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Multi-Modal Shame Assessment Predicting Alcohol Consumption and Problems

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Purpose

The purposes of this study were to assess the extent to which various shame measures predict alcohol consumption and alcohol-related problems when used independently and in combination, and to differentiate the predictive power of shame versus guilt in predicting alcohol misuse.

Shame, an emotion related to negative evaluations of the self, is associated with a variety of maladaptive outcomes such as problematic alcohol use (e.g., Meehan et al., 1996; Treeby & Bruno, 2012). In contrast, guilt is a negative emotion thought to potentiate restorative actions, and may therefore serve as a protective factor (Dearing, Stuewig, & Tangney, 2005). Each of the self-report and scenario-based shame measures examined in the present study (i.e., ISS, SSGS, TOSCA) has been found to predict alcohol use or alcohol-related problems (e.g., Cook, 1988; Randles & Tracy, 2013; Ianni, Hart, Hibbard, & Carroll, 2010; Dearing et al., 2005; O'Connor, Berry, Inaba, Weiss, & Morrison, 1994); IAT (Greenwald, McGhee, & Schwartz, 1998) measures of implicit shame have been found to be predictive of maladaptive coping (e.g., Rüsch et al., 2007). However, the relative capacity of these various measures of shame in accounting for alcohol misuse has received little attention, which we sought to remedy through a direct comparison of the measures in a community sample of non-abstainers.

Participants and Measures

Participants: Community non-abstainers ($N = 88$). 63% female. 80% White. Age ($M = 34.65$ years, $SD = 13.43$). Education ($M = 15.28$ years, $SD = 2.30$).

Measures of Shame

- **ISS** (Internalized Shame Scale; Cook, 1988). A self-report measure of trait shame ($M = 1.11$, $SD = 0.77$).
- **SSGS-S** (State Shame and Guilt Scale, Shame Subscale; Marschall, Sanftner, & Tangney, 1994). A self-report measure of state shame ($M = 1.41$, $SD = 0.61$).
- **TOSCA-S** (Test of Self-Conscious Affect, Shame Subscale; Tangney, Wagner, & Gramzow, 1989). A self-report measure of responses to shame vs. guilt potentiating scenarios ($M = 2.72$, $SD = 0.75$), partialing out guilt for analyses.
- **IAT-S** (Implicit Association Test of Shame; Rüsch et al., 2007). Implicit shame as measured by reaction times when sorting self/other and shame/anxiety stimulus pairings ($M = 0.12$, $SD = 0.34$).

Measures of Guilt

- **SSGS-G** (State Shame and Guilt Scale, Guilt Subscale). A self-report measure of state guilt ($M = 1.81$, $SD = 1.00$).
- **TOSCA-G** (Test of Self-Conscious Affect, Guilt Subscale). A self-report measure of responses to shame vs. guilt potentiating scenarios ($M = 4.00$, $SD = 0.54$), partialing out shame for analyses.

Measures of Alcohol Consumption & Problems

- **TLFB** (Time Line Follow Back; Sobell & Sobell, 1992). Self-reported levels of use over the last 30 days: **Days** of drinking ($M = 10.90$, $SD = 7.50$), total number of **Drinks** ($M = 38.79$, $SD = 55.71$), and number of **Binges** ($M = 3.07$, $SD = 5.38$).
- **AUDIT** (Alcohol Use Disorders Identification Test; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993). Self-report measure of problematic drinking, focusing on direct consequences of drinking such as blackouts (Summary Scores: $M = 9.56$, $SD = 6.89$).
- **SIP-2R** (Short Inventory of Problems – Recent; Miller, Tonigan, & Longabaugh, 1995). Self-report measure of problematic drinking, including questions about impulsiveness and interpersonal problems (Average Scores: $M = 0.47$, $SD = 0.54$).

Results

Correlation and regression analyses were conducted to assess relationships between shame, guilt, and drinking outcomes. Scores on the ISS, SSGS-S, and SSGS-G were significantly correlated with number of drinks and number of binges. No shame or guilt variables were significantly correlated with days of drinking. Scores on the ISS, SSGS-S, TOSCA-S, SSGS-G, and TOSCA-G were significantly correlated with both AUDIT and SIP-2R alcohol problems. No significant correlations were found with the IAT-S.

All shame and guilt variables that were found to have significant zero-order correlations with alcohol use or problems were entered into simultaneous linear regression analyses to assess their capacity to predict drinking outcomes. Whereas there were no unique predictors of alcohol use, the ISS and SSGS-G were found to uniquely predict variance in alcohol problems.

Shame and Guilt Simultaneously Predicting Alcohol Use

	TLFB Num. of Drinks [a]				TLFB Num. of Binges [b]			
Variable	B	SE (B)	β	*t*	B	SE (B)	β	*t*
ISS	0.13	0.15	.12	0.85	0.40	0.26	.21	1.53
SSGS-S	0.10	0.13	.11	0.71	0.13	0.23	.08	0.54
SSGS-G	0.18	0.22	.11	0.81	0.16	0.38	.06	0.41

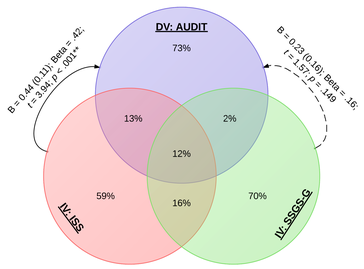
Note: $N = 88$. [a] Model $R^2 = .08$, $F(3,84) = 2.50$, $p = .07$. [b] Model $R^2 = .09$, $F(3,84) = 2.86$, $p = .04$.

Shame and Guilt Simultaneously Predicting Alcohol Problems

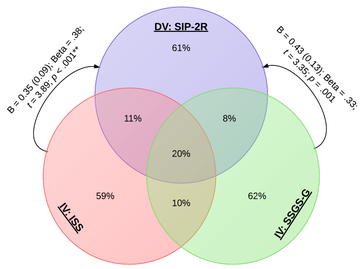
	AUDIT [c]				SIP-2R [d]			
Variable	B	SE (B)	β	*t*	B	SE (B)	β	*t*
ISS	0.38	0.14	.36	**2.68****	0.40	0.11	.44	**3.59****
SSGS-S	0.03	0.12	.03	0.23	-0.18	0.08	-.25	-1.92
TOSCA-S	0.02	0.06	.06	0.44	0.03	0.04	.07	0.62
SSGS-G	0.19	0.18	.13	1.04	0.56	0.15	.43	**3.83****
TOSCA-G	-0.09	0.17	-.06	-0.52	-0.03	0.14	-.03	-0.25

Note: ** $p < .01$. $N = 88$. [c] Model $R^2 = .28$, $F(5,82) = 6.42$, $p < .001$. [d] Model $R^2 = .42$, $F(5,82) = 11.69$, $p < .001$.

ISS and SSGS-G Simultaneously Predicting Alcohol Problems



R^2 = .272; $F(2, 85)$ = 15.85; p < .001



R^2 = .387; $F(2, 85)$ = 26.82; p < .001

Correlations Between Shame, Guilt, and Drinking

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. ISS	1										
2. SSGS-S	.63**	1									
3. TOSCA-S	.57**	.45**	1								
4. IAT-S	-.13	-.10	.02	1							
5. SSGS-G	.51**	.64**	.34**	-.09	1						
6. TOSCA-G	-.32**	-.44**	-.57**	-.02	-.29**	1					
7. TLFB Days	.02	.08	-.03	.15	.04	.00	1				
8. TLFB Drinks	.24*	.25*	.13	.04	.24*	-.14	.81**	1			
9. TLFB Binges	.29**	.25*	.19	.15	.21*	-.17	.55**	.85**	1		
10. AUDIT	.50**	.40**	.36**	.07	.37**	-.26*	.35**	.68**	.76**	1	
11. SIP-2R	.55**	.35**	.37**	-.03	.53**	-.22*	.22*	.54**	.59**	.78**	1

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

Discussion

All measures appeared to have some power to predict alcohol use and problems, with the exceptions that the TOSCA did not predict use and the IAT-S predicted neither use nor problems. The poor performance of the IAT-S may be related to our use of "anxiety" as its shame-relative term; anxiety is also likely to predict alcohol misuse and including this term may have attenuated the IAT-S's sensitivity. Future investigations may use an alternative IAT term, such as "pride," to see if this improves the IAT-S's ability to predict alcohol misuse.

Interestingly, state SSGS-Guilt was positively related to drinking problems, whereas trait TOSCA-Guilt appeared to be protective. We speculate that trait guilt proneness may be protective against people taking damaging impulsive actions and may lead to greater restoration of relationships following transgressions (thereby mitigating problems from drinking), whereas having a more extensive history of drinking problems may have evoked greater state feelings of guilt in our experimental context of talking about drinking problems.

The ISS was found to uniquely predict variance in problematic drinking as measured by both the AUDIT and SIP-2R, whereas the SSGS-G uniquely predicted SIP-2R scores only. We speculate that the reason for this discrepancy involves SIP-2R items being more closely tied to impulsivity and interpersonal problems; one would expect these types of drinking problems to be more closely related to guilt than the more direct drinking consequences assessed by the AUDIT.

Of the shame and guilt measures investigated, we found the ISS to have the greatest overall utility in predicting alcohol misuse, making it a candidate measure of choice for future research and assessment purposes.

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