Cognitive, motivational and emotional factors associated with problem gambling in Australian poker players: A preliminary study
Definition of gambling

Several core elements are essential for any activity to be considered to be gambling:

“... an agreement between at least two parties (one of which may be an organisation), to exchange an item of value (not necessarily limited to money) on the basis of the outcome of an uncertain event (risk) and where participation is voluntary”

- The Australian Psychological Society
Background

- 40% of Australians are estimated to gamble regularly (at least once a week)
- It is estimated that problem gambling affects 2.3% of Australians
- Total gambling turnover in Australia was $148.6 billion for 2005-06 (Australian Bureau of Statistics)
Cognitive Theory and Gamblers’ Beliefs

- Gambler’s hold distorted cognitions (Ladouceur & Walker, 1996; Toneatto, 1999)
- A number of cognitive distortions/irrational beliefs have been identified:
  - Illusion of control
  - Gambler’s fallacy
Theory and Research

- Self-Determination Theory and Motivation
  - Determines persistence and severity of gambling (Chantal, Vallerand & Vallieres, 1995)
  - A need to feel self-determined and competent when interacting with their environment
  - Those exhibiting a high self-determined motivational profile (SDMP) reported higher levels of gambling involvement.
Theory and research

- Alexithymia and Gambling
  - A positive correlation has been found between alexithymia and problem gambling (Lumley & Roby, 1995; Parker, Wood, Bond and Shaughnessy, 2005)
  - However, both have been limited to student populations and require being replicated in a more suitable population
What are the factors that discriminate between social and problem gambling when examining a population of poker players?
Design

- Cross-sectional
- Survey method
- Group comparisons were made between measures
Methods and Measures

Recruitment

- The participants of the study were 96 social poker players in Sydney, randomly selected at poker tournaments and poker rooms.
- They were provided with 3 ways to complete the questionnaire:
  1. On-site paper and pencil
  2. Take home and mail back; or
  3. Online
Methods and Measures

Measures

- Section A was the collection of information regarding participants’ general gambling habits (i.e. what forms of gaming do they participate in, how often and approximately how much money is spent on the activity).
Methods and Measures

- The Canadian Problem Gambling Index (Ferris & Wyne, 2001). E.g. “Have you ever bet more than you could really afford?”

- The Gambling Motivation Scale (Chantal, Vallerand, & Vallieres, 1994). E.g. “Because it makes me feel like someone important” and “To make money quickly and easily.”
Methods and Measures

- The Gambler’s Beliefs Questionnaire (Steenbergh, Meyers, May, & Whelan, 2002).
  E.g. “If I am gambling and losing, I should continue because I don’t want to miss a win”

- The Toronto Alexithymia Scale - 20 (Bagby, Parker & Taylor, 1994).
  E.g. “I am often confused about what emotion I am feeling.”
Analysis of data

- Correlations
- ANOVA
- Estimated marginal means plots
- Multivariate Analyses
- Linear Multiple Regression
Results

Univariate Analyses

- The univariate analyses indicated that a significant difference between problem and non-problem gamblers on self-determined motivation ($F(1,94) = 4.54, p = .04$), non self-determined motivation ($F(1,94) = 19.69, p < .0005$), and the GBQ scale of luck/perseverance ($F(1,94) = 13.56, p < .0005$)
# Results

## Correlations

<table>
<thead>
<tr>
<th></th>
<th>Problem Gambling</th>
<th>Belief: Luck/Perseverance</th>
<th>Belief: Illusion of Control</th>
<th>Self Determined Motivation</th>
<th>Non Self Determined Motivation</th>
<th>Alexithymia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem Gambling</td>
<td>1</td>
<td>**</td>
<td>*</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Belief: Luck/Perseverance</td>
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<td>1</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Belief: Illusion of Control</td>
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<td>.680**</td>
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<tr>
<td>Self Determined Motivation</td>
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<td>.636**</td>
<td>.595**</td>
<td>1</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Non Self Determined Motivation</td>
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<td>.659**</td>
<td>.456**</td>
<td>.710**</td>
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<td>**</td>
</tr>
<tr>
<td>Alexithymia</td>
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<td>.403**</td>
<td>.457**</td>
<td>.370**</td>
<td>.388**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).
Results

Hypothesis 1: Cognitive Distortions And Problem Gambling

- Weak to moderation correlations found (.22 for IOC and .49 for LP)
- Partial correlations controlling for involvement in non-skill gambling did not account for a significant relationship change between Cognitive Distortions and Problem Gambling
Hypothesis 2: Motivation and Problem Gambling

- Both self- and non self-determined motivation were significantly related to problem gambling.
- Non self-determined motivation has a stronger association with severity of problem gambling ($t(93) = 4.37, p < .0005$).
Results

Hypothesis 2 continued…

- Non-skill gambling did not account for the relationship between motivation and severity of problem gambling
- However, when controlling for non-skill gambling, self-determined and non self-determined motivation equally account for problem gambling score
Results

Hypothesis 3: Alexithymia and Problem Gambling

- Weak positive relationships were found between difficulty identifying feelings and difficulty describing feelings with problem gambling and no significant result with externally oriented thinking.
- The overall alexithymia correlation was weak ($r = .26$, $p < .05$).
Results

Hypothesis 3 continued…

- non-skill gambling inflated the relationship between difficulty describing feelings and CPGI and has no relationship to the overall alexithymia score and CPGI or difficulty identifying feelings and problem gambling.

- Independent samples t-test indicated no significant difference between those who score high on alexithymia and non-alexithymic participants on problem gambling ($t(94) = -1.19$, $p= .24$).
Results

Post-Hoc Analyses – Linear Regression

- The full model accounted for 56.3% of variance in problem gambling score.
- Non self-determined motivation and involvement in non-skill gambling accounted for 52.8% of variance in problem gambling score in poker players.
- When non-skill gambling is removed from the model, the model predictability reduced by 15.6%.
Strengths of the Present Study

- This is the first study, to our knowledge, to attempt to examine the psychological factors that may be moderating the development of problem gambling in poker players.
- Providing a new avenue for research.
- However… all the results of this study need to be interpreted with caution.
Limits of the Research

- Sample size was limited and restricted
- The inability to control for respondents' participation in other forms of gambling, particularly non-skill, may have relevantly confounded present results
- From the current sample, poker players do not necessarily adhere to one form of gambling (skill or non-skill)
Limits and strengths of the Research

- The confounding nature of the results may be indicative that more precise and relevant measures need to be created for the assessment of this population.
- Using self-report measures that are susceptible to biases and socially desirable responding, and require self-awareness.
Conclusions

- Poker players do not strictly adhere to previous research/theories on gambling behaviour
- Problem gambling has been shown to be best predicted by involvement in non-skill gambling, and NSDMOT in the current population.
- Understanding this new type of gambler is needed
- Consideration of new interventions
Thank you for your attention