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Perfectionism and Alcohol Use Outcomes in College Students: The Moderating Role of Alcohol Protective Behavioral Strategies

Tiara Watson

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The University of Southern Mississippi

Honors College Thesis: Perfectionism and Alcohol Use Outcomes in College Students:
The Moderating Role of Alcohol Protective Behavioral Strategies

by

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A Thesis
Submitted to the Honors
College of The University of
Southern Mississippi in
Partial Fulfillment
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Abstract

The purpose of this study was to evaluate the moderating role of alcohol-protective behavioral strategy (PBS) types (stopping/limiting drinking – SLD; manner of drinking – MOD; serious harm reduction – SHR) on the relationships adaptive and maladaptive perfectionism have with alcohol misuse and alcohol-related negative consequences. Participants included 526 traditional-aged college students ($M_{\text{age}} = 19.77$, 80.7% female, 60.2% Caucasian/White non-Hispanic) who reported alcohol consumption in the past thirty days and completed measures of perfectionism, typical weekly drinking, alcohol-related negative consequences, and PBS use. PBS-SHR moderated the relationships between adaptive perfectionism and typical weekly drinking such that the negative association between adaptive perfectionism and typical weekly drinking was strongest for those reporting more PBS-SHR use. Additionally, PBS-SHR moderated the relationship between adaptive perfectionism and alcohol-related negative consequences such that the negative association between adaptive perfectionism and ARNC was weakened for those using more PBS-SHR. These results suggest the protective value of adaptive perfectionism and PBS-SHR for college students who tend to engage in frequent alcohol consumption. Therefore, alcohol prevention and intervention efforts may consider targeting personality variables, such as perfectionism, in relation to alcohol use behaviors.

Key Words: college alcohol use, protective behavioral strategies, perfectionism, alcohol-related negative consequences

Dedication

My family, friends, Dr. Madson, Dr. Cottonham, Hallie Jordan, & Honors College

I am forever grateful for the invaluable gifts you gave me: the confidence, guidance, and encouragement to succeed.

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I would like to thank my family and friends for continuously pouring positivity into me, praying for me, and motivating me to persevere. I also would like to thank my advisor, Dr. Madson, for opening doors to a plethora of opportunities that I was not previously aware of and guiding me throughout the research and thesis writing processes. The successful completion of this thesis is attributable to him and my graduate student mentor, Hallie Jordan. Additionally, I would like to thank Dr. Danielle Cottonham for inspiring me to continue to pursue new heights and break boundaries as an African American female.

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Table of Contents

List of Tables	viii
List of Illustrations	ix
List of Abbreviations	x
Chapter 1: Introduction	1
College Alcohol Use	1
Perfectionism	Error! Bookmark not defined.
Protective Behavioral Strategies	Error! Bookmark not defined.
Perfectionism, Alcohol Misuse, ARNC, & PBS ...	Error! Bookmark not defined.
Chapter 2: Methods	4
Participants and Procedure	4
Measures	4
Data Analysis	6
Chapter 3: Results	6
Chapter 4: Discussion	12
Research Questions & Hypotheses	Error! Bookmark not defined.
Implications for Future Research & Limitations ...	Error! Bookmark not defined.
Chapter 5: Conclusion	Error! Bookmark not defined.
References	16
Appendix	20

List of Tables

Table 1: Means, Standard Deviations, & Intercorrelations.....	7
Table 2: Regressions of Alcohol-Related Outcomes on College Stress and PBS	8
Table 3: Effect of Adaptive Perfectionism, Maladaptive Perfectionism, Alcohol PBS Subscales, & Their Interactions on Typical Weekly Drinking.....	9
Table 4: Effects of Adaptive Perfectionism, Alcohol PBS Subscales, & Their Interactions on Alcohol-Related Negative Consequences.....	11

List of Illustrations

Figure 1: Typical Weekly Drinking, Adaptive Perfectionism, & PBS-SHR use	10
Figure 2: ARNC, Adaptive Perfectionism, & PBS-SHR use	11

List of Abbreviations

ARNC	Alcohol-Related Negative Consequences
PBS	Protective Behavioral Strategies
PBS-SHR	Protective Behavioral Strategies-Serious Harm Reduction
PBS-SLD	Protective Behavioral Strategies-Stopping/Limiting Drinking
PBS-MOD	Protective Behavioral Strategies-Manner of Drinking
FMPS	Frost Multidimensional Perfectionism Scale
DDQ	Daily Drinking Questionnaire
PBSS-20	Protective Behavioral Strategies Scale-20
RAPI	Rutgers Alcohol Problem Index

Introduction

Alcohol misuse on college campuses has been a prevalent and pervasive public health problem for over three decades with consistent findings that roughly 62% of students drink alcohol and 35% report drinking to intoxication in the past month (Schulenberg, Johnston, O'Malley, Bachman, Miech, & Patrick, 2018). Additionally, college student drinking is linked with a variety of alcohol-related negative consequences (ARNC) that not only affect the student but others in their environments (White & Hingson, 2014). For instance, it is estimated that approximately 599,000 injuries and 1,700 deaths each year can be attributed to alcohol misuse among college students (Hingson, Zha, & Weitzman, 2009). Because of the risks associated with alcohol misuse and the associated negative consequences, investigation of contributing factors is warranted to enhance strategies to reduce alcohol misuse and ARNC.

Alcohol misuse has been related to personality, social-cognitive, distress, and environmental factors (Jordan, Villarosa-Hurlocker, Ashley & Madson, 2018). Perfectionism is a factor shown to exacerbate college-specific stressors (Rice, Leever, Christopher, & Porter, 2006). Defined as a multidimensional disposition characterized by people setting excessively high standards for themselves (Frost, Marten, Lahart, & Rosenblate, 1990), perfectionism can be adaptive and maladaptive. Adaptive perfectionism is characterized by healthy goal striving associated with more positive affect and outcomes. People with higher levels of adaptive perfectionism tend to experience benefits such as higher academic achievement, higher self-esteem, and the liberty to be more fluid with their perfectionism depending on the situation presented before them (Rice et al., 2006); and they tend to engage in less alcohol misuse (Rice & Arsdale, 2010). Alternatively, people with higher levels of maladaptive perfectionism are

characterized by unrealistic, unhealthy goal setting associated with negative affect and negative outcomes such as increased stress, anxiety, depression, and other psychological disorders (Rice et al., 2006); and they tend to report greater alcohol misuse and ARNC (Sherry et al., 2012). Thus, adaptive perfectionism is likely a protective factor against alcohol misuse whereas maladaptive perfectionism is likely a risk factor (Sherry et al., 2012). Therefore, a further understanding of factors affecting the relationships between types of perfectionism and alcohol outcomes may help inform interventions to promote safe drinking behaviors among college students.

One such factor that may be important to understand is the use of protective behavioral strategies (PBS). PBS are mechanisms that alcohol consumers employ to assuage the negative effects that can ensue from alcohol consumption (Pearson, 2013). These strategies are classified into three subtypes: serious harm reduction (PBS-SHR; using a designated driver), stopping/limiting drinking (PBS-SLD; leaving the bar/party at a predetermined time), and manner of drinking (PBS-MOD; drink slowly versus chugging or gulping). Generally, evidence supports the protective value of PBS (Pearson, 2013); however, different effects can be found when PBS are dismantled into their subtypes (Bravo, Prince, & Pearson, 2017). It appears that PBS-SLD and PBS-MOD tend to vary in their negative association with alcohol consumption while PBS-SHR tends to be linked with decreases in ARNC (Napper, Kenney, Lac, Lewis, & LaBrie, 2014; Pearson, 2013). Student use of PBS tends to be influenced by psychological distress such that students experiencing more distress tend to use fewer PBS and report more alcohol misuse and ARNC; however, when students do use PBS, these strategies are protective against harm (Jordan et al., 2018; Kenney & LaBrie, 2013; LaBrie, Kenney, Lac, Garcia,

& Ferraiolo, 2009). Personality traits such as conscientiousness also relate to students use of PBS. Martens and colleagues (2009) found students higher in conscientiousness reported greater PBS use, less alcohol consumption, and fewer ARNC. Based on findings such as these, factors such as maladaptive and adaptive perfectionism likely interact with students' use of PBS in relation to their links with alcohol misuse and ARNC.

The effects of maladaptive perfectionism have been associated with more alcohol misuse and thus, greater ARNC, while adaptive perfectionism, like conscientiousness, may be a possible protective factor as it is associated with less alcohol misuse and fewer ARNC (Sherry et al., 2012). However, the role of PBS use in these relationships has yet to be investigated. In response, the purpose of this study was to examine the degree to which adaptive and maladaptive perfectionism are associated with alcohol misuse and ARNC while also examining the moderating role of the PBS types on these relationships. We believed that adaptive perfectionism would be negatively associated with alcohol use and ARNC, while maladaptive perfectionism would be positively associated with alcohol use and ARNC. We also predicted PBS types would moderate the negative relationships adaptive perfectionism has with alcohol use and ARNC, such that this relationship would be strengthened for those using more PBS-SLD, PBS-MOD, and PBS-SHR. Finally, we predicted PBS types would moderate the positive relationships maladaptive perfectionism have with alcohol use and ARNC, such that this relationship would be weakened for those using more PBS-SLD, PBS-MOD, and PBS-SHR.

Methods

Participants and Procedure

Participants were 526 (80.7% female) undergraduate students ages 18 to 25 ($M = 19.77$, $SD = 1.72$) who attended a university in the southeastern region of the United States and reported alcohol consumption within the past 30 days. A large majority of participants were African American (33.5%) or Caucasian/White non-Hispanic (60.2%), though Latinx (1.3%), Asian American (.6%), Middle Eastern American (.4%), Native American (.6%), and International Students (.4%) were represented. Roughly, 2.5% of students identified as multiracial (2.7%) or other (.4%). Participants' academic status included freshmen (42.3%), sophomores (19.5%), juniors (23.3%), and seniors (14.9%). Participants described themselves as not at all perfectionistic (6.2%), slightly perfectionistic (19.4%), moderately perfectionistic (41.3%), largely perfectionistic (26.6%), or completely perfectionistic (6.5%). Two methods were used to recruit participants. First, participants enrolled in the study using the School of Psychology recruitment system (SONA Systems) and received credit for partial fulfillment of a research requirement. Second, students responded to a recruitment email (students not in psychology classes) and had their names entered in a drawing for a university gift card. After reading and electronically signing an Institutional Review Board approved informed consent, participants completed a demographic form followed by study measures presented randomly in an attempt to avoid order effects.

Measures

Perfectionism. The 35-item Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990) was used to assess adaptive and maladaptive perfectionism. Participants rated the degree to which they agree with statements such as “I set higher

goals than most people” and “my parents set very high standards for me” using a 5-point scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). We combined the six subscales into adaptive (personal standards 7-items, organization subscales 6-items) and maladaptive perfectionism (concern over mistakes 9-items, parental expectations 5-items, parental criticism 4-items, and doubts about actions 4-items) by summing the subscale scores. Maladaptive perfectionism scores ranged from 22 to 110 and adaptive perfectionism scores ranged from 13 to 65. Higher scores reflected higher levels of adaptive or maladaptive perfectionism. Internal consistency was good for the adaptive ($\alpha = .89$) and maladaptive ($\alpha = .91$) subscales in this sample.

Protective behavioral strategy use. The 20-item Protective Behavioral Strategies Scale (PBSS-20; Treloar, Martens, & McCarthy, 2015) was used to assess the use of protective behavioral strategies when consuming alcohol. Participants indicated the degree to which they use strategies such as “using a designated driver” (PBS-SHR, 8-items), “putting extra ice in your drink” (PBS-SLD, 7-items), or “avoiding drinking games” (PBS-MOD, 5-items) using a 6-point Likert scale ranging from 1 (*Never*) to 6 (*Always*). Scores range from 8 to 48 for PBS-SHR, 7-42 for PBS-SLD and 5-30 for PBS-MOD with higher scores representing more use of PBS. Internal consistency in this sample was good for PBS-SLD ($\alpha = .86$), PBS-MOD ($\alpha = .87$) and PBS-SHR ($\alpha = .93$).

Alcohol use. The Daily Drinking Questionnaire (DDQ) was used to assess typical weekly alcohol consumption (Collins, Parks, & Marlatt, 1985). Participants reported the number of standard drinks consumed on each day during a typical week. The number of drinks participants reported each day were summed to calculate the total amount of standard alcoholic beverages consumed during a typical week.

Alcohol-related negative consequences. The 23-item Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) was used to assess ARNC. Participants indicated the degree to which they experienced consequences such as “went to work or school high or drunk” or “not able to do your homework or study for a test” using a 5-point scale ranging from 0 (*Never*) to 4 (*More than 10 times*). Scores ranged from 0 to 92 with higher scores representing more ARNC. Internal consistency was good ($\alpha = .94$) in the current sample.

Data Analysis

To evaluate the degree to which PBS types moderated the association between the types of perfectionism (adaptive and maladaptive) and alcohol use and ARNC, two hierarchical multiple regression analyses were performed. For Step 1, the main effects of adaptive and maladaptive perfectionism and the types of PBS were entered; for Step 2, the two-way interactions of the main effects were entered (i.e. adaptive x PBS-SLD, adaptive x PBS-MOD, adaptive x PBS-SHR, maladaptive x PBS-SLD, maladaptive x PBS-MOD, maladaptive x PBS-SHR). The SPSS PROCESS macro was used to evaluate significant two-way interactions to elucidate how the interactions functioned (Hayes, 2017).

Results

Means, standard deviations and intercorrelations can be found in Table 1. Adaptive perfectionism was positively correlated with maladaptive perfectionism, PBS-SLD, PBS-MOD and PBS-SHR and negatively correlated with typical weekly drinking and ARNC. Maladaptive perfectionism was positively correlated with ARNC and negatively correlated with PBS-SHR. There was no significant correlation between

maladaptive perfectionism and typical weekly drinking, PBS-SLD, or PBS-MOD.

Results of the hierarchical regressions can be found in Table 2.

Table 1: Means, Standard Deviations, & Intercorrelations

	1	2	3	4	5	6	7
1. ADAP	-						
2. MALAD	.28***	-					
3. DDQ	-.23***	-.04 ns	-				
4. RAPI	-.21***	.13**	.45***	-			
5. PBS-SLD	.14***	-.05 ns	-.12**	-.11**	-		
6. PBS-MOD	.17***	-.06 ns	-.17***	-.15***	.62***	-	
7. PBS-SHR	.25***	-.13**	-.21***	-.34***	.48***	.49***	-
Means	47.7	64.2	11.6	8.0	23.8	17.5	39.5
SD	8.8	14.5	17.3	11.8	9.1	7.2	10.1

Note. ADAP = Adaptive Perfectionism; MALAD = Maladaptive Perfectionism; DDQ = Daily Drinking Questionnaire; RAPI = Rutgers Alcohol Problem Index; PBS-SLD = Protective Behavioral Strategies-Stopping/Limiting Drinking; PBS-MOD = Protective Behavioral Strategies-Manner of Drinking; PBS-SHR = Protective Behavioral Strategies-Serious Harm Reduction. * < .05; **p < .01; ***p < .001.

Typical Weekly Drinking. There were main effects of adaptive perfectionism ($\beta = -.176, t = -4.177, p < 0.01$) and PBS-SHR ($\beta = -.136, t = -2.861, p = .004$) but not maladaptive perfectionism ($\beta = -.003, t = -.077, p = .939$), PBS-MOD ($\beta = -.093, t = -1.803, p = .072$) or PBS-SLD ($\beta = -.030, t = .586, p = .558$) on typical weekly drinking. Further, there was a significant interaction, such that PBS-SHR moderated the relationship adaptive perfectionism ($\beta = .214, t = 3.595, p < 0.01$) had with typical weekly drinking. PROCESS analyses (Table 3) indicate the negative relationship between adaptive perfectionism and typical weekly drinking was significant at low (1 SD below mean; $\beta = -.51, 95\% \text{ CI } [-.71, -.31]$) and average ($\beta = -.32, 95\% \text{ CI } [-.48, -.16]$) but not high ($\beta = -.16, 95\% \text{ CI } [-.37, .05]$) levels of PBS-SHR use (Figure 1). Additionally, maladaptive perfectionism and PBS-SLD appear to significantly interact ($\beta = .01, t = 2.30, 95\% \text{ CI } [.002, .019]$); however, conditional effects of the predictor variable (i.e.

maladaptive perfectionism) indicate that the relationship between maladaptive perfectionism and typical weekly drinking is not significant at low ($\beta = -.10$, 95% CI [- .23, .03]), average ($\beta = -.01$, 95% CI [-.10, .09]), or high ($\beta = .08$, 95% CI [-.04, .21]) levels of PBS-SLD use.

Table 2. *Regressions of Alcohol-Related Outcomes on College Stress and Protective Behavioral Strategies*

	Typical Weekly Drinking			Alcohol-Related Negative Consequences		
	R^2	ΔR^2	β	R^2	ΔR^2	β
<i>Step 1</i>	.08***	.08**		.15***	.15*	
ADAP			-.18***			-.18***
MALAD			-.00 ns			-.15***
PBS-SLD			.03 ns			.08 ns
PBS-MOD			-.09 ns			-.01 ns
PBS-SHR			-.14**			-.30***
<i>Step 2</i>	.11**	.03**		.17***	.02*	
ADAP x PBS-SHR			.21***			.21***
MALAD x PBS-SHR			-.12*			-
MALAD x PBS-SLD			.12*			-

Note. ADAP = Adaptive Perfectionism; MALAD = Maladaptive Perfectionism; PBS-SLD = Protective Behavioral Strategies-Stopping/Limiting Drinking; PBS-MOD = Protective Behavioral Strategies-Manner of Drinking; PBS-SHR = Protective Behavioral Strategies-Serious Harm Reduction. * < .05**; p < .01; ***p < .001.

Table 3.

Effects of Adaptive Perfectionism, Maladaptive Perfectionism, Alcohol PBS subscales, and their interactions on typical weekly drinking

	Typical Weekly Drinking		
	β	SE	95% CI
<i>Adaptive Perfectionism by Serious Harm Reduction (R² = .092)</i>			
Constant	11.136	.677	9.806, 12.466
Adaptive Perfectionism	-.319	.083	-.483, -.156
Serious Harm Reduction	-.191	.082	-.352, -.029
Adaptive Perfectionism by Serious Harm Reduction	.019	.007	.006, .032
Manner of Drinking	-.230	.123	-.471, .011
Stopping/Limiting Drinking	.041	.096	-.147, .230
Maladaptive Perfectionism	.023	.050	-.074, .121
<i>Maladaptive Perfectionism by Serious Harm Reduction (R² = .082)</i>			
Constant	11.642	.669	10.328, 12.955
Maladaptive Perfectionism	-.005	.049	-.101, .091
Serious Harm Reduction	-.256	.083	-.419, -.092
Maladaptive Perfectionism by Serious Harm Reduction	.005	.004	-.003, .013
Manner of Drinking	-.216	.123	-.458, .026
Stopping/Limiting Drinking	.060	.096	-.130, .249
Adaptive Perfectionism	-.319	.086	-.487, -.151
<i>Maladaptive Perfectionism by Stopping/Limiting Drinking (R² = .088)</i>			
Constant	11.611	.663	10.308, 12.913
Maladaptive Perfectionism	-.008	.049	-.104, .087
Stopping/Limiting Drinking	.058	.096	-.130, .247
Maladaptive Perfectionism by Stopping/Limiting Drinking	.010	.005	.002, .019
Manner of Drinking	-.226	.123	-.467, .016
Serious Harm Reduction	-.243	.081	-.403, -.084
Adaptive Perfectionism	-.316	.084	-.481, -.152

Note. Significant effects are bolded and were determined by a 95% bias-corrected bootstrapped confidence that does not contain zero. The other two PBS subscales and perfectionism type were included as covariates in the models.

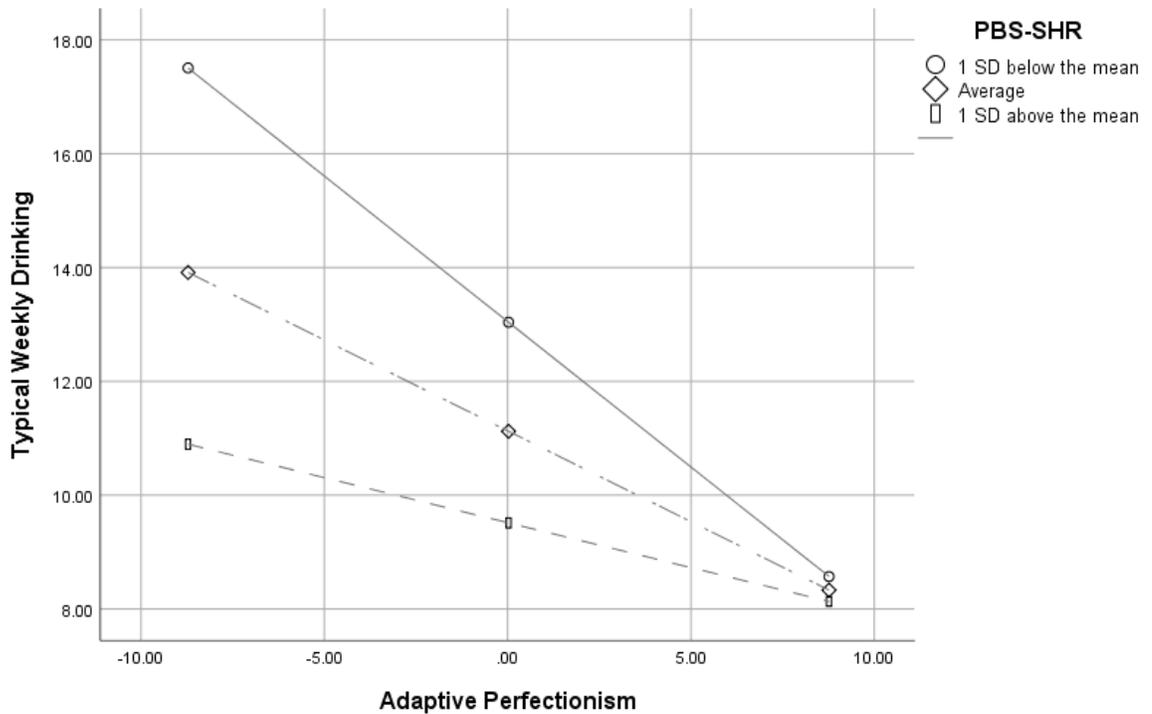


Figure 1. Predictive values of typical weekly drinking based on adaptive perfectionism at low, average, and high levels of protective behavioral strategy-serious harm reduction use.

Alcohol-Related Negative Consequences. There were significant main effects of adaptive perfectionism ($\beta = -.179, t = -4.424, p < 0.01$), maladaptive perfectionism ($\beta = .148, t = 3.754, p < 0.01$), and PBS-SHR ($\beta = -.302, t = -6.613, p < 0.01$) on ARNC. Further, PBS-SHR moderated the relationship between adaptive perfectionism and ARNC ($\beta = .211, t = 3.679, p < 0.01$). PROCESS analyses (Table 4) indicate the significant negative association between adaptive perfectionism and ARNC was significant at low (1 SD below mean; $\beta = -.34, 95\% \text{ CI } [-.47, -.21]$) and average ($\beta = -.22, 95\% \text{ CI } [-.33, -.12]$) but not high ($\beta = -.13, 95\% \text{ CI } [-.27, .01]$) levels of PBS-SHR use (Figure 2).

Table 4.
Effect of Adaptive Perfectionism, Alcohol PBS subscales, and their interactions on alcohol-related negative consequences

<i>Serious Harm Reduction (R² = .160)</i>	Alcohol-Related Negative Consequences		
	β	SE	95% CI
Constant	7.736	.443	6.865, 8.609
Adaptive Perfectionism	-.224	.054	-.331, -.1172
Serious Harm Reduction	-.327	.054	-.433, -.221
Adaptive Perfectionism by Serious Harm Reduction	.011	.004	.003, .020
Manner of Drinking	-.028	.080	-.186, .130
Stopping/Limiting Drinking	.088	.063	-.036, .211
Maladaptive Perfectionism	.136	.032	.072, .199

Note. Significant effects are bolded and were determined by a 95% bias-corrected bootstrapped confidence that does not contain zero. The other two PBS subscales and maladaptive perfectionism were included as covariates in the model.

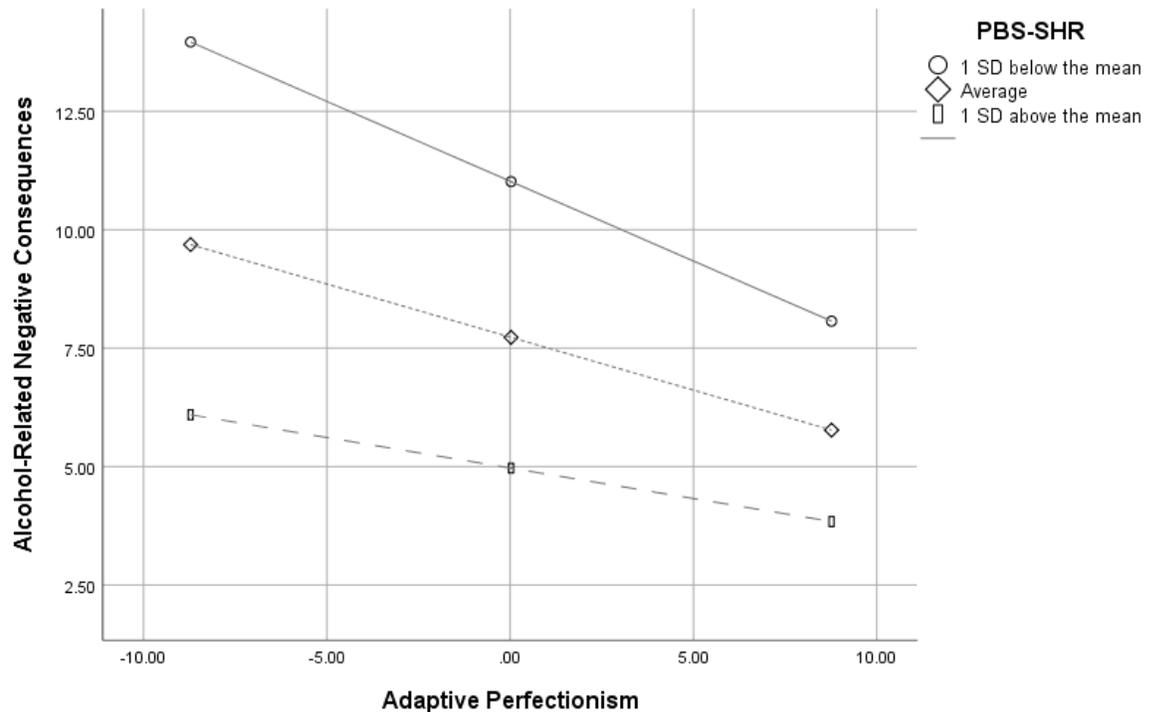


Figure 2. Predictive values of alcohol-related negative consequences based on adaptive perfectionism at low, average, and high levels of protective behavioral strategy-serious harm reduction use.

Discussion

Our results support other findings that have shown adaptive perfectionism was negatively correlated with typical weekly drinking and ARNC, while maladaptive perfectionism was positively associated with ARNC (Sherry et al., 2012; Rice & Arsdale, 2010). We expand on these findings by showing that adaptive perfectionism was positively associated with PBS-SLD, PBS-MOD, and PBS-SHR use whereas maladaptive perfectionism was negatively associated only with PBS-SHR. Thus, our results further support the idea that adaptive perfectionism is a protective factor while maladaptive perfectionism is a risk factor. Surprisingly, statistically significant associations were not found between maladaptive perfectionism and typical weekly drinking, PBS-SLD, or PBS-MOD, although these relationships were in the expected directions. These results could possibly be attributed to our assessment of typical weekly drinking instead of hazardous or binge drinking. One potential explanation for these findings might be that participants with maladaptive perfectionism, which may be associated with negative affect, may be drinking in isolative – negative coping – locations, such as apartments and dorms, instead of social settings in which hazardous drinking and subsequent PBS-SLD or PBS-MOD use may be more pertinent.

As predicted, we found that PBS-SHR moderated the negative relationship adaptive perfectionism had with typical weekly drinking and ARNC. Specifically, we found that both high and low adaptive perfectionism were associated with lower typical weekly drinking; however, this relationship was weaker for those reporting more PBS-SHR use. Further, we found the negative association between adaptive perfectionism and ARNC to be strengthened for those reporting more PBS-SHR use. These findings are consistent with studies supporting the value of PBS-SHR with mitigating ARNC

(Pearson, 2013), especially for those experiencing negative affect such as social anxiety and fear of negative evaluation (Villarosa-Hurlocker, Whitley, Capron, & Madson, 2018) or with less ability to resist peer influence (Villarosa, Kison, Madson, & Zeigler-Hill, 2016). Perhaps this may be attributed to students with more adaptive perfectionism possessing better self-regulation, emotion-regulation, less fear of negative evaluation from others, and a higher ability to resist peer influence. Collectively, these results seem to highlight the protective nature of adaptive perfectionism and the additionally protective nature of using PBS-SHR in relation to alcohol misuse.

These results have important implications for alcohol prevention and intervention efforts on college campuses. Due to the likelihood that many college students experience some form of perfectionism, which is rarely discussed in detail, educational efforts to distinguish between adaptive and maladaptive perfectionism and establish the connection between the types of perfectionism, alcohol misuse, and ARNC is needed. Understanding the components of adaptive and maladaptive perfectionism in the context of alcohol use is important for effectively shaping alcohol intervention strategies to screen and subsequently tailor these interventions based on perfectionism presentations. Based on our results, it might also be important for those providing counseling services addressing perfectionism recognize the potential value of adaptive perfectionism as a client strength especially within the context of alcohol misuse as well as bolster the impact of alcohol prevention and intervention efforts including the use of harm reduction behaviors such as PBS-SHR.

Although novel, the results of this study should be interpreted within the limitations of the study. First, this study used a cross-sectional design and, as a result,

causal relationships cannot be inferred, nor do they account for fluctuations occurring in alcohol use behaviors and challenges to perfectionism during academic year. For example, students may be more impacted by their adaptive and maladaptive perfectionism at different points in a semester, such as midterms and finals, or engage in different levels of drinking at different times during the semester. Thus, use of longitudinal designs would be important to address this limitation. Our assessment of typical weekly drinking instead of hazardous drinking in this study may be a possible contributor to the lack of significant results regarding the hypotheses concerning maladaptive perfectionism. Essentially, maladaptive perfectionism could potentially be more closely related to hazardous and binge drinking than typical weekly drinking. Therefore, future studies should assess different types of drinking such as binge drinking, pre-gaming, and hazardous drinking. Furthermore, we combined the six perfectionism subscales into two composite scores of adaptive and maladaptive perfectionism. This procedure potentially may have provided a less precise assessment of perfectionism. Finally, a large portion of the sample was Caucasian/White non-Hispanic and female from one university in the southeastern region of the United States. Therefore, the results might not be directly generalizable to other groups of people and other regions of the country.

The findings from this study also highlight future directions for research. For instance, examining the moderating and mediating roles of alcohol use predictors such as drinking context, drinking motives, and outcome expectancies could help to appreciate nuances influencing the relationships between perfectionism and alcohol use outcomes. Examining mental health factors such as depression, anxiety, college stress, and social

anxiety, as well as cognitive and behavioral factors like fear of negative evaluation, self-regulation, and resistance to peer influence may be valuable. Also, future research should explore the impact of specific demographic factors, such as gender and ethnicity, on the established relationships given well known differences between these groups with alcohol outcomes (Borsari, Murphy, & Barnett, 2007). A better understanding of these differences can help inform culturally- and gender-focused prevention and intervention efforts (Madson, Villarosa, Moorer, & Zeigler-Hill, 2015; Madson & Zeigler-Hill, 2013).

In conclusion, this study contributes to the PBS literature by providing preliminary evidence for the value of PBS subtypes, specifically SHR, on the relationships the types of perfectionism have with alcohol misuse and ARNC. Perfectionism is a construct that is not often examined in the context of alcohol use behaviors, and the moderating role of alcohol PBS on the established relationships has not been previously explored. Therefore, the findings of this study emphasize the importance of further investigation into the relationships adaptive and maladaptive perfectionism have with alcohol use behaviors and the additional protective factors that encompass adaptive perfectionism. Additionally, these results provide evidence that support the effectiveness of certain types of protective behavioral strategies for college students with levels of adaptive and maladaptive perfectionism who also use alcohol.

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Appendix



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI.

INSTITUTIONAL REVIEW BOARD

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NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 18072404

PROJECT TITLE: Perfectionism and Alcohol Use Outcomes in College Students: The Moderating Role of Alcohol Protective Behavioral Strategies

PROJECT TYPE: Honor's Thesis Project

RESEARCHER(S): Tiara Watson

COLLEGE/DIVISION: College of Education and Human Sciences

DEPARTMENT: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Exempt Review Approval

PERIOD OF APPROVAL: 08/17/2018 to 08/17/2019

Edward L. Goshorn, Ph.D.
Institutional Review Board