Effects of Social Exclusion and Affect-Regulation Drinking Motives on Implicit Alcohol-Related Cognitions

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BACKGROUND

Humans have a fundamental need to belong to and feel included in valued social groups. Substantial research demonstrates that threats to this fundamental need can have innumerous negative consequences.

Past research also demonstrates that threats to this fundamental need to belong and feel socially connected to others can trigger maladaptive coping-related behaviors, including alcohol abuse and drug use.

However, little is known concerning processes that might explain these effects of threats to social belongingness on alcohol use and abuse behaviors. In the current project, it is hypothesized that the emerging stronger approach tendencies towards alcohol-related cues and implicit alcohol-related cognitions after threats to the fundamental need to belong may constitute one mechanism by which these threats lead to maladaptive drinking behaviors.

The current project examines whether threats to the need to belong lead to stronger behavioral action tendencies toward alcohol cues and implicit alcohol-related cognitions, and whether drinking motives are associated differently with implicit alcohol-related cognitions when threats to the need to belong are present (i.e., social exclusion) versus when they are not (i.e., social inclusion).

Hypotheses:

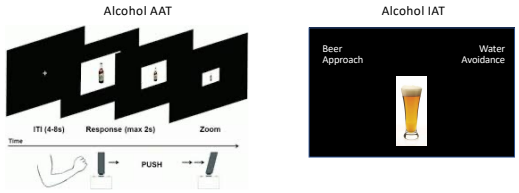
- Enhancement-specific motives will be positively associated with approach motivational bias for alcohol cues and implicit alcohol-related cognitions among individuals assigned to the overinclusion condition but not among those assigned to the exclusion condition.
- Coping-specific motives will be positively associated with approach motivational bias for alcohol cues and implicit alcohol-related cognitions among individuals assigned to the exclusion condition but not among those assigned to the overinclusion condition.

METHOD

The final sample included data from 417 participants (235 females; 89% White; 18-38 years-old). Participants completed the experiment under one of two experimental conditions: social overinclusion or social exclusion. Participants also completed several individual differences measures, including drinking motives, which were used to test moderator hypotheses.

Cyberball game (Williams et al., 2002)

After the Cyberball game, participants completed the Alcohol Approach-Avoidance Task (AAT (Wiers et al., 2009) and the Alcohol-Approach Implicit Association Task (IAT; Ostafin & Palfai, 2006) to measure implicit alcohol-related cognitions.



Finally, participants completed an online survey, including among others:

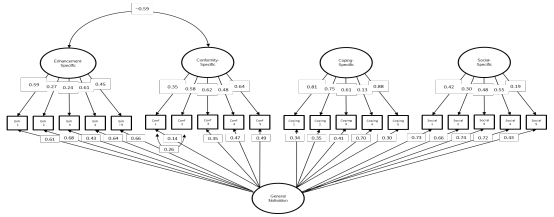
- Drinking Motives Questionnaire–Revised (Cooper, 1994) – enhancement and coping motives
- Need Threat Scale (Beest & Williams, 2006) – fundamental needs (belongingness, self-esteem, control, and meaningful existence).

RESULTS

Descriptive Statistics and Manipulation Checks as a Function of Experimental Condition

	Social exclusion	n_1	Overinclusion	n_2	Effect size (d)	Significance test	*p*-value
Demographics							
Gender (Female %)	60.38	212	52.26	199	−0.16	χ^2 (1) = 2.75	.100
Age (in years)	18.74	212	18.80	199	0.04	t(332.86) = 0.43	.668
Race (White %)	78.97	216	84.42	199	0.16	χ^2 (1) = 1.33	.249
Manipulation Checks							
To what extent were you included by the other players during the game?	2.33 (1.67)	213	7.39 (2.21)	198	2.60	t(365.58) = 26.07	<.001
To what extent were you accepted or rejected by the other players during the game?	2.86 (2.06)	210	7.61 (1.91)	194	2.39	t(402) = 24.02	<.001
What percentage of throws do you think you received during the Cyberball game?	8.62 (14.28)	216	69.34 (13.03)	197	3.20	t(222.1) = 31.8	<.001
Fundamental Needs							
Belongingness	2.45 (1.25)	216	4.53 (1.27)	199	1.60	t(411) = 16.21	<.001
Control	3.88 (1.09)	216	5.48 (1.26)	199	2.93	t(378.01) = 39.55	<.001
Self-esteem	4.48 (1.39)	216	5.75 (0.91)	199	1.07	t(370.01) = 11.07	<.001
Meaningful existence	2.76 (1.60)	216	5.07 (1.41)	199	1.61	t(411) = 16.73	<.001
Need satisfaction index	2.89 (1.02)	216	5.21 (0.92)	199	2.38	t(411) = 24.19	<.001
Mood							
Positive mood	56.05 (20.66)	213	61.04 (18.12)	195	0.26	t(405) = 2.58	.010
Negative mood	22.60 (20.00)	212	17.60 (18.94)	194	−0.26	t(404) = − 2.58	.001
Drinking Motives							
Enhancement motives	2.83 (1.04)	216	3.00 (0.99)	199	0.16	t(411) = 1.62	.106
Coping motives	1.74 (0.82)	216	1.78 (0.82)	199	0.05	t(411) = 0.53	.612
Social motives	3.09 (1.05)	216	3.20 (0.98)	199	0.11	t(411) = 1.17	.245
Conformity motives	1.37 (0.53)	216	1.44 (0.62)	199	0.12	t(389.69) = 1.23	.218
Alcohol Approach Motivational Biases							
AAT alcohol	11.08 (68.2)	202	−0.08 (67.49)	185	−0.16	t(385) = − 1.62	.107
AAT nonalcohol	17.72 (74.35)	202	−8.18 (63.86)	185	−0.37	t(383.45) = −3.69	<.001
AAT objects	14.61 (69.66)	202	−13.63 (66.70)	185	−0.41	t(385) = −4.07	<.001
Implicit Alcohol Cognitions							
IAT D score	−0.14 (0.25)	202	−0.08 (0.29)	195	0.21	t(395) = 2.07	.039

Confirmatory Factor Analysis – Testing the Structure of Drinking Motives (Lac & Donaldsonb, 2016; 2017)



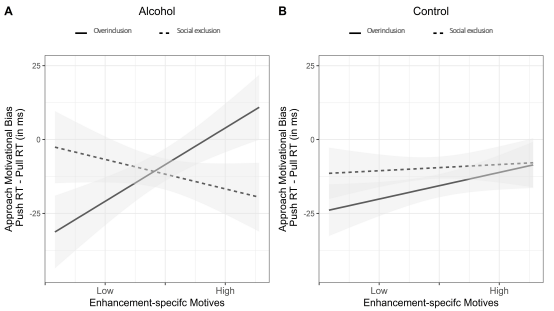
Model fit: χ^2 (149) = 345.62, p < .01, CFI = .95, TLI = .93, RMSEA = .06, RMSEA 90% CI [0.05-0.06], SRMR = .05.

Hierarchical Regression Model Predicting Alcohol-Related Behavioral Action Tendencies (Alcohol AAT)

	B	*SE B*	95% CI	β	*t*	*p*	ΔR^2
Step 1 – Covariates							.328***
Sex (1 = Females; 0 = Males)	-5.32	5.98	[-17.07; 6.43]	-.04	-.89	.374	
Age (in years)	.15	1.99	[-3.75; 4.05]	.003	.08	.940	
Race (1 = White; 0 = Other)	10.70	7.53	[-4.10; 25.51]	.06	1.42	.156	
Need satisfaction index	-.27	1.92	[-4.05; 3.51]	-.006	-.14	.889	
Nonalcohol AAT scores	.56	.04	[.48; .65]	.58	13.48	<. 001	
Step 2 – Main effects							.004
Coping-specific motives	5. 64	4.03	[-2.27; 13.56]	.06	1.40	.162	
Enhancement-specific motives	-.02	4.67	[-9.21; 9.16]	.00	-.005	.996	
Condition (0 = overinclusion; 1 = exclusion)	-6.88	9.40	[-25.36; 11.60]	-.05	-.732	.465	
Step 3 – Two-way interactions							0.13*
Coping-specific motives × Condition	-7.52	8.05	[23.35; 8.32]	-.06	-.93	.351	
Enhancement-specific motives × Condition	-24.52	0.32	[-42.84; -6.19]	-.15	-2.63	.009	

Hierarchical Regression Model Predicting Implicit Alcohol Cognitions (Alcohol-Approach IAT D)

	B	SE B	95% CI	β	t	p	ΔR^2
Step 1 – Covariates							.05***
Sex (1 = Females; 0 = Males)	-.09	.03	[-.15; -.04]	-.17	-3.34	.001	
Age (in years)	.01	.01	[-.01; .03]	.04	.81	.421	
Race (1 = White; 0 = Other)	.02	.04	[-.05; .09]	.03	.59	.555	
Need satisfaction index	.02	.01	[.004; .04]	.12	2.41	.016	
Step 2 – Main effects							.01
Coping-specific motives	.04	.02	[.001; .07]	.09	.19	.060	
Enhancement-specific motives	.02	.02	[-.02; .06]	.05	.95	.345	
Mood-induced condition (0 = overinclusion; 1 = exclusion)	.01	.04	[-.08; .10]	.02	.23	.822	
Step 3 – Two-way interactions							.02
Coping-specific motives × Mood-induced condition	.01	.04	[-.7; .08]	.02	.24	.815	
Enhancement-specific motives × Mood-induced condition	.04	.04	[-.05; .12]	.06	.84	.401	



The Enhancement-specific motives × Condition interaction was significant (β = -15, p = .009) for alcohol approach bias scores, but not for nonalcohol (or control) approach bias scores.

CONCLUSIONS

- Compared to participants who were overincluded, participants who were excluded reported significantly lower feelings of belongness, sense of control, self-esteem, and meaningful existence.
- No statistically significant difference was found in approach motivational tendencies towards alcohol cues between the two experimental conditions. However, those assigned to the overinclusion condition showed higher implicit alcohol-related cognitions compared to those assigned to the social exclusion condition.
- Drinking motives did not interact with experimental condition in predicting implicit alcohol-related cognitions (indexed by alcohol IAT scores).
- Enhancement-specific motives interacted with experimental condition in predicting approach motivational bias towards alcohol cues (indexed by alcohol AAT scores). This significant interaction was driven by a positive association between enhancement-specific and AAT scores among individuals assigned to the overinclusion condition (β = .10, p = .075), accompanied by a negative association among those assigned to the social exclusion condition (β = -.12, p = .054).

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