



Profiles of Motivations for Responsible Drinking among College Students:

A Self-Determination Theory Perspective

Dylan K. Richards¹, Matthew R. Pearson², and Craig A. Field¹

¹Latino Alcohol and Health Disparities Research and Training (LAHDR) Center, Department of Psychology, University of Texas at El Paso

²Center on Alcoholism, Substance Abuse, & Addictions, University of New Mexico



INTRODUCTION

- ❖ Research has shown that college students endorse different types of motivations for responsible drinking that are consistent with self-determination theory (SDT; Richards et al., 2020a)
- ❖ The more self-determined these motivations, the more predictive they are of using alcohol protective behavioral strategies (PBS; Richards et al., 2020b)
- ❖ Given that these types of motivation do not exist in isolation (i.e., high self-determined motivation does not preclude low self-determined motivation), there is need to examine these from a person-centered approach
- ❖ We used latent profile analysis (LPA) to identify subpopulations of college students based on their SDT motivations to drink responsibly, and compared them on SDT-related constructs and alcohol-related outcomes

METHOD

PARTICIPANT AND PROCEDURES

- ❖ Among a random sample of 2,500 undergraduate students from a Southwestern university, we recruited a sample of 1,045 students (42% response rate)
- ❖ We restricted our sample to 507 students who reported drinking alcohol at least once in the past 3 months

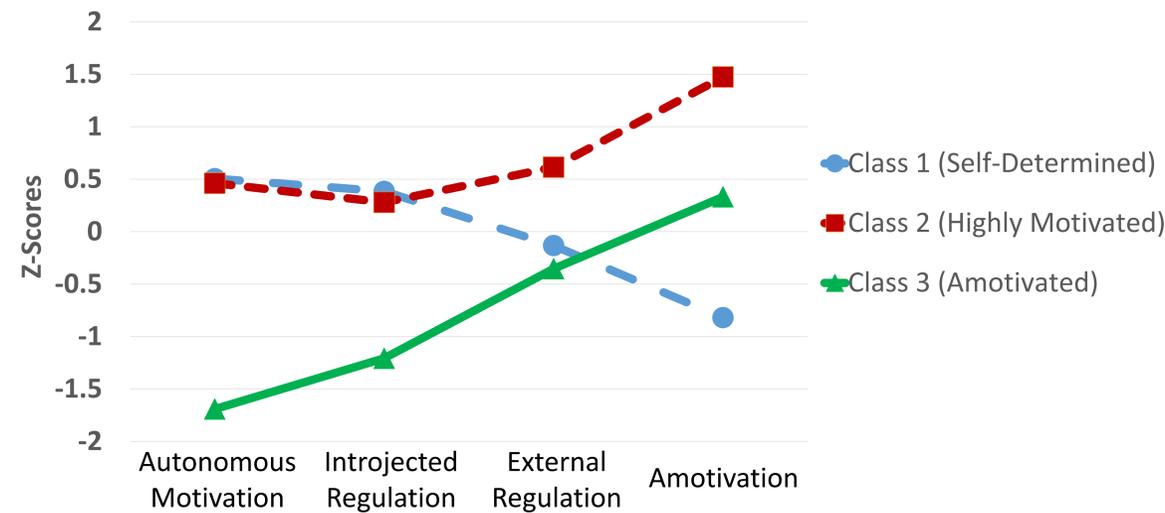
MEASURES

- ❖ Participants completed an online survey that included measures assessing:
 - **SDT motivations for responsible drinking** (Treatment Self-Regulation Questionnaire, Richards et al., 2020a): *autonomous motivation, introjected regulation, external motivation, and amotivation*
 - **Dispositional autonomy** (Index of Autonomous Functioning; Weinstein et al., 2012)
 - **Psychological needs satisfaction** (General Need Satisfaction Scale; Gagné, 2003): *autonomy, competence, and relatedness*
 - **Alcohol protective behavioral strategies** (PBS; PBSS-20, Treloar et al., 2015): *stopping/limiting drinking, manner of drinking, and serious harm reduction*
 - **Alcohol use** (Behavioral Risk Factor Surveillance System, CDC, 2019): *frequency, typical quantity, peak quantity, and heavy episodic drinking*
 - **Alcohol problems** (Brief-Young Adults Alcohol Consequences Questionnaire; Kahler et al., 2005)

RESULTS

LATENT PROFILE ANALYSIS

- ❖ We used latent profile analysis (LPA) in Mplus 8.3 (Muthén & Muthén, 1998-2019) to determine the number of distinct profiles defined by SDT motivations to drink responsibly
- ❖ Based on the Lo-Mendell-Rubin adjusted likelihood ratio test (LRT; Lo et al., 2001; Vuong, 1989), we found that a 2-class solution fit better than a 1-class solution ($p < .0001$), a 3-class solution fit better than a 2-class solution ($p = .0033$), but a 4-class solution did not fit better than a 3-class solution ($p = .6412$); thus, we selected a 3-class solution (see Figure below)



Mean comparisons between latent classes on SDT motivations for drinking responsibly, other SDT constructs, and alcohol-related outcomes

	Class 1: "Self-Determined" (n = 268.92)	Class 2: "Highly Motivated" (n = 124.02)	Class 3: "Amotivated" (n = 114.06)	Significant Class Differences
Motivations-Drinking Responsibly	M (SE)	M (SE)	M (SE)	
Autonomous Motivation	5.352 (.063)	5.248 (.107)	3.358 (.146)	1 = 2 > 3
Introjected Regulation	5.233 (.103)	5.060 (.132)	3.246 (.266)	1 = 2 > 3
External Regulation	2.993 (.103)	4.131 (.199)	2.751 (.178)	1 = 3 < 2
Amotivation	1.747 (.095)	5.280 (.156)	3.584 (.188)	2 > 3 > 1
Dispositional Autonomy	M (SE)	M (SE)	M (SE)	
IAF Total Score	5.583 (.089)	5.127 (.147)	4.291 (.168)	1 > 2 > 3
Psychological Needs Satisfaction	M (SE)	M (SE)	M (SE)	
Autonomy	5.177 (.052)	4.913 (.092)	4.545 (.092)	1 > 2 > 3
Competence	5.291 (.060)	4.850 (.096)	4.518 (.107)	1 > 2 > 3
Relatedness	5.372 (.045)	5.043 (.075)	4.799 (.091)	1 > 2 > 3
Protective Behavioral Strategies	M (SE)	M (SE)	M (SE)	
Stopping/Limiting Drinking	4.332 (.069)	4.172 (.115)	3.281 (.122)	1 = 2 > 3
Manner of Drinking	4.436 (.072)	4.265 (.115)	3.311 (.128)	1 = 2 > 3
Serious Harm Reduction	5.413 (.038)	5.225 (.071)	4.715 (.101)	1 > 2 > 3
Alcohol-Related Outcomes	M (SE)	M (SE)	M (SE)	
Alcohol Frequency	39.337 (1.936)	37.195 (3.004)	27.148 (2.720)	1 = 2 > 3
Alcohol Quantity	3.513 (.207)	4.000 (.402)	5.798 (.519)	1 = 2 < 3
Peak Quantity	4.510 (.236)	5.397 (.516)	7.040 (.589)	1 = 2 < 3
Heavy Episodic Drinking	3.768 (.461)	6.189 (1.141)	8.409 (1.36)	1 < 3; 2 = 1/3
Negative Consequences	.133 (.010)	.170 (.018)	.270 (.025)	1 = 2 < 3

SUMMARY

- ❖ Class 1 ("Self-Determined") comprised 53.04% of the sample (probabilistic n = 268.92, most likely class n = 272), defined by high levels of autonomous motivation and introjected regulation, and low levels of external regulation and amotivation
- ❖ Class 2 ("Highly Motivated") comprised 24.46% of the sample (probabilistic n = 124.02, most likely class n = 124), defined by high levels on all subscales
- ❖ Class 3 ("Amotivated") comprised 22.50% of the sample (probabilistic n = 114.06, most likely class n = 111), defined by the highest levels of amotivation, and lowest levels on all other subscales
- ❖ Dispositional autonomy is theorized to derive from environments in which psychological needs are met
- ❖ More self-determined motivations are theorized to arise when basic psychological needs are met
- ❖ Consistent with SDT, the "Self-Determined" class exhibited the highest levels of dispositional autonomy and psychological needs satisfaction, followed by the "Highly Motivated", with the "Amotivated" class reporting the lowest levels on these SDT constructs
- ❖ The "Self-Determined" and "Highly Motivated" classes reported higher use of PBS, higher frequency of use, lower typical quantity, lower peak quantity, and lower negative consequences than the "Amotivated" class, but largely did not differ from each other
- ❖ Taken together, these findings support SDT and are consistent with previous studies (e.g., Vansteenkiste et al., 2009) in other behavioral domains in that the quality of motivation is most indicative of positive outcomes
- ❖ Better understanding of motivational profiles for responsible drinking may inform targets of interventions for increasing PBS use among college students

ACKNOWLEDGMENTS

This study was funded by a Dodson Research Grant awarded to Dylan K. Richards and the LAHDR center. Matthew R. Pearson is supported by a career development award (K01AA023233) from NIAAA.

CONTACT INFORMATION

Dylan K. Richards
Email: dkrichards2@miners.utep.edu

REFERENCES

- Centers for Disease Control and Prevention (CDC). (2019, April). Behavioral Risk Factor Surveillance System. Retrieved from <https://www.cdc.gov/brfss/>
- Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion, 27*, 199-223.
- Kahler, C. W., Strong, D. R., & Read, J. P. (2005). Toward efficient and comprehensive measurement of the alcohol problems continuum in college students: The Brief Young Adult Alcohol Consequences Questionnaire. *Alcoholism: Clinical and Experimental Research, 29*, 1180-1189.
- Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika, 88*, 767-778.
- Muthén, L. K., & Muthén, B. O. (1998-2019). *Mplus User's Guide*. Eighth Edition. Los Angeles, CA: Muthén & Muthén.
- Richards, D. K., Morera, O. F., & Field, C. A. (in press). The psychometric properties of a version of the Treatment Self-Regulation Questionnaire for assessing motivations for responsible drinking. *Journal of American College Health*.
- Richards, D. K., Pearson, M. R., & Field, C. A. (2020). *Motivations for responsible drinking and the use of protective behavioral strategies among college students: A test of self-determination theory*. Unpublished manuscript.
- Treloar, H., Martens, M. P., & McCarthy, D. M. (2015). The Protective Behavioral Strategies Scale-20: Improved content validity of the Serious Harm Reduction subscale. *Psychological Assessment, 27*, 340-346.
- Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology, 101*, 671-688.
- Vuong, Q. H. (1989). Likelihood ratio tests for model selection and non-nested hypotheses. *Econometrica: Journal of the Econometric Society, 57*, 307-333.
- Weinstein, N., Przybylski, A. K., & Ryan, R. M. (2012). The index of autonomous functioning: Development of a scale of human autonomy. *Journal of Research in Personality, 46*, 397-413.