Effectiveness of Brief Interventions for Problem Gambling: a randomized controlled trial

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Introduction

- Problem gambling a significant public health and social issue
- Significant investment in publicly funded intervention services (Helpline, face-to-face counselling)
- No formal evaluation of effectiveness, in general or with specific groups
Problem Gambling Interventions

- Weak evidence base internationally
- Efficacy, effectiveness and outcome studies limited
- Research on pharmacological and psychological therapies
- Psychological therapies – 3 forms ‘possibly efficacious’
- One a brief intervention (motivational interview + self-help workbook)
- None demonstrated efficacy in clinical/community settings (effectiveness)
The New Zealand Short Interventions RCT

Objective
- Inform policy and practice, leading to better outcomes for problem gamblers and reduction in gambling harms

Main Aims
- Evaluate effectiveness of a well developed and documented brief intervention and variants
- Describe ‘standard care’ and evaluate relative to defined brief intervention assessed previously in a RCT
- Complete first module of multi-site international RCT

Funded by the Ministry of Health
Partnerhip – GARC and Gambling Helpline

PI – Prof Max Abbott

Named Investigators:
- Dr Maria Bellringer
- Prof David Hodgins
- Prof Philip Schluter
- Prof Valery Feigin
- Dr Sean Sullivan (staff training/treatment integrity)
Study

- Breaks new ground – moves from efficacy testing with volunteers to assessment of effectiveness with help-seeking problem gamblers
- Evaluates 3 well-defined models relative to ‘standard’ care (counselling with options)
- Enables determination of effectiveness for various client groups
Design

- RCT of 3 interventions and ‘usual’ care embedded in current operations of National Helpline
  - Motivational interview (MI)
  - MI + self-instructional workbook (WB)
  - MI + WB + follow-up ‘booster’ sessions (BS)
  - ‘Standard care’ (‘counselling and options’ and post-Helpline contact) (SC)
- Team of Helpline counsellors trained to deliver all four interventions
Participants

- 489 consenting Helpline callers aged 18 and over seeking help for own gambling (+110 per ‘experimental’ group; more in SC)
- Exclusion – acute psychotic signs/symptoms; serious risk to self/others
Baseline and Outcome Assessments (1 week, 3, 6, 12 months)

**Self-report**
- Days gambled, money lost, treatment goal success
- Control over gambling, gambling impacts, problem gambling severity (Lie-Bet and PGSI)
- Psychiatric co-morbidity
- Tobacco/drug use
- Psychological distress

**Collateral assessments**
- Gambling past month; changes observed; confidence in accuracy
Major challenges

- Recruitment
- Intervention delivery and integrity
- Follow-up assessment
- Staff changes
- Christchurch earthquake
- Helpline liquidation
Pilot Study mid-August to mid-October 2009

- 62 invited, 42 accepted (68%, 3-7 per week)
- Good spread across groups by problem gambling severity, gender, age
- No significant difference between groups re. intervention duration (M 37-47 minutes)
- Treatment integrity pre and during trial satisfactory (blind ratings of audiotapes)
Study

- Study proper commenced November 2009
- Most Helpline staff trained, additional line added and recruitment 7 days per week
- Recruitment for RCT concluded March 2011
1298 Calls

462 Randomized

836 Excluded: 58 in crisis, 41 language, 292 ineligible, 445 declined

116 Standard Treatment
- FU 3 – 86%
- FU 6 – 79%
- Fu 12- 67%

112 MI
- FU 3 – 77%
- FU 6 – 70%
- Fu 12- 60%

118 MI + workbook
- FU 3 – 83%
- FU 6 – 75%
- Fu 12- 66%

116 MI + Workbook + Boosters
- FU 3 – 75%
- FU 6 – 71%
- Fu 12- 63%
Motivational Interview = Motivational Nudge
30-35 minutes

1. Elicit client concerns
   - normative feedback (PGSI)
2. Explore ambivalence
3. Promote self-efficacy
4. Suggest strategies in workbook
## Adherence Assessment

<table>
<thead>
<tr>
<th>MI</th>
<th>Standard Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reflective listening</td>
<td>• Soft/hard referral</td>
</tr>
<tr>
<td>• Potential benefits of not gambling</td>
<td>• Information regarding other helplines, websites</td>
</tr>
<tr>
<td>• Affirmation</td>
<td>• Offer info pack</td>
</tr>
<tr>
<td>• Offer feedback PGSI score</td>
<td>• Discuss strategies for controlling access to money</td>
</tr>
<tr>
<td>• Summarize concerns, motivation</td>
<td>• Discusses urge strategies</td>
</tr>
<tr>
<td>• Ask for commitment</td>
<td>• Discuss keeping busy</td>
</tr>
<tr>
<td>• Connect with workbook</td>
<td>• Advise to set saving goal</td>
</tr>
<tr>
<td>• Ask about other change attempts</td>
<td>• Other advice</td>
</tr>
<tr>
<td>• Reasons for contacting helpline</td>
<td>• Reasons for contacting helpline</td>
</tr>
<tr>
<td>• Financial concerns</td>
<td>• Financial concerns</td>
</tr>
</tbody>
</table>

- MI: Motivational Interviewing
- Standard Treatment: Standard treatment protocol
- Shared elements
  - Reasons for contacting helpline
  - Financial concerns
- Inter rater reliability – ICC = .97
Therapists can deliver MI...
Who called?

- Men 53%
- Age Median 38 age 18 to 79 years
- Education
  - No qualifications = 22%
  - Secondary School = 34%
  - Professional/Tertiary = 22%
- Employment
  - Full-time = 46%
  - Unemployed = 14%
- Primary gambling type: 92% Pub or club gaming machines
- Length of problem 6.8 years
- Last gamble 3.5 days
- Goal: Quit 80%
- Predicted success in six months: 8.2/10
- Predicted success 12 months: 8.9/10
- Distressed (Kessler 10): 84%
- Alcohol problem in last year: 63%
Primary hypotheses

- That all groups would show a significant reduction in problem gambling
- That the MI groups would show similar improvements to the TAU group
- That the MI+W group and the MI+W+B group would show greater improvements than the MI and TAU groups
- That the M+W+B group would show greater improvements than the other groups at the 12-month follow-up
Results

- Achieved power 70%
- No consistent moderators, predictors, covariates in terms of:
  - Sex
  - Ethnicity
  - Type of Gambling
Median Money Lost per day
Percent quit or improved

<table>
<thead>
<tr>
<th></th>
<th>3 Months</th>
<th>6 Months</th>
<th>12 Months</th>
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<tbody>
<tr>
<td>ST</td>
<td>83 (82)</td>
<td>72 (73)</td>
<td>87 (75)</td>
</tr>
<tr>
<td>MI</td>
<td>87</td>
<td>87</td>
<td>85</td>
</tr>
<tr>
<td>MI+W</td>
<td>76</td>
<td>73</td>
<td>75</td>
</tr>
<tr>
<td>MI+W+B</td>
<td></td>
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</tbody>
</table>
Median PGSI score, past 3-month time frame

- TAU
- MI
- MI+W
- MI+W+B

Baseline 3 months 6 months 12 months
PGSI score, 3-month time frame
0 5 10 15 20

GAMBLING & ADDICTIONS RESEARCH CENTRE
NATIONAL INSTITUTE FOR PUBLIC HEALTH & MENTAL HEALTH RESEARCH
Control over gambling behaviour
Median Kessler-10 score

- Baseline: 32.0
- 3 months: 28.5
- 6 months: 17.0
- 12 months: 11.5

Legend:
- TAU
- MI
- MI+W
- MI+W+B
<table>
<thead>
<tr>
<th>Goal met after 12 months</th>
<th>100%</th>
<th>90%</th>
<th>80%</th>
<th>70%</th>
<th>60%</th>
<th>50%</th>
<th>40%</th>
<th>30%</th>
<th>20%</th>
<th>10%</th>
<th>0%</th>
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<tbody>
<tr>
<td>ST</td>
<td>(28)</td>
<td></td>
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<tr>
<td>MI</td>
<td>(35)</td>
<td>(15)</td>
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<tr>
<td>MI+W</td>
<td>(36)</td>
<td>(31)</td>
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<tr>
<td>MI+W+B</td>
<td>(27)</td>
<td>(22)</td>
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- **Completely**: Blue
- **Mostly**: Orange
- **Partly**: Red
- **Not at all**: Blue
Sought Treatment?

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Previously</th>
<th>Baseline</th>
<th>3 Months</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST</td>
<td>34</td>
<td>17</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>MI</td>
<td>41</td>
<td>20</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td>MI+W</td>
<td>32</td>
<td>19</td>
<td>20</td>
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</tr>
<tr>
<td>MI+W+B</td>
<td>31</td>
<td>16</td>
<td>24</td>
<td>19</td>
</tr>
</tbody>
</table>
Main findings

- Participants in all groups – sustained statistically and clinically significant improvements on primary outcome measures
- Substantial improvements in problem gambling severity, self-rated control over gambling, impacts on work, social, family and home life, health, psychological distress, depression and quality of life
- Little or no change re. alcohol misuse and smoking
- Hypotheses 1 and 2 corroborated
- No additional improvements with addition of workbook or booster sessions
But some subgroup differences – generally MI+W+B participants did better than MI participants (on some measures), e.g. those with

- low belief in achieving treatment goal
- controlled gambling goal (also vs TAU)
- more severe gambling problems (also vs TAU)
- higher psychological distress
- alcohol misuse
Limitations

- Design didn’t allow assessment of therapy components
- Understanding of why similar outcomes achieved across interventions
- Understanding of why some subgroups appear to do better with interventions of different intensity/duration
Future

- 36 month follow up (underway)
- Extension to other jurisdictions
- Internet/mobile delivery
Parting thoughts ...

- Efficacy of brief treatments is supported
  - Do they hasten a natural process?
- Challenge is to position them to both increase/hasten self-recovery and to increase treatment-seeking
Increasing success

**Actions**

- Observation
- Attempts to control
- Attempts to cut back
- Seek self-help information
- Seek treatment

**Public awareness**

- Early signs
- Basic change strategies
- Nipping it in the bud

**Online Support**

- Information and motivation

**Brief Treatment**

- Motivation, basic change strategies, treatment linking

**Treatment**