A LONGITUDINAL STUDY OF ALBERTA ELECTRONIC MACHINE GAMBLERS

By

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Outline of the LLLP

What is the LLLP?

--Launched in 2006 the LLLP is a five age cohort, four data collection wave longitudinal study that examines the incidence and determinants of gambling and problem gambling. The study was guided by four broad research questions:

1. What are the normal patterns of continuity and discontinuity in gambling and problem gambling behavior?
2. What bio-psychological variables and behavior patterns are most predictive of current and future responsible and problem gambling?
3. Are there distinct sub-groupings of gamblers and problem gamblers with different trajectories and predictors?
4. What etiological model of problem gambling is best supported by the longitudinal findings?
Study Design

- 5 age cohorts (13-15, 18-20, 23-25, 43-45 and 63-65)
- Data collection done by 1) an initial telephone screening procedure; 2) a face-to-face in-depth interview; and 3) computer-based and internet surveys. Four regions of the province sampled (Edmonton, Calgary, Lethbridge and Grand Prairie areas).
- Sample size: wave 1 = 1,808, wave 2 = 1,495, wave 3 = 1,316 and wave 4 = 1,343.
- Multiple measures used to assess: 1) gambling behavior; 2) mental health/personality/coping; 3) general health; 4) substance use/risky behavior; 5) family relationships; 6) societal factors; 7) cognitive factors; 8) activity participation; and 9) demographics.
The EGM Study

Context
- Illegal in Canada until 1985
- VLTs Introduced in Alberta bars and lounges in 1992 and capped at 6,000 in 1996.
- Slots allowed at Alberta casinos and racetracks in 1996 but no cap.
- At present there are 5,991 VLTs and 13,505 slots in the province.
- EGMs produced a net profit of $1.37 billion in 2011-12 ($500 million VLTs and $857.4 million slots) which accounted for 84% of provincial gambling revenue.
- A remarkably high % of this revenue comes from at risk gamblers VLTs 77% and slots 72% (Williams et al., 2011).
EGMs reputed to be the most hazardous gambling format.
--Designed that way (Dow Schull, 2012).
--Impaired control “a natural consequence of regular high intensity EGM play” (Dickerson et al., 2003).
--Addictive potency enhanced by—easy accessibility, structural characteristics, capacity to deliver players into the “zone” (Harrigan, 2008; Parke & Griffiths, 2006; Livingstone, 2005; Dow Schull, 2012).
--Link between no. of EGMs per capita and PG prevalence rates.
--Disproportionate % of revenues contributed by at risk players.
--Dow Scull contends that EGM addiction occurs through the interaction of a vulnerable gambler with a machine designed to addict, in a soothing, ambient environment abetted by player loyalty programs and govt’s. hunger for revenues.
Research Aims

- Does EGM play pose a greater risk for problem gambling than other gambling formats?
- Does frequency of EGM play engender an elevated risk for problem gambling compared with occasional EGM play?
- What is the association between frequency of EGM play and problem gambling, health problems, and gambling fallacies compared with non-gamblers and those who gamble but not on EGMs?
Gambling Categories
(four adult cohorts)

- Non-gambler
- Gamble but not in the past year
- Gambled in past year but not on EGMs
- Low frequency EGM player [less than once a month and $20 or less spent per session]
- Moderate frequency EGM player [about once per month and $21 to $80 spent per session]
- High Frequency EGM player [2 to 3 times per month or greater and $81 to max spent per session]
Results

Key Differentiating Factors

1. PGSI score
2. Remember a big win or a loss
3. Smoking behavior
4. Median amount of largest loss
5. Age
6. Gender
7. Location
Factors Expected to Differentiate But Did Not

1. Gambling fallacies score
2. Preference of who they gambled with
3. General health
4. Gambling motivations
# Table 1
PGSI Scores

<table>
<thead>
<tr>
<th>Problem Gambler (5plus)</th>
<th>NEGM</th>
<th>EGM Low</th>
<th>EGM Mod</th>
<th>EGM High</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>1.5%</td>
<td>3.7%</td>
<td>8.0%</td>
<td>26.8%</td>
</tr>
<tr>
<td>n=687</td>
<td></td>
<td>n=187</td>
<td>n=88</td>
<td>N=97</td>
</tr>
<tr>
<td>W2</td>
<td>2.5%</td>
<td>3.5%</td>
<td>5.4%</td>
<td>18.2%</td>
</tr>
<tr>
<td>n=554</td>
<td></td>
<td>n=144</td>
<td>n=111</td>
<td>n=121</td>
</tr>
<tr>
<td>W3</td>
<td>2.7%</td>
<td>2.7%</td>
<td>10.3%</td>
<td>18.3%</td>
</tr>
<tr>
<td>n=488</td>
<td></td>
<td>n=152</td>
<td>n=71</td>
<td>n=72</td>
</tr>
<tr>
<td>W4</td>
<td>2.3%</td>
<td>0.7%</td>
<td>8.1%</td>
<td>19.5%</td>
</tr>
<tr>
<td>n=533</td>
<td></td>
<td>n=139</td>
<td>n=67</td>
<td>n=83</td>
</tr>
</tbody>
</table>
Table 2
Median of Largest Amount Spent in One Session
(Average over 4 waves)

<table>
<thead>
<tr>
<th></th>
<th>NEGM</th>
<th>EGM Low</th>
<th>EGM Mod</th>
<th>EGM High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Spent</td>
<td>$130</td>
<td>$75</td>
<td>$160</td>
<td>$360</td>
</tr>
</tbody>
</table>
## Table 3
Smoking Behaviour (Average over 4 waves)

<table>
<thead>
<tr>
<th></th>
<th>NGS</th>
<th>GNPY</th>
<th>NEGM</th>
<th>EGM Low</th>
<th>EGM Mod</th>
<th>EGM High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily/occasional</td>
<td>10%</td>
<td>15%</td>
<td>22%</td>
<td>28%</td>
<td>33%</td>
<td>47%</td>
</tr>
<tr>
<td>Former/Never</td>
<td>90%</td>
<td>85%</td>
<td>78%</td>
<td>72%</td>
<td>67%</td>
<td>53%</td>
</tr>
</tbody>
</table>
Age Considerations

- High and moderate EGM play is most pronounced in the 43 – 45 age cohort.
- The 63 – 65 age cohort is the least likely to engage in EGM play.
- High EGM play peaks with the 43 – 45 age cohort then drops off significantly for the next age cohort.
Gender Considerations

- Females are by a 2 to 1 margin more likely to be non-gamblers
- Females are somewhat more likely to be EGM gamblers (this applies to all EGM play categories through all 4 waves)
Concluding Thoughts

- Frequency of EGM play is associated with problem gambling.
- Gambling fallacies are prevalent across all categories, not just problem gamblers.
- Being female and middle-aged are related to high frequency EGM play.