CHAPTER ONE

Brief Interventions for Gambling Disorder: A Short Overview and Case Study in New Zealand

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Gambling activities are widely available in most countries, especially in recent times with the almost ubiquitous ownership of internet-connected mobile devices which allow access to gambling opportunities almost anywhere, at any time - in addition to the traditional land-based gambling venues. Such convenient access has the potential to lead people down the path of developing gambling-related behavioural problems.

Disordered gambling is a formally identified behavioural addiction, described in the "substance related and addictive disorders category" of the Diagnostic and Statistical Manual of Mental Disorders (5th Edition; DSM-5) as repeated gambling behaviour causing significant problems or distress (American Psychiatric Association, 2013). Estimates of disordered or problematic gambling vary between jurisdictions and depend on a variety of methodological factors such as the type of survey (e.g., gambling survey vs. health survey with embedded gambling questions) and method of data collection (e.g., face-to-face, telephone or online). Williams et al. (2012) standardised problem gambling prevalence rates across 200 studies conducted worldwide between 1975 and 2012, applying weighting factors to control for methodological differences between studies, and identified a prevalence of problem gambling

between 0.5% and 7.6%. While this work is outdated, more recent research from New Zealand indicates the problem gambling rate has not significantly changed since 2000 (Abbott, 2017). It is likely this will also be the case in other jurisdictions.

In a review of gambling treatments, Echeburúa et al. (2017) found several different interventions were shown to be efficacious in randomised controlled trials with volunteer participants; however, few have been evaluated for effectiveness in clinical populations in real-life settings. Similarly, recent reviews have identified cognitive behavioural treatments and brief motivational interventions as effective gambling treatments associated with lower gambling risk/severity, frequency, and monetary loss (Abbott, 2019a, 2019b; Di Nicola et al., 2020). They have also been found to reduce co-existing mental health issues like anxiety and depression (Linnet et al., 2017; Ranta et al., 2019). However, additional large and robust clinical trials in pragmatic (i.e. real-life) settings are required to assess effectiveness and long-term outcomes (Abbott, 2019a). The brief motivational interview approach has been found to be both efficacious and effective when administered via a telephone (i.e., a helpline). This approach is the focus of the case study discussed later in this chapter.

Brief Motivational Interview Interventions for Gambling-Related Problems

As its name indicates, a brief intervention is a short, often single-session treatment approach commonly used in addiction settings. Brief interventions aim to raise awareness about problematic behaviours and motivate people to change. These can be counsellor-led or self-

directed and can be delivered in a variety of formats such as face-to-face, by phone, online or via a workbook (Quilty et al., 2019).

Motivational interviewing (MI) is a widely used type of brief intervention whereby a counsellor enables someone exhibiting problematic addictive behaviours (e.g. disordered gambling) to "talk themselves into change, based on their values and interests" (Miller & Rollnick, 2013, p.4). MI interventions are based on the premise that people are generally ambivalent about change and, therefore, less likely to do so (Hettema et al., 2005). Cognitive dissonance is the result of this ambivalence, with a conflict between maintaining behaviours or changing them. The therapeutic process of MI is a collaboration between counsellor and client, working to instil a motivation to change in the client, with guidance as opposed to assertive direction. This supports the client's self-efficacy by granting their autonomy (Miller & Rose, 2009). MI techniques include reflective listening (i.e. deeply understanding the content and emotions expressed and demonstrating this understanding by summarising it back to them), and verbalisations promoting change. The goal is to engage in reflection and discussion that reduces ambivalence and fosters a commitment to change (Miller & Rose, 2009).

A 2012 Cochrane review of 14 randomised controlled trials (RCTs) found preliminary evidence for the efficacy of mainly single-session MI treatments for severely disordered gamblers seeking treatment from either outpatient clinics or university settings (Cowlishaw et al., 2012). Subsequently, a study by Yakovenko et al. (2015) that included both a systematic review of eight RCTs evaluating brief MI for disordered gambling (generally single session and face-to-face or by phone) and a meta-analysis of five of these studies, showed MI to be a promising intervention for

problematic gambling in adults. They found significant reductions in gambling losses immediately following treatment, and in gambling frequency for up to one year afterwards (Yakovenko et al., 2015).

Understanding the effectiveness of interventions also informs the optimal treatments for specific population groups, taking into consideration inequities in gambling harm experienced by groups such as indigenous people, migrants and those living in socio-economically deprived areas. In many cases, gambling treatments previously found efficacious in controlled experiments have failed to elicit clinical benefits in real-life community settings (Westphal & Abbott, 2006). One reason for this may be the poor fit of rigidly controlled laboratory settings as a model for real-world situations where parameters are more complicated and unpredictable.

The New Zealand Case Study

From August 2009 to February 2011 in New Zealand (NZ), 462 people who called the national gambling helpline for help with their own gambling were recruited to take part in an RCT of three brief MI interventions of increasing intensity, which were compared with the helpline's standard 'counselling and options' approach, which did not contain MI elements, as the control group. 'Counselling and options' involved counsellor engagement with a client and problem identification followed by a discussion of possible actions. These include options such as referral to a face-to-face gambling treatment service, being offered a comprehensive intervention by phone (six one-hour sessions), or receiving information on specialist gambling helplines (for different

ethnicities, youth and debt counselling) and guidance for financial management, coping with gambling urges, and abstaining from gambling venues.

The three MI interventions were designed based on prior research indicating their likely efficacy among volunteers in a Canadian university research setting (Hodgins et al., 2001, 2004). The first was a single motivational interview (labelled "MI" in the RCT) comprising:

a) Elicitation of self-motivational statements/change talk. Counsellors achieved this by using reflective listening and examining difficulties experienced by a client (e.g. financial, legal, relationship and emotional difficulties).
b) Assessment of gambling risk level using the Problem Gambling Severity Index (PGSI; Ferris & Wynne, 2001). Counsellors discussed the overall PGSI score and individual responses to each question with each client.
c) Affirmation of participants for their commitment and openness in talking about the problem.
d) Summarising the discussion, with counsellors asking for client commitment to change gambling behaviour, and promotion of self-efficacy to make behavioural changes.

The second was also a single motivational interview (as detailed above), with the addition of a cognitive behavioural self-help workbook (labelled "MI+W"). The workbook included sections on:

a) Self-assessment: Understanding the problem, and negative consequences of gambling, increasing self-awareness, identifying reasons for gambling, and the financial costs of gambling.

b) Making a decision: Costs and benefits of gambling, and deciding whether to abstain or control gambling.
c) Reaching the desired goal: Understanding irrational thoughts, and the concept of randomness; coping with urges to gamble; avoiding gambling venues and opportunities; minimising access to money; dealing with large debts; and informing other people about the plan to quit or reduce gambling.
d) Maintaining the goal: Identifying strategies to counter reasons for gambling, understanding lapses and relapses, making amends with close contacts who have been negatively affected by a client's gambling, and dealing with co-existing issues.
e) Resources: Treatment provider details, help websites and gambling venue self-exclusion processes).

Counsellors introduced the workbook to each client, describing and emphasising that it contained tips and strategies former gamblers had used. The workbook was posted or emailed to clients after the MI interview.

The third intervention included the single motivational interview plus workbook (as detailed above), with the addition of four 'booster' follow-up phone interviews at intervals of 1, 4, 13 and 26 weeks after the initial interview (labelled "MI+W+B"), which continued the process of building motivation to change. Each session began with a discussion of what had happened since the last session and a review of what had been accomplished in previous sessions. Each session concluded with a summary of the client's present state, eliciting the client's perceptions of what steps should be taken next, and a clear sense of continuity of care was provided. The five booster sessions were

progressive consultations with the initial session to elicit motivation and strengthen commitment, and subsequent sessions acting as check-ups of progress toward change.

The interview termination process for all three interventions and the control group included a summary of the interview, affirmation of a client's goals, strategies and confidence, assurance of the helpline's support and advice that a researcher would call within seven days to confirm participation in the research.

Participants in the RCT had a baseline assessment before receiving their intervention and were assessed again after three, six, twelve and 36 months. The methods and findings from this RCT and 36-month follow-up have been published elsewhere (Abbott et al., 2015, 2018). In brief, at the 12-month assessment, all the interventions including the control group were found to effectively reduce gambling behaviour (i.e., fewer days of gambling, less money lost). This was associated with reduced gambling risk (i.e., lower PGSI score), fewer negative consequences on work, social, family and home life, and less psychological distress and depression. They were also associated with increased self-reported control over their gambling behaviours, health, and quality of life. Participants in the control group showed similar improvements to participants in the other groups, demonstrating the benefits of even the briefest of interventions. All improvements were observed by the 3-month assessment and sustained over time. However, the most intensive of the brief treatments, MI+W+B, resulted in more improved outcomes than others, especially among those whose goal was to control gambling (rather than abstain) and those with higher levels of psychological distress or alcohol misuse at the baseline assessment.

While most RCTs do not measure long-term outcomes, the NZ study was rare as it included a 36-month (3-year) follow-up assessment, which found the clinically significant outcomes mentioned above were sustained through 36 months for all three intervention groups and the control group. Moreover, participants in the MI+W+B group continued to show better improvement than those in other groups, with lower gambling risk and a greater reduction in gambling behaviours. This shows the importance of long-term follow-ups to assess the sustainability of initial positive treatment outcomes. As most RCTs only include short-term follow-ups because of cost and other practical hurdles, understanding of treatment effects over time is not well understood (Yakovenko et al., 2015).

An important part of any RCT is the provision of interventions with fidelity to manualised protocols. Without an assessment of treatment fidelity, it is impossible to know if the interventions were delivered as intended and, therefore, whether any outcomes can be attributed to the interventions. Despite this, a lack of any such assessment is a shortcoming of many RCTs (Jelsma et al., 2015). But in the NZ study, treatment fidelity was assessed by randomly sampling one fifth of the calls to the helpline by participants which were digitally recorded and then coded based on the Motivational Interviewing Treatment Integrity scale (MITI; Moyers et al., 2004). One-third of the recordings were coded by a second person to assess the reliability of the first assessment.

The Importance of Co-Design and Collaboration

Two hurdles to conducting a large-scale RCT for gambling interventions within a real-life service are costs and the necessity for all staff within the treatment service to be committed to, and

engaged with, the research. This can only be achieved through a collaborative co-design approach allowing for the controlled environment of an RCT within a real-world situation, where some flexibility is required to allow for changing contexts and constraints. This involves developing partnerships between the researchers and treatment providers by involving the latter in the research design so it suits the operational context of the service as well as the research goals (Goodyear-Smith et al., 2015; Sanders & Stappers, 2008). The NZ RCT followed a co-design process and is described below as a guide to other researchers and clinicians who may contemplate similar trials (or other research) in real-life services to develop effective interventions for problematic gambling or other behavioural or substance addictions.

The idea for the NZ study was initiated by senior managers at the gambling helpline, who wanted to provide the best service to their clients using an MI approach. They contacted the university researchers to develop a proposal for the RCT (the process could also have been initiated by the researchers or a third party), including consultation with, and involvement of, the researcher who had conducted the initial MI efficacy trials in Canada to ensure the most relevant evidence would inform the study. A research proposal was developed and submitted to the NZ Ministry of Health in a contestable research funding round. As the funder of the helpline's usual practices, the proposal had to convince the Ministry that the research would not be a detriment to their standard of service, relevant data and statistics routinely captured from clients would continue to be captured, and that they were getting value for their investment. A major concern was the possibility that insufficient participants would be recruited for the trial and retained for subsequent assessments. This was an issue that had led to the premature termination of an earlier RCT in NZ

for gambling treatments in a pragmatic setting, wherein 96 participants were randomised but just 12 were retained at the six-week assessment (Tse et al., 2008).

Once funding was secured, the process of co-design continued to turn the proposed research into a procedure that would be acceptable, manageable, credible and robust within the helpline setting. This involved numerous meetings between the researchers and senior helpline managers and counsellors. Taking into consideration the helpline counsellors' expertise in responding to callers concerned about their gambling, the researchers and helpline staff agreed on processes for maximising client recruitment and retention, and the procedures for the baseline assessment and intervention delivery. Initial ideas by the researchers were debated and modified based on the recommendations of the helpline staff, resulting in a recruitment model they found acceptable.

The researchers attended an all-staff meeting to introduce the RCT to all counsellors and give them a chance to ask questions and give feedback. Assessment questionnaires were reviewed by helpline staff and suggested changes in question wording or order were incorporated if they did not compromise validated screens. This co-design process was successful because all parties were committed and seriously considered the other's point of view. However, it was a time-consuming process taking about a year, indicating that co-design cannot be rushed.

Initial counsellor training in intervention delivery was provided by the researcher from Canada who had conducted the previous MI efficacy trials, by training the usual gambling treatment service trainer in NZ with whom the counsellors were familiar and who was highly respected. Use of a familiar, respected trainer was one of the suggestions from helpline staff during

the initial stages of the co-design process. He also served as an investigator in the RCT, provided advice throughout the trial, delivered all subsequent training, and helped supervise the counsellors involved in the research.

Recruitment of participants took longer than expected, and the co-design process continued throughout with researchers and senior helpline staff collaborating to overcome issues including waning interest among some of the counsellors. In the end, a large sample of 462 participants was achieved (the two previously mentioned reviews of RCTs included studies with sample sizes ranging from 13 to 231 [Cowlishaw et al., 2012; Yakovenko et al., 2015]), a level of success that would not have been possible without the support and commitment of the senior helpline staff. As participants lived in all regions of New Zealand, they included people from varying socio-economic status, and from the four major ethnicities: Māori (NZ's indigenous people), Pacific, Asian and European. This is important for understanding whether interventions are effective across all sub-populations.

Translating Research into Policy and Practice

To improve and maximise public health, robust and up-to-date evidence must be used to inform decisions around policy and practice. In the context of providing the best treatments for gambling-related issues, it means that findings from RCTs are necessary. Unfortunately, a common occurrence with research is that findings are often hidden from those they would most benefit, within complex and dense academic papers or technical reports, and with translation of the research into policy or practice often being extremely slow (Curran et al., 2011; Oelke et al.,

2015). In a scoping review of knowledge translation, Mackay et al. (2015) identified implementing gambling research findings into practice was lagging relative to other areas of the public health and mental health fields.

In the case of the NZ RCT, the helpline staff appreciated the benefits of the trial, and the funding organisation was also the funder of existing gambling treatment services - the NZ Ministry of Health. Over a period of several months, there were discussions between the researchers, the Ministry and the gambling helpline service (which had become embedded within wider telehealth services by the time the 36-month follow-up assessment results were available) to discuss the implications and importance of the research findings. The outcome was that a slightly modified version of the MI+W+B intervention, which showed better improvement in outcomes than other groups, became standard practice at the gambling helpline. The relative speed at which this translation of research into practice occurred was unprecedented to our knowledge, at least in the gambling field, and exemplifies what can be achieved if all stakeholders are committed to improving services.

Implications and Future Steps

Helpline clients participating in the NZ RCT were generally exhibiting high levels of disordered gambling behaviour and co-existing mental health and substance use issues. Nonetheless, the outcomes of the RCT were positive and were sustained over *three years*, particularly for the MI+W+B condition. Although previous RCTs of MI interventions for disordered gambling had shown reductions in disordered gambling and co-existing issues in the

short-term (up to one year), the NZ RCT extended this into the longer term. At this point, it is important to acknowledge that although the brief MI interventions were effective, all participants were recruited after they had contacted the helpline for assistance with their gambling, meaning they had already chosen to contact a service that was likely to provide a briefer service than, for example, if they had contacted a face-to-face gambling treatment clinic. Thus, brief interventions may not be suitable for all people who experience disordered gambling behaviours.

Nonetheless, brief interventions have potential utility for phone helplines as well as the first treatment in a comprehensive stepped care model of face-to-face treatment. The stepped care model is adaptive to a client's requirements, where the initial intervention provided to clients should be brief and low-intensity, with constant progress monitoring so that treatment is 'stepped up' to a higher intensity for clients who do not improve or benefit from the initial brief intervention (Bower & Gilbody, 2005; Swan & Hodgins, 2015). This more tailored approach may help reduce clinical dropout of clients who attend face-to-face services but find that the level of intensity is not what they need, whilst still providing appropriate service for those who require more intensive long-term interventions.

The combination of a motivational interview with a self-help workbook and follow-up phone sessions appeared to be a powerful one, with lasting clinical effects. Providing the intervention briefly by phone is also cost-effective as clients do not have to travel; they can call at a time and place that suits them, particularly if the treatment service operates at all hours. Even if the sessions are provided face-to-face in an easily accessible physical location, the brief nature of the intervention can still reduce costs. The use of a self-help workbook allows clients to progress

at their own pace and grants a sense of self-resolution of the problem. Several studies have identified that a barrier to seeking professional help for gambling problems was a desire to fix the problem on their own (Gainsbury et al., 2014; Pulford et al., 2009) and that self-guided change is often a positive early step in overcoming gambling problems (Bishop, 2018; Kim et al., 2017, Swan & Hodgins, 2015). The addition of booster calls helps to elicit and maintain motivation and strengthens commitment to change through consistent affirmation and support.

In a stepped care approach, if the initial MI+W+B intervention does not lead to improved control of gambling behaviour, a more intensive intervention such as cognitive behavioural therapy can be provided. Moreover, the potential of novel online approaches such as mobile apps also merits consideration. In the NZ RCT, the largest improvements in gambling behaviour were seen after three months, so this could be an optimal time for counsellors and clients to assess their progress and decide on a different intervention approach. Nonetheless, further research is required to confirm the effectiveness of such a stepped care approach that starts with MI+W+B.

Note 1: RCTs are known as the 'gold standard' for treatment effectiveness research because they control for bias through random allocation of participants to intervention or control groups with both the participants and the researchers 'blind' to which intervention a participant received. This means that cause and effect can be inferred with higher confidence due to fewer avenues for subjectivity and confounds (Hariton & Locascio, 2018; Sibbald & Roland, 1998).

Note 2: The workbook was titled "Becoming a winner: Defeating problem gambling. A gambling self-help manual". It was developed by D. C. Hodgins and K. Makarchuk in Canada and, with permission from the developers, was adapted for use in the New Zealand context.

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