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

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Professor Max Abbott
max.abbott@aut.ac.nz
PVC and Dean, Faculty of Health & Environmental Sciences, AUT University
Co-director, National Institute for Public Health & Mental Health Research
Director, Gambling & Addictions Research Centre
Auckland University of Technology
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
Study Team

- Partnership – 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>
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<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>
- 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 Days Gambled per month
Median Money Lost per day

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Percent quit or improved

<table>
<thead>
<tr>
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<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</td>
</tr>
<tr>
<td>MI</td>
<td>87</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>MI+W</td>
<td>87</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td>MI+W+B</td>
<td>87(76)</td>
<td>87(75)</td>
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Median PGSI score, past 3-month time frame

![Graph showing median PGSI scores across different time frames for TAU, MI, MI+W, and MI+W+B interventions.](image-url)
Control over gambling behaviour

Graph showing the control over gambling behaviour over time for different interventions:
- TAU
- MI
- MI+W
- MI+W+B

Key:
- Baseline: 3.0
- 3 months: 7.5
- 6 months: 8.0
- 12 months: 7.5

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Self-rated Goals Meet?

![Bar chart showing the percentage of goals met after 12 months for different treatments: ST, MI, MI+W, MI+W+B. The chart indicates the distribution of responses from 'Completely' to 'Not at all' for each treatment group.](chart.png)

- **ST**: 28% 'Completely', 15% 'Mostly', 38% 'Partly', 23% 'Not at all'
- **MI**: 35% 'Completely', 23% 'Mostly', 36% 'Partly', 26% 'Not at all'
- **MI+W**: 36% 'Completely', 31% 'Mostly', 21% 'Partly', 13% 'Not at all'
- **MI+W+B**: 35% 'Completely', 22% 'Mostly', 31% 'Partly', 23% 'Not at all'

Legend:
- **Blue**: Completely
- **Orange**: Mostly
- **Red**: Partly
- **Green**: Not at all
Sought Treatment?

The graph illustrates the percentage of people who sought treatment for gambling and addictions. The categories are:

- Previously
- Baseline
- 3 Months
- 12 Months

The treatments are differentiated by color:
- ST
- MI
- MI+W
- MI+W+B

The data points are as follows:

- Previously:
  - ST: 34%
  - MI: 32%
  - MI+W: 41%
  - MI+W+B: 31%

- Baseline:
  - ST: 17%
  - MI: 20%
  - MI+W: 19%
  - MI+W+B: 16%

- 3 Months:
  - ST: 28%
  - MI: 25%
  - MI+W: 20%
  - MI+W+B: 24%

- 12 Months:
  - ST: 15%
  - MI: 26%
  - MI+W: 17%
  - MI+W+B: 19%
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**