Introduction

- Money plays a **central role** in gambling.
- Though the major objective of gambling is to *win money*, problem gamblers typically reinvest their winnings in the face of mounting debts.

**WHY?**
This presentation will discuss:

- Findings of a study exploring recreational versus problem gamblers:
  - Attitudes to money
  - Motivations for gambling
  - Attitudes toward pre-commitment
  - Choice within the context of responsible gambling.
- Implications for informed choice
  - Characteristics of necessary information
  - Goals and guidelines for promoting informed choice in gambling.

**STUDY BACKGROUND**

**Method**

**Sample**
- 127 patrons at one of four (4) venues in Brisbane, Queensland, Australia.
- Assisted by research assistant on electronic gaming machine floor.
- Groupings: non-gamblers (0 symptoms), low-risk gamblers (1 to 2 symptoms), moderate-risk gamblers (3 to 7 symptoms), and problem gamblers (8+ symptoms).
Measures

- **Questionnaire**: Demographics, gambling behavior, preferred gambling activities.
- **Problem Gambling Severity Index (PGSI)** of the Canadian Problem Gambling Index (CPGI) (Ferris & Wynne, 2001): 9-item subscale assessing past-year problem gambling behaviors and consequences.
- **Money Beliefs & Behavior Scale** (Furnham, 1984): 47-items measuring six money attitude subscales.
- **Money Attitude Scale** (Yamouchi & Templer, 1982): 34-items measuring five money attitude subscales.

Demographic Results

- **Age**: Mean, 40 years. Range, 18 to 81 years
- **Men**: 71%, n=90 Women: 29%, n=37
- **Non-problem gamblers**: 49%, n=62
- **Low-risk gamblers**: 20%, n=25
- **Moderate risk gamblers**: 16%, n=20
- **Problem gamblers**: 16%, n=20

Demographic Results

- **Problem gamblers** were **more likely** than non-problem gamblers to endorse machines ($P=0.006$) and **less likely** to endorse lottery play ($P=0.003$).
- **Problem gamblers** gambled **more times per month** (7x/month) than non-problem gamblers (3x/month), $P=0.007$, and spent **more money per visit** on machines ($185 versus $32; $P<0.001$).
Background

- Money is a multidimensional construct with instrumental, symbolic, and emotional meaning at multiple levels: individual, social, & cultural.

- It is important to understanding what money represents and how attitudes and values interact to influence behavior and psychological well-being.
Lea and Webley (2006)
- Controversial framework based on biological parameters.
- Explains the incentive and reinforcing powers of money.
- Money represents a unit of value that can be exchanged for goods and services and used to acquire wealth and economic benefits.
- **BUT** this definition fails to explain situations where money is acquired for its own sake (hoarders, spendthrifts).

**TOOL AND DRUG THEORY**

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**Tool Theory**
- Money is valuable for what it represents: opportunity to acquire something of value.
- Functions as second-order reinforcer.
- Reinforcing value: Intangible benefits of wealth, prestige, power.
- Instrumental 'means to an end': materialism or egotism.

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**Tool Theory in Gambling**
- The motivation underlying the incentive to risk money is driven by perceived opportunities to:
  - win money to reduce debt (*chase losses*)
  - enhance personal wealth and life-style standards.
- **BUT**
- Problem gamblers use winnings to extend sessions until money is exhausted.
• The reinforcing “high” generated by gambling becomes the primary incentive.
• Money is simply the means to continuing reinforcement.
• Money is conditioned to act as reinforcer by eliciting states of subjective arousal produced by risk in gambling.

SO.....
PGs appear to use gambling more as a **DRUG**.

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**Drug Theory of Money**

• Money is a powerful motivator at the cognitive level partly because of its capacity:
  - “to mimic the neural, behavioral, or psychological action of some other natural incentive” (Lee & Webley, 2006, p. 8).

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**Drug Theory and Gambling**

• Repetitive gambling is driven by a need to stimulate brain reward centers to achieve excitement.
• The unpredictability of gambling and winning elicits arousal that mimics natural rewards in the brain (Ross et al., 2008).
• Gambling is a neurochemically-based addiction with reinforcing value in its own right.
  - Increased activity in right dorsolateral prefrontal cortex (Crockford et al., 2005).
Unanswered Questions and Hypotheses

- Does the value of money or the association with gambling activate reward centers?
  - In literature, the desire to recoup losses rather than wealth accumulation leads to excessive gambling.
  - Withdrawal symptoms are linked to the presence or absence of aversive symptoms NOT to the absence of opportunity to win money.

Study Aims and Hypotheses

- To explore differences in attitudes toward money across levels of gambling problem severity.
- To evaluate the relationship between viewing money as a tool or a drug by levels of problem severity.

H: Will there be differences across groups? Yes
H: Will problem gamblers be more likely to view money as a drug as compared to recreational gamblers? Yes

Findings

- Problem gamblers were over-represented and non-problem gamblers under-represented on the following scales:
  - Obsession (Money Valence): Concern for all aspects of money.
  - Power/Spending: Money as a means of power.
  - Distrust: Suspiciousness and distrust regarding money.
  - Anxiety: Money as a source of anxiety or as protection from anxiety.
  - Power: Money as an indicator of power, status and success.
Findings

Compared to all other groups, problem gamblers were:

- More likely to view money as a symbol of influence and success;
- More interested in the prestige and power money conveys in contrast to the security it affords;
- More anxious and worried about money.

\[ p < .05 \]

Findings

Compared to problem and moderate risk gamblers:

- Non-problem gamblers were higher on the Inadequacy Subscale, which measures insecurity about having enough money.

\[ p < .05 \]

Predictors of Problem Gamblers Compared to Other Groups

<table>
<thead>
<tr>
<th>Variable</th>
<th>Problem vs. Non-Problem</th>
<th>Odds ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obsession/Money Valence</td>
<td>3.93 (1.10, 14.04)</td>
<td></td>
</tr>
<tr>
<td>Anxiety (MAS)</td>
<td>8.06 (2.44, 3.51)</td>
<td></td>
</tr>
<tr>
<td>Power/Spending (Furn.)</td>
<td>6.06 (1.51, 24.3)</td>
<td></td>
</tr>
<tr>
<td>Power (MAS)</td>
<td>5.55 (1.37-22.57)</td>
<td></td>
</tr>
<tr>
<td>Power/spending (Furn.)</td>
<td>11.79 (2.03-68.54)</td>
<td></td>
</tr>
<tr>
<td>Anxiety (MAS)</td>
<td>6.81 (1.43-32.57)</td>
<td></td>
</tr>
</tbody>
</table>
Implications

- Provided **preliminary support** for the Drug Theory of Money in gambling.
- **Problem gamblers** reported significant **preoccupation** (obsession) with money as indicator of **prestige, power, means of acquiring wealth**; **BUT**
- **Problem gamblers** had high levels of **anxiety about money**, both worrying about money and viewing it as a way to reduce anxiety.

Implications

- Provided **limited support** for the Tool Theory of Money.
- **Non-problem gamblers** were more likely to gamble to combat **perceived inadequacy** in providing, though differences in univariate analyses were not sustained in logistic regression results.

Implications

- Suggests problem gamblers are primarily motivated by a **desire to impress** and influence others through the image of wealth and success rather than by a desire for money to purchase goods.
  - **BUT**
  - Need to explore attitudes **prior** to development of gambling problem (precursor or consequence).

Background

- Attempts to identify the specific ‘addictive’ features of electronic gaming machines have yielded largely inconclusive results (Blaszczynski et al., 2005).
- Suggests that the interaction between a gambler’s motivation-related cognitions and the machine, rather than the machine itself, fuels excessive play.

Background

- Problem gamblers are particularly motivated by the desire to win money (Ladouceur, et al., 2002; Neighbors, et al., 2002; Wood, et al., 2004).
- This is partly due to the misconception that gambling is an income-generating activity rather than a form of entertainment (Walker, 1992).
Background

- Machine players with gambling problems adopt a number of erroneous cognitions regarding the probability of winning and the nature of randomness.
- This leads to over-estimating the likelihood of winning and, in turn, to excessive spending (Gaboury & Ladouceur, 1989; Manoso, et al., 2004).
- Some authors have suggested that gamblers be required to gamble with cards limited to pre-set amounts of money (i.e. 'smart' cards) (see e.g., Dickerson & O’Connor, 2006).

Unanswered Questions

- Do problem gamblers differ from other groups in their:
  - Motivations to gamble?
  - Willingness to either set or adhere to pre-session spending limits?
  - Precommitment strategies?

Motivations for Gambling

<table>
<thead>
<tr>
<th></th>
<th>Non-Problem Gamblers</th>
<th>Low-Risk Gamblers</th>
<th>Moderate-Risk Gamblers</th>
<th>Problem Gamblers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fun &amp; Enjoyment</td>
<td>64.5%</td>
<td>72.0%</td>
<td>75.0%</td>
<td>42.1%</td>
</tr>
<tr>
<td>Exciting/Entertaining</td>
<td>1.6%</td>
<td>24.0%</td>
<td>15.0%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Socialize with Others</td>
<td>11.3%</td>
<td>24.0%</td>
<td>10.0%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Earn Income</td>
<td>3.2%</td>
<td>12.0%</td>
<td>5.0%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Escape daily hassles &amp; problems</td>
<td>8.1%</td>
<td>16.0%</td>
<td>15.0%</td>
<td>42.1%</td>
</tr>
</tbody>
</table>
Findings

- Problem gamblers were much more likely than non-problem gamblers to gamble in order to earn income or escape problems.
- Non-gamblers were motivated primarily by fun/enjoyment and/or socialization.


\[ X^2 < .05 \]

Findings

- Problem gamblers were much more reluctant than all other groups to endorse the use of 'smart cards,' despite the fact that they:
  - often lost track of money while gambling; and
  - rarely knew if they were winning or losing.
- Problem gamblers said they would only use a smart card if:
  - cards were refillable;
  - they were either able to access additional funds as needed or
  - allowed to purchase an additional card if they ran out of money and wanted to chase a loss.

\[ X^2 < .05 \]
Implications

- Pre-commitment would have little effect on decreasing gambling expenditures among those who are intent on continued gambling.
- Problem gamblers will likely find a means of obtaining additional cards or seek out venues where refills or other options were available.
- However, future studies should evaluate whether pre-commitment strategies might have a protective effect for non-problem or low-risk gamblers who might otherwise proceed to more serious levels of gambling.

IMPLICATIONS FOR RESPONSIBLE GAMBLING AND INFORMED CHOICE

Elements of Responsible Gambling

- Governments are responsible for providing regulatory control to maximize consumer protection regarding gambling products.
- Industry is responsible for ensuring that gamblers have sufficient, accurate information to make informed choices.
- Individual gamblers are responsible for making optimal choices and minimizing harm based on the information they receive.
Decision-Making Models

Do costs outweigh benefits?

Encourage a sense of personal efficacy? Do you believe you are capable of performing behavior despite obstacles?

Are the positive by-products of discontinuing the behavior significant enough?

What are the attitudes and/or social norms that determine intentions which, in turn, guide behavior?

Models in Health

- Do costs outweigh benefits?
- Encourage a sense of personal efficacy? Do you believe you are capable of performing behavior despite obstacles?
- Are the positive by-products of discontinuing the behavior significant enough?
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Cognitive Models

- Psychological distress results from dysfunctional belief schemas or structures.
- An individual’s interpretation of events determines how s/he will feel & behave.
- Identifying & modifying dysfunctional belief structures will change behaviours & emotions.

(Echeburua et al., 1996; Sylvain, Leduc & Bouchot, 1997; Sharpe, 2002)
Common Dysfunctional Beliefs in Gambling

- **Illusions of control** (Langer, 1975)
- **Superstitious beliefs** (Joukhador, Mccallum & Biazenski, 2003)
- **Biased evaluation** (Gilovich, 1983)
- **Erroneous perceptions of randomness** (Coulombe et al., 1992; Walker, 1992)
- **Gambler’s fallacy** (Laplace, 1951)

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Goals of Informed Choice
Primary Goals of Informed Choice in Gambling

- To provide relevant educational information necessary to objectively evaluate gambling options and modify erroneous cognitions (e.g., not income-generating activity).

Primary Goals of Informed Choice in Gambling

- To detail the benefits of responsible gambling + potential social and personal costs of excessive gambling.
- To provide sufficient guidelines to assist individuals in identifying their current level of responsible gambling.

Primary Goals of Informed Choice in Gambling

- To target specific gambling activities, socio-demographic groups, and stages of change to promote optimal information dissemination.
- To use several mediums for wide dissemination of information.
Relevant Questions

Industry and Marketing Promotion

- What, if any, game-specific information would best contribute to gamblers making better informed choices?
- What is the effect of general industry marketing and promotion? Can this effect be minimized by harm reduction prevention programs?

Promotion of Informed Choice

- What elements of information are necessary for individuals to make healthy and responsible gambling choices?
- What impact, if any, do casino-sponsored responsible gambling policies have on individual gambling choices (i.e. setting limits, avoiding cash machines etc.)?
GUIDELINES FOR PROMOTING INFORMED CHOICE

Universal Gambling-Related Information

- This type of information includes pamphlets, brochures, billboards, ads and other methods of educating the broader public about gambling. 
  - Eliminate marketing targeted to wealth and power images, income generation.
- Targets erroneous beliefs


Providing Universal Gambling-Related Information

- Educate on the nature of gambling as entertainment.
- Dispel myths that gamblers can "beat the house," earn income; explain probability, odds, hit rate, return-to-player etc.
- Provide sufficient information on individual games to promote limit-setting (personal responsibility, limited access to money while gambling).
- Increase awareness of risks associated with excessive gambling.
Gambler-Specific Information

• Tailor educational materials to gamblers from various demographic groups.
• Provide research-based information that targets gamblers by age, gender, ethnicity, and socio-economic factors.

Providing Gambler-Specific Information

• Provide detailed and interactive info on specific games (player return rates, “real” reels versus virtual reels, computer operation of machines)
• Provide promotional materials and resources targeting individuals who gamble for non-entertainment purposes (e.g., due to loss, loneliness, social isolation etc.)

Providing Gambler-Specific Information

• Offer educational materials identifying erroneous cognitions and countering them with information (e.g. illusion of control, gambler’s fallacy etc.)
• Develop user-friendly screens to promote identification of the signs and symptoms of problem gambling.
• Provide concise, repetitive messages to heighten self-awareness regarding expenditure and patterns of play.
Problem Gambler-Specific Information

- Target those who are already experiencing gambling-related problems.

Blaszczynski, Ladouceur, Nower & Shaffer, 2008

Providing Problem Gambler-Specific Information

- Develop assessment guidelines to determine the “health” of one’s gambling behavior and position on the spectrum.
- Provide resources and referrals for counseling, hotline, self-exclusion and self-help services.
- Provide cost-related information to educate problem gamblers on the financial and legal risks of excessive gambling.
- Develop strategies for adopting gambling limits and increasing responsible gambling behavior.


