

Assessing the Relationship Between Implicit Memory Associations and Gambling in Adolescents

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Measures that assess **memory associations** typically use word production methods to assess memories that are **outside of conscious awareness**. Previous research has demonstrated that memory associations for gambling have a significant positive relationship with concurrent gambling behaviours in adults. The present study seeks to examine the relationship between memory associations and gambling behaviours in a large sample of adolescents, where gambling is less common and involves a somewhat different pattern than is found with adults.

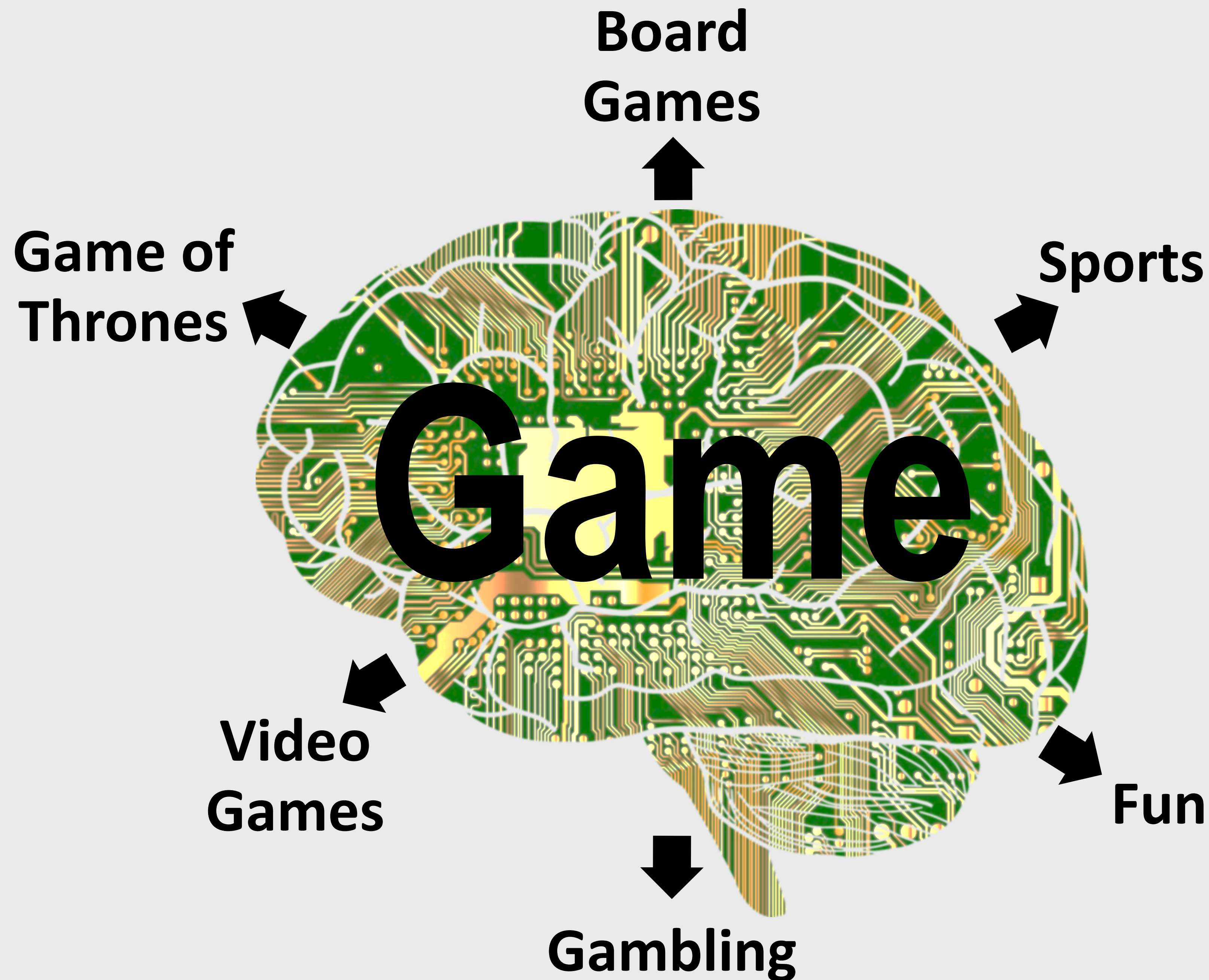


Table 2. Kendall's Tau-b Correlations Between the Indicator Variables.

	WA	OEL	GFq	GFo	BI
WA	-				
OEL	.141	-			
GFq	.134	.190	-		
GFo	.146	.188	.925	-	
BI	.082	.157	.257	.255	-
IN-M	.116	.233	.345	.341	.138
IN-D	.109	.238	.344	.341	.146
IN-S	.067	.112	.218	.220	.079
IN-F	.137	.248	.308	.310	.134
IN-LM	.130	.250	.304	.303	.147
IN-R	.131	.256	.292	.294	.144
DN-M	.132	.147	.238	.248	.122
DN-D	.129	.132	.271	.280	.144
DN-SB	.045	.091	.237	.239	.097
DN-S	.058	.058	.253	.256	.104
DN-F	.106	.145	.364	.369	.212
DN-LM	.105	.194	.364	.370	.243
DN-R	.095	.169	.305	.309	.164

Cells in dark green indicate significance at the $p < .01$ level, cells in light green indicate significance at the $p < .05$ level, and cells that are grey are non-significant.

Methods

Procedure:

Students recruited as part of participation in comprehensive school-based prevention programming.

Participants:

1237 students in grades 8-10 from School District 22 in Vernon, British Columbia.

Measures:

- Self-coded gambling word associates (WA)
- Gambling outcome expectancy liking (OEL)
- Past year frequency of gambling (GFq)
- Number of gambling formats (GFo)
- Behavioral intentions (BI)
- Injunctive norms (IN)
- Descriptive norms (DN)

Results

Table 1. Mann Whitney U Tests Comparing Means Between Gamblers and Non-Gamblers.

	Gambler (N=261)	Non-Gambler (N=792)	p
Word Associate Score (0-13)	2.36 (2.10)	1.69 (1.92)	$p < .001$
Outcome Expectancy Liking (-2.00-2.00)	-.26 (.98)	-.75 (1.04)	$p < .001$
Behavioural Intentions	.78 (1.59)	.15 (.76)	$p < .001$
Injunctive Norms (How much would each of the following people approve of you gambling; Strongly Disapprove-Strongly Approve; 1-4)			
Mother (IN-M)	1.96 (.71)	1.34 (.52)	$p < .001$
Father (IN-D)	1.99 (.71)	1.36 (.51)	$p < .001$
Most students at my school (IN-S)	2.30 (.76)	1.88 (.77)	$p < .001$
Close friends (IN-F)	2.07 (.81)	1.49 (.65)	$p < .001$
Others like me (IN-LM)	2.02 (.79)	1.46 (.63)	$p < .001$
Others I would like to be like (IN-R)	1.97 (.79)	1.44 (.63)	$p < .001$
Descriptive Norms (For each of the following people, please pick one category to describe their gambling)			
Mother (Never - Very Heavy; 1-6, DN-M)	1.73 (.94)	1.31 (.66)	$p < .001$
Father (Never - Very Heavy; 1-6, DN-D)	2.05 (1.10)	1.07 (.30)	$p < .001$
Siblings (Never - Very Heavy; 1-6, DN-SB)	1.36 (.82)	1.07 (.30)	$p < .001$
Most students at my school (% , DN-S)	23.35 (22.14)	11.61 (16.55)	$p < .001$
Close friends (% , DN-F)	9.78 (17.56)	1.84 (9.33)	$p < .001$
Others like me (% , DN-LM)	8.39 (15.82)	1.72 (9.59)	$p < .001$
Others I would like to be like (% , DN-R)	6.81 (14.34)	1.68 (9.44)	$p < .001$

Conclusions

- Memory associations for gambling are significantly more present for adolescents who gamble compared to adolescents who do not gamble. Similarly, there are more positive outcome expectancies, they are more likely to have an intention to gamble, and both injunctive and descriptive norms are higher.
- There is a significant positive relationship between memory associations measures of: gambling outcome expectancies, gambling frequency, gambling formats, behavioural intentions, injunctive norms, and descriptive norms.
- Studies have demonstrated that memory associations for alcohol use can predict future use and problems even among those who have never consumed alcohol before. Future studies with these cohorts will examine if this is also true for gambling-related memory associations.