RELAPSE PREVENTION: AN EVIDENCE-BASED REVIEW

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Alberta = 4 million people

- 16 casinos
  - 7,000 slots, 350 tables
- 47 race tracks
- 6,000 VLTs
- 2100 Ticket lottery sites

“You seem familiar, yet somehow strange — are you, by any chance, Canadian?”
Outline

- What we know about relapse in problem gambling
- What we know about preventing relapse
- Staying on Track booklets – Are they helpful?
## Analysis of Relapse Situations

(Cummings et al., 1980)

<table>
<thead>
<tr>
<th>Situation</th>
<th>Alcoholics (N=70)</th>
<th>Smokers (N=64)</th>
<th>Gamblers (N=19)</th>
<th>Uncontrolled Eaters (N=29)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intrapersonal Determinants</strong></td>
<td>61%</td>
<td>50%</td>
<td>79%</td>
<td>46%</td>
</tr>
<tr>
<td>Negative Emotional States</td>
<td>38%</td>
<td>37%</td>
<td>47%</td>
<td>33%</td>
</tr>
<tr>
<td>Negative Physical States</td>
<td>3%</td>
<td>2%</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Positive Emotional States</td>
<td>--</td>
<td>6%</td>
<td>--</td>
<td>3%</td>
</tr>
<tr>
<td>Testing Personal Control</td>
<td>9%</td>
<td>--</td>
<td>16%</td>
<td>--</td>
</tr>
<tr>
<td>Urges and Temptations</td>
<td>11%</td>
<td>5%</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Interpersonal Determinants</strong></td>
<td>39%</td>
<td>50%</td>
<td>21%</td>
<td>52%</td>
</tr>
<tr>
<td>Interpersonal Conflict</td>
<td>18%</td>
<td>15%</td>
<td>16%</td>
<td>14%</td>
</tr>
<tr>
<td>Social Pressure</td>
<td>18%</td>
<td>32%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Positive Emotional States</td>
<td>3%</td>
<td>3%</td>
<td>--</td>
<td>28%</td>
</tr>
</tbody>
</table>
Figure 20-4. Cognitive-behavioral model of the relapse process.
Figure 20-6. Relapse prevention: global life-style strategies.
Relapse Prevention Interventions
For Abstinence Initiation

- **High-risk situation**
  - Identify High-risk situations
- **No Adaptive Coping Response**
- **Decreased self-efficacy**
- **Positive Outcome Expectancies**
  - Prepare for lapse
- **Skills Training**
Relapse Prevention Interventions
For Relapse Management

Initial use of substance (lapse) → Abstinence Violation Effect → Return to Pretreatment Level of Use (Relapse)

**General Strategies**
lapses are:
- mistakes
- unique events
- attributable to external, specific controllable factors

**Specific Strategies**
- Stop, look, listen
- Stay calm
- Renew your commitment
- Review high risk situations
- Make immediate plan for recovery
- Use social support

**Motivational Enhancement**
Help client see value of returning to treatment

**Harm Reduction**
Help client take steps in the right direction
New research on relapse

- Muller et al (2017) – follow-up after inpatient treatment (N = 270)
  - Pretreatment, post-treatment, 12 months
- Abstinence-focused multimodal treatment in 8 centres in Germany
- Mean duration = 77 days (SD = 31)
- Treatment dropout - 32%
- 12 month follow-up - 42%
- Major findings-
N = 270 treatment completers

- 95% men
- Employed - 46%
- Age M = 40 (SD = 12) 17-63 years
- Slot machines - 79%
- Sports betting - 6%
- Casino games - 4%
- Comorbid disorders - 36%
Outcomes at one year

- Abstinent- 42%
- Gambling- non-problem- 29%
- Relapsed- 29%

- No demographic differences among the groups.
- No difference in gambling history or treatment duration.
- Relapse group had higher baseline SOGS scores.
- No other predictors of outcome
Changes in Big Five personality after treatment

- No baseline differences
- Abstinent group
  - Reduced neuroticism, increased extraversion and conscientiousness
- Asymptomatic group
  - Decreased neuroticism
- Relapsed group
  - No change
Aragay at al. (2015)

- follow-up after outpatient CBT in Spain (N = 566)
  - Pretreatment, post-treatment, six months
  - Manualized MI + CBT – six months – weekly or bi-weekly, six months monthly (flexible according to patient need)
  - Treatment dropout = 30% (younger, single, high novelty-seeking)
  - Lapse = isolated episode of gambling with mild negative consequences
  - Relapse – 2 plus or one episode with loss of control
  - Study looked at predictors of relapse
N = 566

- 93% men
- Employed- 51%
- Age M = 44 (SD = 13)
- Slot machines – 90%
- Bingo - 2%
- Casino games- 2%
- Online- 2%
- Comorbid disorders- 45%
■ Relapses
  - 12% one
  - 3% two or more

■ Predictors of relapse during treatment
  - Single
  - Less expenditure pretreatment
  - High “harm avoidance”

■ Predictors of relapse during follow-up
  - Single
  - Less expenditure pre-treatment
  - Still gambling at intake
Risk of relapse decreases slowly over time.
Smith at al. (2015)

- Follow-up after outpatient treatment or support group (N = 158)
  - South Australia services.
  - Initial, 3 months, 6 months, 12 months (some participants)
  - 6 month follow-up 63%
  - 85% men
  - Employed- 58%
  - Age M = 44 (SD = 13)

- Potential predictors: mental health, urges, cognitions, social support, social and work functioning, sensation-seeking traits, demographics.
Continuing to gamble problematically vs Remission (50%) - higher gambling urges, poorer work and social functioning

Relapse vs. remission (21%) - higher urges

Conclusions:
Surprisingly few predictors of relapse.

Gambling-related urges is that most practical and is consistent with earlier research.
Critical Dimensions of Relapse Study: Design

- Recruited 101 people who recently quit gambling
- Media recruitment versus treatment sample
- No gambling for 2 weeks
- South Oaks Gambling Screen (SOGS) > 4
- Interviewed face to face initially, 3, 6 and 12 months, 5 years
Demographics (N=101)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>% Female</td>
<td>36</td>
</tr>
<tr>
<td>% Married or Cohabiting</td>
<td>29</td>
</tr>
<tr>
<td>% Never Married</td>
<td>38</td>
</tr>
<tr>
<td>% Some post secondary education</td>
<td>66</td>
</tr>
<tr>
<td>% Full-time employment</td>
<td>55</td>
</tr>
<tr>
<td>% Unemployed</td>
<td>22</td>
</tr>
<tr>
<td>% Current smoker</td>
<td>76</td>
</tr>
<tr>
<td>Age Mean</td>
<td>39 years</td>
</tr>
<tr>
<td>Range</td>
<td>19-77</td>
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</table>
## Gambling Involvement

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of gambling problem</td>
<td>Mean 34</td>
</tr>
<tr>
<td>South Oaks Gambling Screen</td>
<td>Mean 12.2</td>
</tr>
<tr>
<td>% DSM-IV Pathological Gambling</td>
<td>89</td>
</tr>
<tr>
<td>% Previous quit attempt</td>
<td>75</td>
</tr>
<tr>
<td>% Past gambling treatment</td>
<td>50</td>
</tr>
<tr>
<td>% Current gambling treatment</td>
<td>25</td>
</tr>
<tr>
<td>Mean days abstinent at initial</td>
<td>19</td>
</tr>
</tbody>
</table>

### Major problem type of gambling:

- % Video lottery terminals: 49
- % Mixed games: 34
- % Casinos: 12
- % Bingo: 3
- % Other: 3
Demographics - Comorbidity

Past Mood Disorders reported by 60% of participants

- Depression
- Bipolar 1
- Bipolar 2
- Dysthymia
- Double depression
- None

- Lifetime alcohol problems reported by 72%
- Current alcohol problems reported by 7%
- Lifetime drug problems reported by 49%
- Current drug problems reported by 7%

Current mood reported by 20% (all major depressive disorders)
Comorbidity: Suicidal Ideation

- **Suicidal ideation**
  
  - ever? 71%
  - 7 days in a row? 40%
  - plan? 53%

- **Suicide attempt?** 33%
  - required medical help in 62% of attempts

- **Attempt related to gambling?**
  - 21% of those attempting or 7% of sample
Suicide -

- Individuals who become suicidal related to gambling problems have typically had previous suicidal experiences.

Hodgins, Mansley, & Thygesen, 2006
Goals and Confidence

Goal
Quit all forms of gambling 33%
Quit problem type of gambling 67%

Confidence to achieve goal Scale 1-10 (10 most confident)
in the next week M=8
in the next month M=7
in the next year M=6

Follow up rates
3 months - 83% 6 months - 80% 12 months -79%
5 yrs – 55%
Relapse - resumption of gambling after a period of 2 weeks

Over the entire follow up period:
6% remained completely abstinent
37% were abstinent 2/3 of the time
17% were abstinent 1/2 of the time
29% gambled 2/3 of the time
7% continued gambling
### Monthly Gambling Days Before & During the Follow-up Year

<table>
<thead>
<tr>
<th>Days Gambled</th>
<th>Before</th>
<th>During</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0%</td>
<td>19%</td>
</tr>
<tr>
<td>1</td>
<td>2%</td>
<td>24%</td>
</tr>
<tr>
<td>2-7</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>8 or more</td>
<td>65%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Gambling Outcome: Is the glass half full or half empty?

- Relapse rates are very high
  - 94% relapsed
  - almost half gambled most of the year
- Overall general improvement within the sample
  - 8+ days per month reduced from 65% to 14% of people
Assessment of Relapse

- Open-ended interview audiotaped
  - based on Marlatt’s interview
  - extensive description of context, thoughts, feelings, circumstances
  - mood ratings before and during
  - consequences
  - reasons and strategies for terminating
Relapse Rates and Patterns

- Minor 29%  Major 71%
- Mean was 40 days with 12 days of gambling
  - $368. Loss
  - Range loss of $3,000. to win of $4,000.
Characterization of Relapses

Morning 12%
Noon 21%
Early afternoon 15%
Late afternoon/early evening 21%
Late evening (after 10pm) 31%

Weekday 50%
Weekend (after noon on Friday) 50%

Alone 67%
With friends/family 33%
Characterization of Relapses

Engaged in task prior to relapse 49%
No task engagement 51%

Dominant Form of Gambling:
VLT’s 57%
Casinos 25%
Scratch tickets 7%
Bingo 7%
Sports select 2%
Slots 2%
### Main Reasons for Relapses

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thought I could win</td>
<td>20%</td>
</tr>
<tr>
<td>Boredom/killing time</td>
<td>18%</td>
</tr>
<tr>
<td>Giving into urges/habit/opportunity</td>
<td>15%</td>
</tr>
<tr>
<td>Dealing with negative situations/emotions</td>
<td>15%</td>
</tr>
<tr>
<td>Make money</td>
<td>10%</td>
</tr>
<tr>
<td>Socializing/fitting in</td>
<td>10%</td>
</tr>
<tr>
<td>Seeking excitement/ enjoyment</td>
<td>5%</td>
</tr>
<tr>
<td>Giving up</td>
<td>3%</td>
</tr>
<tr>
<td>Control issues/testing</td>
<td>2%</td>
</tr>
<tr>
<td>Access to money</td>
<td>2%</td>
</tr>
</tbody>
</table>
## Characterization of Relapses

### Emotional State Prior to Gambling

<table>
<thead>
<tr>
<th>Emotional State</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thinking about finances</td>
<td>77%</td>
</tr>
<tr>
<td>Frustrated</td>
<td>51%</td>
</tr>
<tr>
<td>Happy</td>
<td>49%</td>
</tr>
<tr>
<td>Bored</td>
<td>46%</td>
</tr>
<tr>
<td>Active</td>
<td>45%</td>
</tr>
<tr>
<td>Tired</td>
<td>42%</td>
</tr>
<tr>
<td>Sad</td>
<td>36%</td>
</tr>
<tr>
<td>Relaxed</td>
<td>36%</td>
</tr>
<tr>
<td>Quiet</td>
<td>35%</td>
</tr>
<tr>
<td>Irritable</td>
<td>34%</td>
</tr>
<tr>
<td>Lonely</td>
<td>33%</td>
</tr>
<tr>
<td>Angry</td>
<td>29%</td>
</tr>
<tr>
<td>Nervous</td>
<td>29%</td>
</tr>
<tr>
<td>Peppy</td>
<td>19%</td>
</tr>
</tbody>
</table>
Characterization of Relapses

Extreme Consequences
(overall 54% had one)

- Family Life: 16%
- Social Life: 14%
- Work Life: 12%
- Financial Situation: 51%
Major Conclusions

- Relapse rates were extremely high (94%).
- Relapses were most likely to occur during late evening (and least likely to occur in the morning), on the weekend and when the individual was alone.
- Positive and negative moods were equally likely to precede gambling.
- Most relapses were major and half had an extremely negative consequence.

*Hodgins & el-Guebaly, 2004*
Do Comorbid Disorders Predict Gambling Outcome?

- Logistic Regression – stable outcome yes or no
  - Backwards likelihood ratio method
- Cox Regression – time to stable outcome
- Wide range of demographic, gambling and comorbidity variables

Hodgins, Peden & Cassidy, 2005
Do Comorbid Disorders Predict Gambling Outcome?

- Three months abstinence ($\chi^2(1)=3.9, p<.05$)
  
  - Participants with no history of drug use disorder 2.5 times more likely to achieve abstinence (OR = 2.6)
Do Comorbid Disorders Predict Gambling Outcome?

- 12 months abstinence \( (\chi^2(1) = 6.8, p < .01) \)
  - Individuals *involved in gambling treatment* were 5 times more likely to achieve abstinence \( (OR=5.5) \)
  - 30% of individuals with a history of treatment versus 8%
Comorbid Substance and Time to Stable Abstinence (3 mos) - 1

Lifetime Mood
OR = 1.8
Comorbid Substance and Time to Stable Abstinence (3 mos) - 2

South Oaks Gambling Screen

1.11x more likely with each 1 unit increase in SOGS
Comorbid Substance and Time to Stable Abstinence (12 mos)

Treatment or GA Involvement

$OR=4.6, \ p<.02$
Major Conclusions

- Relapse rates were extremely high (96%)
- Comorbidity rates were high – many former drinkers
- Comorbidity more predictive of short term periods of abstinence...
Major Conclusions

- Stable abstinence from gambling for a 3 month period was less likely in participants with drug use disorders (2.5x) and
- Occurred later for those with a past mood disorder.
- Treatment implications?
Major Conclusions

- Only treatment predicted longer periods of abstinence – value of aftercare.
- Those with more severe gambling problems achieved abstinence earlier – Does severity of problem enhance motivation? In particular for abstinence?
- Modest follow-up rate.
- Naturalistic sample.
Role of Treatment/support in outcome

- 63% more likely to achieve stable abstinence
  - 25/101 (8 in more than one)
  - Individual 60%
  - GA 44%
  - Group 24%
  - Residential 8%
What can we do for the 75% who don’t attend treatment?

- Smoking Cessation Study (Brandon et al., 2000)
  - Minimal interventions for smokers who quit on their own
  - Hotline and mailings of RP booklets
  - Hotline (verification call, call if no contact for 3 months) 20% used
  - 12% vs. 35% smoking at 12 months
  - Cost $21. per person, $126. Per abstinent person
Follow-up Study

- Preventing Relapse in Gamblers who have Quit
  - 1 versus 8 relapse prevention booklets
  - No no-intervention control
  - media recruitment
  - one-year follow-up
  - Hodgins et al., 2007
Staying on Track

A guide to remaining gambling free

Over View

Brought to you by the Addiction Centre and the University of Calgary.
Funded by the Alberta Gaming Research Institute.
Staying on Track Overview
Booklet

Nine tips in nine pages

- Identify triggers
- Prepare a budget
- Limit access to Money
- Develop ways to deal with urges
- Challenge your thinking that allows you to gamble
- Get more balance in your life
- Deal with problems of depression
- Deal with substance abuse problems
- Get back on the wagon if you slip

- Seven exercises
- Encouraged to save booklet and review
Staying on Track: Avoiding a Relapse

- Reviews the most frequent triggers and gives examples of people’s stories
  - Dealing with negative situations or emotions
  - Seeking enjoyment and excitement
  - The desire to make money
  - Combating boredom

- Maintenance factors and plan
EXERCISE

List any leisure activities you would like to do more of or try for the first time.

EXAMPLE

I want to start bowling again on Thursday evenings.

A Healthy Lifestyle is a matter of balancing your physical health, your emotional well-being, the relationships you have, and your leisure life.
Pleasant Activities List

The following list was modified from a Pleasant Events List, which was produced by asking people what they do for fun. Read through the list and check off all activities that may help you balance your lifestyle.

- Being out in the country.
- Wearing nice or new clothes.
- Talking about sports.
- Meeting someone new.
- Playing ball.
- Planning trips or vacations.
- Buying things for self or someone you care about.
- Going to the beach.
- Doing art work.
- Rock climbing.
- Reading the Bible.
- Playing golf.
- Decorating my room or house.
- Going to a sports event.
- Reading a “how to do it” book or article.
- Reading stories, novels, poems or plays.
- Watching TV.
- Talking to myself or a friend.
- Camping.
- Working in politics.
- Working on machines.
- Thinking about something good in the future.
- Completing a hard task.
- Laughing.
- Solving a problem, puzzle, cross-word.
- Being at weddings, baptisms, confirmations.
- Having lunch with friends.
- Playing tennis.
- Driving long distances.
- Woodworking, carpentry.
- Writing stories, novels, poetry.
- Speaking in a foreign language and learning.
- Going to service, civic, or social club meetings.
- Going to a business meeting or a convention.
- Being in a sporty car.
- Playing in a band.
- Making soup.
- Combing, brushing or washing my hair.
- Acting.
- Taking a nap.
- Canning, freezing, making preserves, etc.
- Solving a personal problem.
- Taking a bath or shower.
- Singing to myself or in a group.
- Making food or crafts to sell or give away.
Staying on Track: Taking Control of Your Finances

- Financial Assessment Exercise
  - Are you heading for trouble?
- Budget Exercise
  - Income, expenses, debts
- Adjusting Budget Plan
- Limiting access to money checklist
Staying on Track: Other Booklets

- Dealing with Urges
- Changing your Thinking
- Lifestyle Balance
- Getting Back on the Wagon
  - Motivational enhancement
- Dealing with Mood and Substance Abuse Problems
  - Self-assessment and treatment resources
Preventing Relapse: Design

- Recruited 168 people who recently quit gambling
- Media recruitment vs. treatment sample
- No gambling for 2 weeks
- DSM (NODS)
- Interviewed by telephone initially, 6 weeks, 6 months and 12 months
- Collateral verification
## Demographics (N=169)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>43%</td>
</tr>
<tr>
<td>Married or Cohabiting</td>
<td>55%</td>
</tr>
<tr>
<td>Never Married</td>
<td>17%</td>
</tr>
<tr>
<td>Some post secondary education</td>
<td>70%</td>
</tr>
<tr>
<td>Full-time employment</td>
<td>69%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>8%</td>
</tr>
<tr>
<td>Current smoker</td>
<td>69%</td>
</tr>
<tr>
<td>Age</td>
<td>42</td>
</tr>
<tr>
<td>Range</td>
<td>21-70</td>
</tr>
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## Gambling Involvement

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of gambling problem</td>
<td>Mean 34</td>
</tr>
<tr>
<td>South Oaks Gambling Screen</td>
<td>Mean 11.2</td>
</tr>
<tr>
<td>% Previous quit attempt</td>
<td>89</td>
</tr>
<tr>
<td>% Past gambling treatment</td>
<td>60</td>
</tr>
<tr>
<td>Median days abstinent at initial</td>
<td>22 (max= 5 yrs.)</td>
</tr>
<tr>
<td>Major problem type of gambling:</td>
<td></td>
</tr>
<tr>
<td>% Mixed games</td>
<td>46</td>
</tr>
<tr>
<td>% Video lottery terminals</td>
<td>38</td>
</tr>
<tr>
<td>% Casinos</td>
<td>8</td>
</tr>
<tr>
<td>% Bingo</td>
<td>4</td>
</tr>
<tr>
<td>% Other</td>
<td>4</td>
</tr>
</tbody>
</table>
Who calls to participate?

- First timers
- Small towners
- The shamed
- Busy people
Impression of Booklets (N=145)

- Still have at 6 months  97%
- Read?
  - Not at all    8%
  - Some         29%
  - Completely   63%
- Procedures? Some times  72%
Twelve Month Outcome (N=140, 84%)

- Gambled 77%

- Met Goal?
  - Not at all 8% 22%
  - Partially 37% 22
  - Mostly 29% 35%
  - Completely 26% 22%
Shifting goals....

- **Initial**
  - Quit all types 30%
  - Quit problem types 70%

- **Twelve Months Booklets 1 Booklet**
  - Quit all types 67% 45%
  - Quit prob. Types 27% 39%
  - Control 5% 16%
## Days Gambled per Month

<table>
<thead>
<tr>
<th>Days</th>
<th>Before</th>
<th>Month 10-12</th>
<th>Relapse Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0%</td>
<td>44%</td>
<td>36%</td>
</tr>
<tr>
<td>1</td>
<td>4%</td>
<td>19%</td>
<td>14%</td>
</tr>
<tr>
<td>2-7</td>
<td>43%</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>8+</td>
<td>53%</td>
<td>9%</td>
<td>20%</td>
</tr>
</tbody>
</table>
Twelve Month Outcome

- NODS (5+)  46%
- SOGS (5+)  70%
- PGSI (8+)  35%
Twelve Month Treatment-seeking

- Receive Treatment?
  - Booklet 24%
  - Control 20%
Summary of the Results

- Booklet group more likely to rate themselves as meeting their goal
- More likely to shift to a more stringent goal of quitting all types of gambling
- No differences in gambling reports
  - 44% abstinent at 12 months
- No difference in treatment involvement
  - 24% vs 20%
Examples of Participants

- Will
  - 38, vlts, quit for 6 years,

- Melanie
  - 26, bingo, few GA meetings, ambivalent

- Jack
  - 52, no success with treatment, court date
Conclusions?

- Can we do better if we focus on motivation?
- How could relapse be better addressed in your service?
Discussion