.* 24(3): 323-328.

- Finn, P.R, Fisher, L., Mayer, H., Ingram, P., Howe, L., & **Atkinson, E.** (2020). Disinhibited personality, incentives, disincentives, and drinking-related decisions. *Alcohol,* 82, 53-61.

- Smith, G. T., **Atkinson, E. A.,** Riley, E. N., Davis, H. A., & Oltmanns, J. R. (2020). The general factor of psychopathology. *Annual Review of Clinical Psychology*, 16.

- **Atkinson, E.A.**, Ortiz, A. M., & Smith, G. T. (2020). Affective risk for problem drinking: Reciprocal influences among negative urgency, affective lability, and rumination. *Current Drug Research Reviews*, 12.

- Howe, L. K., Fisher, L. R., **Atkinson, E. A.,** & Finn, P. R. (Under Review). Symptoms of anxiety, depression, and borderline personality in alcohol use disorders with and without comorbid substance use disorder.

- Peterson, S.J., **Atkinson, E.A.**, & Smith, G.T. (Under Review) Reciprocal relationship between problem drinking and affective lability.

Professional Positions Held

- **Graduate Research Assistant (August 2018 – Present)**
    - Adolescent Risky Behavior Research Lab, University of Kentucky, Lexington, KY
- **Graduate Student Therapist (August 2019 – Present)**
    - Jesse G. Harris, Jr. Psychological Services Center, Lexington, KY
- **Practicum-Level Individual Therapist (August 2019 – March 2020)**
    - University of Kentucky Counseling Center; Lexington, KY
- **Interpersonal Group Process Observer (August 2019 – December 2019)**
    - University of Kentucky Counseling Center, Lexington, KY

- **Interpersonal Group Process Leader (January 2020 – March 2020)**
    - University of Kentucky Counseling Center, Lexington, KY
- **Laboratory Director (May 2016 – August 2018)**
    - Biobehavioral Alcohol Research Lab, Indiana University, Bloomington, IN
- **Research Associate (March 2017 – August 2018)**
    - Cognitive Control Laboratory, Indiana University, Bloomington, IN

Scholastic and Professional Honors

- Robert Lipman Fellowship, 2019, University of Kentucky
- RSA Student Merit Award for the 42nd annual Research Society on Alcoholism Scientific Meeting, 2019