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Clinical Consensus Statements on Intervention Content for Gambling Treatment: A Contextualised Delphi Study with Clinical Researchers

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Abstract
There is little consensus on the optimal components of gambling psychological treatments. This study aimed to identify clinical consensus statements regarding the perceived effectiveness of gambling intervention content (change techniques, participant/recruitment characteristics, delivery characteristics, and evaluation characteristics) from a panel of researchers with psychological gambling treatment expertise across 11 countries. A two-round modified Delphi study was conducted. Thirty-five panellists rated the perceived effectiveness of 96 gambling intervention components for achieving clinically helpful change, which was defined as "reduction in gambling severity, expenditure, and frequency". Consensus criteria on effectiveness and ineffectiveness were defined *a priori.* Consensus statements were identified for four of 19 change techniques (*motivational enhancement*, *relapse prevention*, *cognitive restructuring*, and *plan social support*), five of 23 participant/recruitment characteristics (e.g. *eligibility screening took place*), 17 of 47 delivery characteristics (e.g. *the therapy goal was to reduce time and/or money spent gambling*), and three of seven evaluation characteristics (e.g. *specific process or mediators are targeted by the intervention*). These statements, when interpreted with consideration of contextual factors, can inform the selection of likely effective components to employ in gambling treatment programs and indicate where future research efforts may be most beneficial.

Keywords Gambling disorder · BCT · Delphi · Clinical consensus · Clinical researcher · Treatment

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There is consistent evidence that cognitive-behavioural therapy (CBT) and motivational interviewing (MI) are effective gambling interventions (Cowlishaw et al., 2012; Eriksen et al., 2023; Gooding & Tarrier, 2009; Pfund et al., 2023a, 2023b; Yakovenko et al., 2015). Identifying active ingredients of such interventions is considered important (Walker et al., 2006) but remains challenging due to inconsistencies in naming practices (Abraham & Michie, 2008; Michie et al., 2013) and because nominally identical interventions, such as those described as CBT, are combined in different ways (Gooding & Tarrier, 2009; Michie & Johnston, 2012). Change techniques (hereafter referred to as 'techniques'), which are the component parts of interventions designed to facilitate behaviour change (Sheeran et al., 2019), have recently been categorised into taxonomies, allowing interventions to be classified based on the techniques they include (Abraham & Michie, 2008; Michie et al., 2012; Sheeran et al., 2019). These taxonomies can also include other intervention features, participant characteristics, or methodological aspects that may be associated with treatment effectiveness (Sheeran et al., 2019). They can therefore serve as a foundation for evaluating the effectiveness of intervention components (Abraham & Michie, 2008; Michie & Johnston, 2012).

Cross-domain taxonomies, such as the Behaviour Change Taxonomy Version 1 (BCTTv1) (Michie et al., 2013), are designed to be used across health domains, while domain-specific taxonomies are customised for individual health domains to ensure the relevance of their components to their specific contexts (Michie et al., 2012; Rodda et al., 2018; Sheeran et al., 2019). For example, the Gambling Intervention System of Characterization (GIST-1) is a domain-specific taxonomy that classifies the content and characteristics of gambling interventions evaluated using randomised trial study designs delivered in various modes (e.g. face-to-face, telephone, online, and self-directed) and settings (e.g. clinical, community, and university) without restricting eligibility based on diagnostic status or problem gambling severity classification. This data-driven classification system categorises a range of intervention content across four domains including techniques, participant/recruitment characteristics, delivery characteristics, and evaluation characteristics (Rodda et al., 2018). Various methodologies, including systematic reviews (Willett et al., 2019) and meta-analyses (Merkouris et al., 2023; Michie et al., 2012), alongside empirical cross-sectional surveys (Månsson et al., 2022) and consensus studies with expert stakeholders (Garnett et al., 2015; Taylor et al., 2020), have applied both cross-domain and domain-specific taxonomies to identify effective intervention components across various health conditions.

The use of classification taxonomies to identify effective intervention components for gambling treatments, however, is only emerging. Two systematic reviews have employed the BCTTv1 taxonomy to identify the most frequently used components in effective gambling intervention studies (Humphreys et al., 2021; St Quinton et al., 2022). Humphreys and colleagues (2021) investigated 16 high-quality studies of effective web-based interventions for alcohol consumption, binge eating, and gambling and identified the five most prevalent BCTTv1 techniques: *feedback on behaviour*, *self-monitoring of behaviour*, *self-monitoring of outcome(s) of behaviour*, *instruction on how to perform a behaviour*, and *social comparison*. Only three studies in this analysis, however, related to gambling. Similarly, St Quinton and colleagues aimed to identify promising techniques and modes of delivery across 16 gambling randomised controlled trials (RCTs) for adolescents (St Quinton et al., 2022), defining *promising* techniques as those present in 25% of interventions with at least two being effective interventions. Four promising BCTTv1 techniques were identified: *information about antecedents*, *behavioural experiments*, *information about social and environmental consequences*, and *information about emotional consequences.*

Moreover, this review identified three modes of delivery: *face-to-face*, *computer*, and *playable electronic storage*. While these studies provide preliminary information relating to active treatment components, they were both relatively narrow in scope, and their use of a cross-domain taxonomy, which relied on accurate reporting within studies, presents limitations concerning how accurately gambling-specific intervention content could be categorised. Moreover, the frequency of technique use in effective treatments does not account for the impact of other commonly employed intervention components.

Several studies that have obtained the perspectives of gambling clinicians on the effectiveness of techniques for gambling treatments mitigate these problems (Keshani et al., 2025; Månsson et al., 2022). Månsson and colleagues (2022) surveyed 188 Swedish gambling counsellors, in which *motivation*, *craving management*, and *gambling cognitions* were rated as the three most important techniques to include in gambling treatments. Although representative of most practicing gambling counsellors in Sweden, this study relied on a cross-sectional survey that did not directly investigate technique effectiveness and included many counsellors with limited gambling treatment experience. In contrast, Keshani and colleagues (2025) conducted a two-round Delphi study of 68 Australian and New Zealand clinicians to identify consensus statements on effective techniques for gambling treatments. Clinical consensus statements reflect consensus expertise derived through explicit a priori methodology (Rosenfeld et al., 2015). Delphi studies, which are characterised by iterative rounds of survey data collection from a panel of experts to achieve consensus, possess several advantages over cross-sectional surveys as they facilitate ongoing input, feedback on individual and group responses, and revision of responses, leading to the gradual refinement of ideas. They are particularly appropriate to examine complex issues that lack an established evidence base as they enable establishment of clear consensus (Jorm, 2015).

Using the GIST-1 (Rodda et al., 2018), Keshani and colleagues (2025) identified consensus statements on the effectiveness of ten techniques: *relapse prevention*, *goal setting*, *motivational enhancement*, *information provision*, *cognitive restructuring*, *financial regulation*, *information gathering*, *plan social support*, *problem solving*, and *decisional balance*. While this provides valuable insights into potentially effective techniques, the three other GIST-1 domains were not explored. Moreover, input from different gambling stakeholders, such as clinical researchers, can add to the limited evidence base as they possess unique expertise in designing, developing, and evaluating gambling interventions. The current Delphi study therefore aims to identify consensus statements regarding the perceived effectiveness of items from all four GIST-1 domains with an international panel of leading clinical gambling researchers. Findings can help inform the selection of intervention content most likely to be effective for gambling treatment, which can then be prioritised for evaluation in experimental trials, thereby streamlining the development of optimised interventions.

Methods

Study Design

A two-round modified Delphi study (Hsu & Sandford, 2007) was conducted to identify clinical consensus statements on effective intervention content for gambling treatment. Consensus criteria for carrying items to the next round and stopping criteria for the study

were specified a priori, consistent with quality recommendations for Delphi studies (Diamond et al., 2014). Panellists were asked to rate items on a 9-point scale. Items rated between 7–9 by at least 70% of panellists and 1–3 by fewer than 15% of panellists were classified as *consensus-effective*. Conversely, items rated between 1–3 by at least 70% of panellists and 7–9 by fewer than 15% of panellists were classified as *consensus-ineffective*. All other items were classified as *no-consensus*. This study was designed to terminate after two rounds, consistent with previous Delphi studies investigating promising intervention content (Mersha et al., 2023; Taylor et al., 2020; Vestjens et al., 2015; Walsh et al., 2020). Only items for which no-consensus was reached in Round One (R1) were carried forward to Round Two (R2) for re-rating. Reporting was consistent with the ACCORD (ACcurate COnsensus Reporting Document) guidelines for consensus methods in biomedicine (Gattrell et al., 2024). This study was not prospectively registered and was conducted as part of a doctoral thesis by the first author and their supervisory team.

Participants

Delphi panellists were clinical researchers who met the following three criteria: (i) were amongst the top 50 experts for 'gambling' on Expertscape.com (i.e. an independent tool that objectively ranks researchers by expertise based on PubMed metrics) worldwide; or within the top 10 experts in one of the top 15 rated countries; (ii) were listed as an author on at least one peer-reviewed publication related to the development or evaluation of psychological gambling interventions; and (iii) had a publicly listed email address. The Expertscape search was conducted in May 2023.

Using the inclusion criterion relating to the top 50 experts on Expertscape.com identified 32 researchers with a relevant publication across 11 countries: Australia, Spain, Sweden, USA, Canada, New Zealand, France, UK, Switzerland, Finland, and Gibraltar. To enhance international geographic representativeness of the experts, this inclusion criterion was expanded to add the top 10 experts in one of the top 15 rated countries on Expertscape.com. This modification added five additional countries to those represented by the original inclusion criteria (China, Italy, Germany, Netherlands, and Belgium), but none of the researchers from four countries (China, Germany, Netherlands, and Belgium) had a relevant publication. This expansion to the inclusion criteria therefore resulted in the addition of only one country (Italy). There was no further recruitment to ensure the invited panel had sufficient expertise to provide informed and reliable ratings.

Overall, 49 experts across 12 countries were invited to participate: Australia ($n=9$), Spain ($n=8$), Sweden ($n=7$), USA ($n=6$), Canada ($n=4$), New Zealand ($n=4$), France ($n=3$), UK ($n=3$), Switzerland ($n=2$), Finland ($n=1$), Gibraltar ($n=1$), and Italy ($n=1$). Of these, 39 (19.59%) from 11 countries completed the R1 survey, with the remainder either failing to complete the survey ($n=8$) or indicating they did not believe they had the requisite expertise ($n=2$). Of these 39 panellists, 35 (89.74%) from the same 11 countries completed the R2 survey. Panellists were anonymous, in that they were unable to identify other panellists, until all data collection and analyses were complete. As reported in Table 1, the mean age of panellists was 53.05 years and 69.23% were male. They were involved in clinical research for an average of 22.44 years and 79.49% were currently practicing, or had formerly practiced, as an addiction clinician. These panellists reported a range of clinical degrees, with psychology, psychotherapy, and psychiatry being the most common. All panellists reported being moderately to extremely familiar with the behavioural

Table 1 Characteristics of Delphi panellists across both rounds

Panel member characteristic	Round one ($n=39$)		Round two ($n=35$)	
	N	*%*	***N***	*%*
Age (mean, SD)	53.05 (11.51)		53.09 (11.83)	
Sex (male)	27	69.23	24	68.57
Country of residence				
Australia	8	20.51	6	17.14
Canada	4	10.26	4	11.43
Finland	1	2.56	1	2.86
France	2	5.13	2	5.71
Gibraltar	1	2.56	1	2.86
New Zealand	4	10.26	4	11.43
Spain	4	10.26	3	11.43
Sweden	6	15.38	6	17.14
Switzerland	1	2.56	1	2.86
UK	3	7.69	3	8.57
USA	5	12.82	2	5.71
Years of clinical research experience (mean, SD)	22.44 (10.91)		22.71 (11.23)	
Range	8–50 years		8–50 years	
Practiced as a clinician with clients with addictions	31	79.49	28	80
Years of experience practicing as a clinician[a,b]	19.5 (11.94)		18.37 (12.02)	
Range	2–43		2–43	
Clinical degree[b,c]				
Counselling	2	5.13	2	5.71
Family therapy	1	2.56	1	2.86
Mental health nursing	1	2.56	0	0.00
Psychiatry	8	20.51	6	17.14
Psychology	20	51.28	20	57.14
Psychotherapy	8	20.51	8	22.86
Youth work	1	2.56	1	2.86
Familiarity with the treatment outcome literature for alcohol/drugs?				
Not at all familiar	1	2.56	1	2.86
Slightly familiar	5	12.82	5	14.29
Somewhat familiar	8	20.51	8	22.86
Moderately familiar	13	33.33	11	31.43
Extremely familiar	12	30.77	10	28.57
Familiarity with the treatment outcome literature for behavioural addictions (including gambling)?				
Not at all familiar	0	0.00	0	0.00
Slightly familiar	0	0.00	0	0.00
Somewhat familiar	0	0.00	0	0.00
Moderately familiar	14	35.90	13	37.14
Extremely familiar	25	64.10	22	62.86

[a]One missing data point

[b]Question only shown to those who indicated they had practiced as a clinician with clients with addictions

[c]Multiple responses allowed

addiction treatment outcome literature and over two-thirds (64.10%) reported being moderately to extremely familiar with the substance use treatment outcome literature.

Measures

In R1, panellists provided demographic and clinical information. They were presented with 19 techniques (18 from the GIST-1), in addition to *Mindfulness*, which was included due to emerging evidence for the effectiveness of mindfulness-based gambling interventions (de Lisle et al., 2012; Maynard et al., 2015; Sancho et al., 2018). For each technique, panellists were asked to "Please rate how effective you think this technique is for bringing about clinically helpful change in someone with gambling problems" on a 9-point scale from (1) *Not effective at all* to (9) *Very effective* based on their knowledge of the research literature, relevant theory, and clinical experience. Clinically helpful change was defined as "reductions in gambling severity, expenditure, and frequency". Panellists were then asked to list up to two additional techniques they believed are effective for gambling treatment.

Next, panellists were presented with intervention content from the other GIST-1 domains: *participant/recruitment characteristics*, *delivery characteristics*, and *evaluation characteristics*. Using the same 9-point scale, they were asked to rate how effective a gambling intervention would be if it contained each specific characteristic, independent of other aspects of the intervention or study. Panellists were asked about every GIST-1 item, where feasible (see *Supplementary Material A* for a complete list of GIST-1 items and adaptations). Panellists could view intervention content definitions by hovering their cursor over each label.

Procedure

Recruitment occurred from May 16 to June 15 (R1) and July 24 to August 28 (R2), 2023. Eligible individuals received email invitations containing study details and a link to the R1 Qualtrics survey. Panellists provided informed consent to participate via a checkbox prior to the first survey. Panellists who completed R1 were invited to participate in R2 via email. In R2, panellists were asked to re-rate items that did not reach consensus in R1. At the end of R1, unique identifiers were used to generate personalised R2 survey links, thereby ensuring R1 and R2 responses were linked. In R2, panellists were instructed to refer to a personalised feedback document outlining their individual ratings for items in R1 contrasted with the distribution of panellist ratings. Up to two reminder emails were sent per round. Panellists were offered reimbursement (AUD $100) for completing both rounds. Consistent with the participatory research approach of other Delphi studies (Castro-Calvo et al., 2021; Luquiens et al., 2022), panellists were invited as co-authors in addition to the core research team (IMK, SSM, SNR, NAD) by providing feedback on manuscript drafts. The core research team did not participate as panellists. Ethics approval was granted by the Deakin University Human Research Ethics Committee (HEAG-H 118_2022).

Statistical Analysis

A priori consensus criteria, as defined above, were identical to those employed in a previous Delphi study (Keshani et al., 2025). Only items for which no consensus was reached in

R1 were carried forward to R2 for re-rating. Descriptive statistics (means, standard deviations, and panel rating distributions) were calculated for each round.

Results

In R1, 15 items met *consensus-effective* criteria, no items met *consensus-ineffective* criteria, and 81 items did not reach consensus. In R2, a further 13 items met *consensus-effective* criteria and one item met *consensus-ineffective* criteria. After both rounds, 28 items met *consensus-effective* criteria, one item met *consensus-ineffective* criteria, and 67 items were classified as *no-consensus*.

Techniques

As indicated in Table 2, four techniques met *consensus-effective* criteria: (1) *motivational enhancement*, (2) *relapse prevention*, (3) *cognitive restructuring*, and (4) *plan social support*. Although none of the techniques reached *consensus-ineffective* criteria, *social comparison* was rated between 1 and 3 by the greatest proportion of panellists.

Additional techniques suggested by three or more panellists as potentially effective were *emotion regulation* or *distress tolerance* ($n=6$) and *acceptance* ($n=3$). Other suggestions were not techniques, were listed by fewer than three panellists, or were already encompassed by GIST-1 techniques.

Participant/Recruitment Characteristics

As indicated in Table 3, five participant/recruitment characteristics met *consensus-effective* criteria: (1) *clients were recruited from gambling services or treatment agencies*; (2) *eligibility screening took place*; (3) *participants screened positive for gambling problems or gambling disorder*; (4) *screening assessments were conducted face-to-face* (in person/video-conferencing); (5) *baseline assessments were conducted face-to-face* (in person/video-conferencing). None of the participant/recruitment characteristics met *consensus-ineffective* criteria.

Delivery Characteristics

As indicated in Table 4, consensus was reached on 17 delivery characteristics. Sixteen characteristics met *consensus-effective* criteria: (1) *treatment length available to clients exceeded seven sessions or 541 min (9 h)*; (2) *completed sessions were between five and eight sessions*; (3) *completed sessions were more than nine sessions*; (4) *the intervention was delivered to an individual*; (5) *the intervention was delivered to a group*; (6) *the therapy goal was to reduce time and/or money spent gambling*; (7) *all therapeutic content was delivered by a practitioner*; *therapist approach was* (8) *CBT*, (9) *MI*, (10) *cognitive therapy (CT)* (11), and *behaviour therapy (BT)*; (12) *the intervention was delivered face-to-face* (in person only); (13) *the intervention was delivered by a registered professional*; (14) *supervision was provided to the practitioner*; (15) *training was provided to deliver the intervention*; and (16) *a treatment manual was used to deliver the intervention*. Conversely, *consensus-ineffective* criteria was met by *imposing a goal on participants*.

Table 2 Panel ratings for techniques across both rounds

Technique[a]	Rank*	*N*	Mean rating (SD)	% of panellists rating		
				1–3	4–6	7–9
Motivational enhancement*	1	39	7.23 (1.69)	5.13%	15.38%	79.48%
Relapse prevention*	2	39	7.26 (1.50)	2.56%	23.07%	74.36%
Cognitive restructuring*	R1: 3	39	6.77 (1.61)	2.56%	33.34%	64.11%
	R2: 3	35	7.26 (1.05)	0.00%	20.01%	80.00%
Plan social support*	R1: 4	39	6.51 (2.35)	5.12%	35.89%	58.98%
	R2: 4	35	6.83 (0.84)	0.00%	25.71%	74.29%
Decisional balance	R1: 12	39	6.13 (1.68)	10.25%	43.58%	46.16%
	R2: 5	35	6.49 (1.18)	2.86%	28.57%	68.57%
Financial regulation	R1: 6	39	6.41 (1.85)	7.69%	35.90%	56.40%
	R2: 6	35	6.71 (1.28)	2.86%	31.43%	65.71%
Behaviour substitution	R1: 7	39	6.51 (1.44)	2.56%	43.58%	53.84%
	R2: 7	35	6.51 (1.45)	5.71%	31.43%	62.85%
Stimulus control	R1: 5	39	6.72 (1.80)	5.12%	38.46%	56.41%
	R2: 8	35	6.94 (1.45)	2.86%	37.14%	60.00%
Exposure	R1: 10	39	5.97 (1.82)	12.82%	38.47%	48.71%
	R2: 9	35	6.51 (1.13)	0.00%	40.00%	60.00%
Goal setting	R1: 11	39	6.33 (1.68)	5.13%	48.71%	46.16%
	R2: 10	35	6.46 (1.29)	2.86%	42.86%	54.28%
Self-monitoring	R1: 9	39	6.54 (1.77)	5.13%	43.58%	51.28%
	R2: 11	35	6.34 (1.58)	8.57%	51.43%	40.00%
Problem solving	R1:14	39	5.95 (1.95)	12.82%	51.28%	35.89%
	R2: 12	35	6.06 (1.53)	5.71%	57.14%	37.14%
Mindfulness	R1: 13	39	5.67 (1.97)	17.94%	41.02%	41.03%
	R2: 13	35	5.89 (1.30)	2.86%	60.00%	37.14%
Feedback on assessment	R1: 8	39	6.49 (1.74)	5.13%	43.59%	51.29%
	R2: 14	35	6.74 (1.18)	8.57%	65.72%	25.72%
Imaginal desensitisation	R1: 16	39	5.72 (1.72)	12.82%	53.85%	33.32%
	R2: 15	35	5.89 (1.35)	8.57%	65.72%	25.72%
Social skills training	R1: 17	39	5.18 (2.07)	25.64%	48.72%	25.64%
	R2: 16	35	5.40 (1.62)	14.29%	62.86%	22.85%
Information gathering	R1: 15	39	5.41 (2.28)	20.51%	46.15%	33.33%
	R2: 17	35	5.26 (1.73)	20.00%	62.85%	17.14%
Information provision	R1: 18	39	4.85 (1.86)	30.77%	48.72%	20.52%
	R2: 18	35	4.97 (1.44)	20.00%	62.85%	17.14%
Social comparison	R1: 19	39	4.33 (1.82)	38.46%	46.16%	15.38%
	R2: 19	35	4.37 (1.44)	37.15%	54.29%	8.57%

Techniques were classified as consensus-effective if at least 70% of panellists rated its effectiveness between 7 and 9, and fewer than 15% of panellists rated it between 1 and 3. Techniques which reached consensus-effective or consensus-ineffective criteria in the first round were not included for re-rating in the second round

R1 round one; *R2* round two

[a]Techniques are ranked in order of their mean ratings. Consensus-effective techniques are ranked above non-consensus-effective techniques

*Indicates that the technique met consensus-effective criteria

Evaluation Characteristics

As indicated in Table 5, three evaluation characteristics met *consensus-effective* criteria: (1) *the intervention is evaluated against a no intervention control group*; (2) *the intervention is evaluated against an active control group*; and (3) *specific process or mediators are targeted by the intervention*. None of the evaluation characteristics met *consensus-ineffective* criteria.

Discussion

This Delphi study is the first to identify consensus statements from clinical researchers on the perceived effectiveness of intervention content for gambling treatments for bringing about clinically helpful change. Consensus was reached on four techniques, five participant/recruitment characteristics, 17 delivery characteristics, and three evaluation characteristics.

Techniques

Clinical consensus statements on effectiveness were identified for *motivational enhancement*, *relapse prevention*, *cognitive restructuring*, and *plan social support*. These findings are consistent with those from the available systematic reviews and other empirical research. Specifically, *motivational enhancement* is closely linked with MI, an effective intervention for reducing gambling behaviour (Yakovenko et al., 2015), which was also rated by Swedish gambling counsellors as the most important technique to include in gambling interventions (Månsson et al., 2022). Participants receiving *relapse prevention* have demonstrated improvements in gambling outcomes, although many participants can continue to experience gambling difficulties (Hodgins & el-Guebaly, 2004; Hodgins et al., 2007). *Relapse prevention* has also been included in effective individual and group gambling interventions (Ladouceur et al., 2001, 2003). *Cognitive restructuring* has also been included in these interventions (Ladouceur et al., 2001, 2003), with behavioural experiments (coded as *Cognitive restructuring* in the GIST-1) identified as a *promising* technique in adolescent gambling interventions (St Quinton et al., 2022). Moreover, addressing gambling cognitions was identified as an important technique to include in gambling interventions by Swedish counsellors (Månsson et al., 2022). Finally, increased social support has been associated with better gambling treatment outcomes (Bickl et al., 2023; Petry & Weiss, 2009) and improved quality of life (Penfold & Ogden, 2023), providing a possible underpinning for the effectiveness of *plan social support*. This convergence of findings provides a good rationale to prioritise the inclusion of these techniques in gambling interventions.

These four techniques, alongside six others, were also endorsed as effective in a Delphi study of Australian and New Zealand specialist gambling clinicians (Keshani et al., 2025). The discrepancy between clinicians and clinical researchers likely reflects differences in professional perspectives, with clinicians likely drawing on their direct practice experience to value a wider range of strategies, such as *financial regulation*,

Table 3 Panel ratings for participant/recruitment characteristics across both rounds

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
Sample type	Community	R1	6.03 (1.93)	10.26%	48.72%	41.02%
		R2	6.20 (1.09)	0.00%	62.86%	37.14%
	Clinical (a gambling service or treatment agency)*	R1	7.59 (1.23)	0.00%	17.95%	82.06%
	University	R1	5.87 (2.13)	17.95%	38.46%	43.59%
		R2	5.77 (1.48)	5.72%	62.86%	31.43%
Remuneration	Remuneration for completing an eligibility screen	R1	4.79 (2.36)	33.32%	33.33%	33.34%
		R2	5.23 (1.87)	14.29%	57.14%	28.58%
	Remuneration for baseline assessment	R1	5.08 (2.44)	33.33%	25.64%	41.03%
		R2	5.46 (1.92)	14.29%	51.43%	34.28%
	Remuneration for follow-up assessment	R1	5.54 (2.44)	25.64%	30.77%	43.59%
		R2	5.80 (2.11)	11.43%	48.57%	40.00%
	A total amount exceeding $70 US dollars ($96 Canadian dollars / $105 Australian dollars)[a]	R1	5.36 (2.50)	25.64%	30.77%	43.59%
		R2	5.63 (2.10)	11.43%	51.43%	37.14%
Eligibility criteria	Screening for eligibility was conducted*	R1	6.82 (1.63)	2.56%	28.20%	69.23%
		R2	6.94 (1.01)	0.00%	22.86%	77.14%
	Screened positive for a gambling problem or gambling disorder*	R1	6.77 (1.72)	5.12%	23.08%	71.79%
	Gambled in the last 12 months	R1	5.33 (2.30)	23.08%	38.46%	38.46%
		R2	6.09 (1.78)	8.57%	45.71%	45.71%
	Aged 18 or older	R1	5.72 (1.99)	10.25%	51.28%	38.46%
		R2	5.89 (1.19)	65.71%	34.28%	65.71%
	No suicidal ideation/current risk	R1	5.46 (2.15)	17.94%	48.71%	33.33%
		R2	5.31 (1.43)	11.42%	68.57%	20.00%
	No acute mental distress	R1	5.51 (2.32)	20.52%	41.02%	38.46%
		R2	6.09 (1.44)	2.86%	60.01%	37.14%

Table 3 (continued)

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
	No current intervention	R1	5.38 (2.28)	23.08%	38.46%	38.47%
		R2	5.60 (1.85)	14.28%	57.15%	28.56%
	Participation limited to specific type of gambling	R1	4.77 (2.12)	30.77%	51.28%	17.95%
		R2	5.14 (1.50)	14.28%	68.57%	17.15%
	Collateral person required	R1	5.97 (2.33)	15.38%	33.33%	51.28%
		R2	6.43 (1.38)	2.86%	34.29%	62.85%
Screening modality	Face-to-face screen*	R1	7.26 (1.66)	2.56%	28.20%	69.23%
		R2	7.86 (1.10)	0.00%	14.29%	85.72%
	Telephone screen	R1	6.41 (1.66)	2.56%	46.15%	51.28%
		R2	6.69 (1.06)	0.00%	42.86%	57.15%
	Self-directed screen	R1	5.56 (1.84)	17.95%	51.28%	30.77%
		R2	5.51 (1.20)	2.86	79.99	17.14
Baseline modality	Face to face delivery*	R1	7.38 (1.61)	2.56%	23.08%	74.36%
	Telephone delivery	R1	6.46 (1.63)	5.12%	35.90%	58.97%
		R2	6.80 (1.06)	0.00%	31.43%	68.57%
	Self-directed delivery	R1	5.77 (1.62)	10.25%	61.54%	28.20%
		R2	5.96 (0.98)	0.00%	80.00%	20.01%
	Baseline assessment is over 80 items long[a]	R1	4.67 (2.05)	28.21%	53.84%	17.95%
		R2	5.29 (1.30)	5.72%	85.71%	8.57%

Items were classified as consensus-effective if at least 70% of panellists rated its effectiveness between 7 and 9, and fewer than 15% of panellists rated it between 1 and 3. Items were classified as consensus-ineffective if at least 70% of panellists rated its effectiveness between 1 and 3, and fewer than 15% of panellists rated it between 7 and 9. Items which met consensus criteria in the first round were not included in the second round

R1 round one, *R2* round two

[a]Figures were means derived from experimental studies in the literature

*Indicates that the item met consensus-effective criteria

Table 4 Panel ratings for delivery characteristics across both rounds

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
Therapeutic contact	Planned intensity: The total number of sessions available to participants exceeded 7 and/or available duration of time available to complete the program exceeded 541 min (9 h)*	R1	6.97 (1.62)	5.12%	23.07%	71.79%
	Actual intensity: The total number of sessions completed by participants exceeded 5 and/or actual duration of time spent completing the program exceeded 335 min (5 h and 35 min)[a]	R1	6.10 (1.46)	7.69%	48.72%	43.58%
		R2	6.66 (0.95)	0.00%	34.29%	65.71%
	Minimal contact: Therapeutic contact is less than 30 min in duration	R1	4.00 (1.66)	38.46%	53.85%	7.69%
		R2	3.91 (1.23)	34.28%	60.01%	5.71%
	Single session: Contained in a single session which lasted more than 30 min	R1	4.64 (2.11)	43.59%	33.33%	23.08%
		R2	3.86 (1.33)	57.15%	34.29%	8.57%
	Short contact: Between two and four sessions	R1	5.41 (1.86)	12.81%	58.98%	28.20%
		R2	5.29 (1.14)	5.71%	82.86%	11.43%
	Medium contact: Between five and eight sessions*	R1	6.62 (1.39)	2.56%	43.59%	53.85%
		R2	6.97 (0.91)	0.00%	28.57%	71.43%
	Long contact: More than nine sessions*	R1	6.87 (2.08)	15.38%	15.38%	69.23%
		R2	7.26 (1.46)	2.86%	17.13%	80.00%
	Delivered to individual*	R1	7.51 (1.13)	0.00%	17.94%	82.05%
	Delivered to group*	R1	6.79 (1.45)	5.13%	25.63%	69.23%
		R2	6.63 (1.27)	5.71%	20.00%	74.28%
Goal	Intervention goal is determined at screening, assessment, or at the commencement of the intervention	R1	6.64 (1.90)	7.68%	35.90%	56.41%
		R2	6.74 (1.10)	0.00%	48.57%	51.43%
	Intervention goal is reduction in gambling time and/ or money*	R1	6.77 (1.70)	5.12%	30.77%	64.10%
		R2	7.09 (1.00)	0.00%	22.86%	77.14%
	Intervention goal is abstinence	R1	5.51 (2.13)	20.51%	41.02%	38.46%

Table 4 (continued)

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
		R2	5.40 (1.84)	17.14%	45.71%	37.14%
	Intervention goal is imposed on participants (i.e. participants were not free to choose)†	R1	3.51 (2.09)	58.97%	30.77%	10.25%
		R2	2.91 (1.48)	77.14%	17.14%	5.72%
Professional oversight	All therapeutic content was delivered by a self-directed program or workbook	R1	4.56 (1.63)	28.21%	61.53%	10.25%
		R2	4.40 (0.96)	20.00%	77.15%	2.86%
	Therapeutic content was delivered entirely by a self-directed program or workbook, with some advice and information about change options (e.g. self-exclusion or information on gambling), information on how to use the self-directed program, and/ or encouraging or facilitative support delivered by a practitioner	R1	5.23 (1.53)	10.26%	71.79%	17.94%
		R2	5.03 (0.88)	0.00%	100.00%	0.00%
	Therapeutic content was predominantly delivered by a self-directed program or workbook but with some therapeutic content delivered by a practitioner	R1	6.21 (1.52)	5.13%	46.15%	48.71%
		R2	6.49 (1.08)	0.00%	40.00%	60.00%
	All therapeutic content was delivered by a practitioner*	R1	7.51 (1.22)	0.00%	17.95%	82.05%
Therapist approach	CBT*	R1	7.82 (0.93)	0.00%	7.69%	92.31%
	Motivational interviewing*	R1	7.13 (1.45)	2.56%	28.20%	69.23%
		R2	7.26 (0.84)	0.00%	20.00%	80.00%
	Cognitive therapy*	R1	7.00 (1.34)	2.56%	28.20%	69.23%
		R2	7.37 (0.76)	0.00%	2.86%	97.14%
	Behaviour therapy*	R1	6.95 (1.22)	0.00%	28.21%	71.79%
	Non-directive	R1	4.79 (1.79)	23.08%	53.85%	23.07%
		R2	5.11 (1.33)	5.72%	77.14%	17.14%
	Normative feedback	R1	4.82 (1.95)	30.77%	48.72%	20.52%
		R2	5.06 (0.98)	8.57%	88.57%	2.86%
Interaction modality	Face-to-face*	R1	7.90 (0.96)	0.00%	7.69%	92.31%

Table 4 (continued)

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
	Telephone	R1	6.05 (1.54)	5.12%	53.85%	41.03%
		R2	6.29 (1.03)	0.00%	60.00%	40.00%
	Internet	R1	6.33 (1.61)	7.69%	46.15%	46.15%
		R2	6.43 (0.90)	0.00%	68.57%	31.42%
Qualifications of practitioner	Registered professional*	R1	7.87 (0.88)	0.00%	5.13%	94.88%
	Intern or student	R1	5.90 (1.43)	5.12%	58.97%	35.90%
		R2	6.03 (1.30)	5.71%	57.15%	37.14%
	Counselor or volunteer	R1	4.95 (1.57)	23.08%	64.10%	12.82%
		R2	5.37 (1.24)	11.43%	71.43%	17.15%
Supervision	Supervision provided*	R1	7.77 (1.31)	2.56%	7.69%	89.74%
	Not provided with supervision	R1	4.56 (1.53)	20.51%	71.79%	7.69%
		R2	4.51 (1.16)	11.43%	82.85%	5.71%
	Provided with training to deliver the treatment*	R1	7.10 (1.61)	2.56%	28.21%	69.23%
		R2	7.34 (1.39)	2.86%	20.01%	77.14%
	Not provided with training to deliver the treatment	R1	3.69 (1.42)	41.02%	58.98%	0.00%
		R2	3.70 (1.20)	37.15%	60.00%	2.86%
Manual	Treatment manual*	R1	7.21 (1.28)	0.00%	28.20%	71.80%
	No treatment manual	R1	4.64 (1.56)	28.20%	61.54%	10.26%
		R2	4.77 (1.02)	17.15%	82.85%	0.00%
	Integrity check	R1	6.77 (1.40)	2.56%	41.02%	56.41%
		R2	6.77 (1.02)	0.00%	31.43%	68.57%
	No integrity check	R1	4.46 (1.46)	23.07%	74.36%	2.56%
		R2	4.71 (1.14)	11.43%	68.57%	20.00%
Self-directed	Internet	R1	5.33 (1.77)	15.39%	56.41%	28.21%
		R2	5.40 (1.29)	8.57%	74.29%	17.15%

Table 4 (continued)

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
	Paper-based	R1	4.51 (1.66)	28.20%	61.54%	10.25%
		R2	4.57 (1.25)	17.15%	80.00%	2.86%
	Check materials received and understood	R1	5.44 (1.84)	17.95%	48.72%	33.33%
		R2	5.80 (1.30)	2.86%	62.85%	34.29%
	No check materials received and understood	R1	3.79 (1.60)	43.58%	51.28%	5.12%
		R2	3.63 (1.22)	37.15%	60.00%	2.86%
Self-directed approach	CBT	R1	6.54 (1.39)	0.00%	58.98%	41.03%
		R2	6.49 (1.25)	2.86%	57.15%	40.00%
	Motivational interviewing	R1	5.59 (1.90)	12.82%	56.40%	30.77%
		R2	5.63 (1.35)	5.72%	71.43%	22.86%
	Cognitive therapy	R1	5.46 (1.96)	20.51%	48.72%	30.77%
		R2	5.86 (1.42)	5.72%	71.42%	22.86%
	Behaviour therapy	R1	5.59 (1.94)	17.94%	46.15%	35.89%
		R2	5.74 (1.46)	8.57%	62.86%	28.57%
	Non-directive	R1	3.67 (1.65)	51.28%	38.46%	10.25%
		R2	3.66 (1.37)	48.57%	45.72%	5.72%
	Normative feedback	R1	4.21 (1.94)	41.02%	43.59%	15.38%
		R2	4.11 (1.45)	28.58%	62.85%	8.57%

Items were classified as consensus-effective if at least 70% of panellists rated its effectiveness between 7 and 9, and fewer than 15% of panellists rated it between 1 and 3. Items were classified as consensus-ineffective if at least 70% of panellists rated its effectiveness between 1 and 3, and fewer than 15% of panellists rated it between 7 and 9. Items which met consensus criteria in the first round were not included in the second round

R1 round one, *R2* round two

[a]Figures were means derived from experimental studies in the literature

[*]Indicates that the item met consensus-effective criteria

[†]Indicates that the item met consensus-ineffective criteria

Table 5 Panel ratings for evaluation characteristics across both rounds

Group	Component/characteristic	Round	Mean rating (SD)	% of panellists rating		
				1–3	**4–6**	**7–9**
Nature of evaluation	Evaluated against a no intervention control group*	R1	6.85 (2.35)	12.82%	20.52%	66.67%
		R2	7.46 (1.86)	5.71%	20.00%	74.28%
	Evaluated against an active control group*	R1	6.69 (1.60)	2.56%	35.90%	61.54%
		R2	6.80 (1.17)	0.00%	28.57%	71.42%
	Evaluated against CBT	R1	5.90 (2.23)	10.26%	48.71%	41.02%
		R2	5.56 (2.06)	11.43%	54.28%	34.28%
Process evaluation	Specific processes or mediators are targeted by the intervention*	R1	7.23 (1.59)	5.13%	15.38%	79.48%
	Specific processes or mediators are not targeted by the intervention	R1	4.56 (1.55)	30.77%	58.98%	10.25%
		R2	4.63 (0.86)	17.14%	82.86%	0.00%
	Non-specific processes or mediators are targeted by the intervention	R1	5.36 (1.67)	15.39%	58.98%	25.64%
		R2	5.86 (0.76)	0.00%	85.71%	14.29%
	Non-specific processes or mediators are not targeted by the intervention	R1	3.95 (1.54)	38.46%	56.42%	5.12%
		R2	4.60 (1.10)	14.28%	82.85%	2.86%

Items were classified as consensus-effective if at least 70% of panellists rated its effectiveness between 7 and 9, and fewer than 15% of panellists rated it between 1 and 3. Items were classified as consensus-ineffective if at least 70% of panellists rated its effectiveness between 1 and 3, and fewer than 15% of panellists rated it between 7 and 9. Items which met consensus criteria in the first round were not included in the second round

R1 round one, *R2* round two

*Indicates that the item met consensus-effective criteria

problem solving, and *goal setting*, in addressing the complex and multifaceted needs of people experiencing gambling harm. Although a significant proportion of researchers reported clinical experience with addictions, they seemed to endorse only those strategies with a stronger empirical evidence base in the relatively nascent published gambling literature, such as *relapse prevention* and *cognitive restructuring*. Clinicians may therefore adopt a more practice-oriented lens, valuing techniques that demonstrate utility in real-world treatment settings, while researchers may adopt a narrower evidence-focused lens that prioritises interventions supported by rigorous trials. Relatedly, tailoring is likely a key factor, whereby clinicians often adapt their approach to the specific needs of individual clients, while research has been slower to assess the efficacy of such tailored interventions. Geographic context may also contribute to the divergence, with clinician perspectives shaped by the distinctive patterns of gambling harm, service delivery structures, and cultural contexts of Australia and New Zealand (e.g. financial counselling is a major treatment focus in their service delivery models) compared to the broader international research community. A modified RAND/UCLA Appropriateness Method, which combines systematic evidence reviews with structured rounds of rating and discussion among experts, may clarify these discrepancies in clinician and clinical researcher technique ratings (Fitch et al., 2001).

Participant/Recruitment Characteristics

Consensus statements on the effectiveness of *screening for eligibility*, *face-to-face screening* (in person/video-conferencing), and *face-to-face baseline assessments* (in person/video-conferencing) are consistent with empirical evidence that assessments may be associated with behaviour change (Kypri et al., 2007; McCambridge & Day, 2008; Petry et al., 2008). An assessment may promote increased problem awareness, readiness, or motivation to change (Petry, 2005; Prochaska et al., 1997). Change can also be a result of responses to perceived expectations attributed to researchers by participants in assessment sessions, leading to increases in socially desirable behaviours or self-reporting biases (Kypri et al., 2007; McCambridge & Day, 2008). These participant and recruitment characteristics may be particularly relevant for more intensive interventions, where assessments and screening processes are more extensive, rather than for brief interventions.

Consensus statements on the effectiveness of *recruiting participants from gambling services or treatment agencies* and requiring participants to *screen positive for gambling problems or gambling disorder* were also identified. Participants in these groups likely experience greater problem gambling severity and harm. Associations between higher baseline problem gambling severity and better treatment outcomes have been found (Eriksen et al., 2023; Sagoe et al., 2021), although this finding is not consistent across studies (Merkouris et al., 2016). One explanation for a possible association between higher baseline severity and better outcomes is a larger treatment potential for those experiencing more difficulties (Eriksen et al., 2023; Sagoe et al., 2021). Recruiting participants already engaged in gambling services might also yield better outcomes as participants may have greater proclivity for help-seeking or motivation to engage in treatment (Angus et al., 2020; Suurvali et al., 2010), although this approach has implications for eligibility criteria and the composition of control groups.

Delivery Characteristics

Consensus statements on delivery characteristics perceived to be effective by researchers with experience in clinical interventions are suggestive of a more intensive, traditional conceptualisation of treatment, whereby trained, qualified, and supervised therapists deliver evidence-based and manualised therapeutic content (i.e. CBT and MI) via a relatively high number of face-to-face sessions. Consistent with this, recent meta-analyses have found that face-to-face treatments are associated with significantly greater improvements than self-directed ones, with treatment success increasing with time spent in treatment (Eriksen et al., 2023; Goslar et al., 2017; Pfund et al., 2020), although intensive evidence-based self-directed online interventions reveal promising results (Goslar et al., 2017). Both individual and group delivery met consensus criteria for effectiveness, aligning with meta-analytic findings demonstrating treatment outcomes are not impacted by mode of delivery (Eriksen et al., 2023; Goslar et al., 2017).

Consensus on effectiveness was reached for the intervention goal of reduction in gambling time and money, but not abstinence. Studies have demonstrated that non-abstinence treatment goals may be more feasible for many treatment-seekers, increase treatment engagement, and reduce barriers to help-seeking (Dowling & Smith, 2007; Dowling et al., 2009; Ladouceur et al., 2009; Robson et al., 2002). Given the fluid nature of goal selection, participants may change their goals during treatment (Dowling & Smith, 2007; Dowling et al., 2009; Ladouceur et al., 2009; Stea et al., 2015). These findings have implications for supporting clients to select non-abstinence treatment goals (Ladouceur, 2005; Robson et al., 2002). However, consensus was reached on the ineffectiveness of *imposing a goal on participants*. Imposing a goal contradicts the principle of autonomy in MI, which emphasises self-determination and choice (Miller & Rollnick, 2012, p. 124). Such imposition might impede exploration of client ambivalence, a key feature of MI, even if the imposed goal is consistent with the client's own perspective. This might reflect an instance of the righting reflex, potentially leading to increased sustain talk and reduced change talk (Miller & Rollnick, 2012, p. 7).

Evaluation Characteristics

Consensus was reached on the effectiveness of evaluating interventions against *passive control groups* (e.g. waiting list) and *active control groups* (e.g. referral to Gamblers Anonymous). Using control groups can help to account for natural recovery, which might occur independently of treatment-specific effects (Pfund et al., 2023a, 2023b; Sagoe et al., 2021; Slutske, 2006). In the relatively nascent gambling treatment literature, studies are still primarily evaluating interventions against no-intervention control groups, rather than active intervention control groups (Eriksen et al., 2023) to determine *whether* interventions are effective. Given the growing evidence-base for certain interventions (Cowlishaw et al., 2012; Pfund et al., 2023a, 2023b; Yakovenko et al., 2015), there is now a need to directly evaluate the relative effectiveness of different interventions. Consensus was also reached on the effectiveness of *interventions targeting specific processes or mediators*, which is a gap in the current evidence base (Free et al., 2024; Rodda et al., 2018).

Contextual Considerations

In this Delphi study, intervention content and characteristics were systematically selected using the GIST-1 (Rodda et al., 2018), which is a data-driven taxonomy derived from gambling interventions evaluated in the gambling literature. While no treatment components were excluded from the GIST-1, the content was largely mapped onto CBT and MI techniques delivered in traditional, intensive, and pracititioner-led modalities, reflecting their large evidence base. For example, the most frequently reported techniques in these interventions were relapse prevention, cognitive restructuring, behavioural substitution, stimulus control, and motivational enhancement.

The expert panel, which was systematically drawn from an international register, had strong research and clinical expertise, with international representation from 11 countries. Despite efforts to include diverse geographical perspectives, most panellists were embedded in Western contexts. The absence of researchers from Asia, Africa, or South America limits the study's ability to reflect diverse gambling markets, regulatory contexts, help-seeking patterns, service delivery models, therapeutic training, and intervention traditions, thereby reducing its capacity to capture alternative theoretical approaches or culturally specific intervention practices. Information relating to treatment orientations and delivery experiences of the panel was not collected, but over half were psychologists, who may have had greater training in CBT and MI.

While the systematic item pool generation and panel formation contributed to the methodological rigour, replicability, and transparency of this study, these contextual considerations suggest that the findings may reinforce prevailing therapeutic paradigms from the empirical literature rather than identifying promising alternatives, as experts evaluated taxonomy-driven items drawn from the research literature in which they themselves are embedded. Consequently, the consensus statements align with CBT and MI approaches, as well as with more traditionally practitioner-led intensive interventions. They should therefore be interpreted within these epistemic and geographic limitations rather than as universally applicable. Moreover, while they provide a clear framework for intervention design, there is a risk that they may be interpreted as representing an "ideal treatment" applicable to all gambling clients, without accounting for health, cultural, and service inequities or individual differences in client presentations, needs, and preferences. Gambling treatment research has generally lagged behind practice in the evaluation of alternative, culturally specific, and targeted interventions. In light of this, future studies should consider adopting alternative inclusion criteria to include researchers from even more diverse therapeutic and geographic backgrounds while maintaining sufficient expertise to provide informed and reliable ratings and exploring the optimal components for targeted interventions.

The broader program of research associated with this Delphi study highlighted promising alternative, culturally specific, and targeted interventions. First, clinical consensus statements from Australian and New Zealand specialist gambling clinicians focussing on therapeutic approaches suggest that approaches beyond CBT and MI may be effective in pragmatic settings, which include clients who are typically excluded from, or less likely to participate in, clinical trials. These approaches include psychoeducation, mindfulness-based therapies, solution-focussed brief therapy, interpersonal psychotherapy, narrative therapy, acceptance and commitment therapy, dialectical behaviour therapy, and family interventions, most of which have only an emerging evidence base (Guyett et al., 2025). Although mindfulness did not reach consensus in the current study,

researchers identified *emotion regulation*, *distress tolerance*, and *acceptance* as potentially beneficial, underscoring the need for further investigation of experience avoidance techniques in third-wave CBT.

Second, the clinician Delphi studies on techniques (Keshani et al., 2025) and therapeutic approaches (Guyett et al., 2025) highlighted key considerations for delivering gambling interventions to culturally diverse, linguistically diverse, or Indigenous populations. Techniques should be adapted to meet individual and cultural needs, guided by the therapeutic relationship, and delivered in culturally safe and responsive ways, such as by using flexible therapies, modified materials, video explanations, interpreters, or family/community involvement. Use of a clients' first language and culturally relevant explanations can also enhance engagement. Community, family, and social beliefs can influence treatment outcomes, with involvement supporting effectiveness, and stigma, shame, and normalised gambling hindering effectiveness. Certain techniques (e.g. *mindfulness*, *social skills training*) and therapeutic approaches (e.g. acceptance and commitment therapy, narrative therapy, family/systemic therapy, solution-focused therapy, and psychoeducation) may be particularly useful, although prerequisites such as trauma, social support, and financial literacy should be addressed first. Finally, effective delivery requires cultural competence in terms of knowledge about diverse contexts and concepts and cultural responsivity in terms of actively responding to each client's preferences and needs.

Finally, the clinician Delphi study on therapeutic approaches (Guyett et al., 2025) reached consensus for targeted interventions for some client subgroups. Consensus was achieved that psychological interventions are more effective than no intervention across subgroups defined by gender, age, gambling activity, and psychiatric comorbidities. Psychological interventions were also judged more effective than other interventions for women and men, but not for other subgroups. No consensus was reached on the relative effectiveness of sequenced versus simultaneous treatments for clients with psychiatric comorbidities, or on whether gambling or comorbidities should be treated first in sequenced approaches.

Other Strengths and Limitations

Study objectives, participant selection criteria for carrying items forward to the next round, consensus criteria, and the number of Delphi rounds were specified a priori, consistent with key quality recommendations for Delphi studies (Diamond et al., 2014). The study was reported with methodological transparency, careful adherence to consensus conventions, and clear reporting consistent with reporting standards. Additionally, panellists were asked to consider a range of components beyond techniques (Rodda et al., 2018), and between-round attrition was low. Prospectively registering the Delphi protocol could have improved transparency and is recommended for future research in this area. Panellists were also not asked to rate items for different levels of gambling severity, which would have likely yielded different responses across the spectrum of severity. While consensus criteria was identical to another Delphi study with clinicians (Keshani et al., 2025), it is important to note that such criteria are somewhat arbitrary (Diamond et al., 2014; Jorm, 2015) and consensus is not a proxy for effectiveness. Finally, although panellists were provided with detailed descriptions of each technique, they were required to rate all items, even those they felt unqualified to assess or found ambiguous. This limitation should be addressed in future research, as providing the option to abstain may enhance rating validity by distinguishing informed judgements from speculative responses.

Implications

The consensus statements identified in this study are displayed in *Supplementary Materials B*. Findings highlight intervention content perceived as effective for gambling treatment by researchers with experience in developing and evaluating clinical interventions. Expert consensus such as this provides a rationale for the inclusion of specific intervention components in treatment programs and can guide remediation of deficiencies in the current evidence base by indicating where future research efforts may be most fruitful. For example, findings can inform the selection of components to trial in experimental and optimisation studies (Levati et al., 2016). By using a domain-specific taxonomy and including intervention characteristics beyond techniques, the consensus statements may have broader utility in guiding the design of optimisation studies. Consistent with the optimisation phase of the Multiphase Optimisation Strategy (MOST) framework for intervention development (Collins & Kugler, 2018), the use of factorial experiments allow promising intervention components to be experimentally evaluated both individually and in combination to determine the degree to which intervention content interacts additively, synergistically, or reductively prior to integrating the best performing components in larger RCTs (Collins & Kugler, 2018; Collins et al., 2011). Meta-analyses and meta-regressions have also been used to identify effective intervention content across health domains by investigating how intervention components interact when combined (Merkouris et al., 2023; Sheeran et al., 2019). Findings from Delphi studies, content analyses, and meta-analyses have all been used to inform component selection in optimisation trials (Crane et al., 2018). Given that meta-analyses have not yet been conducted to identify effective techniques and intervention components for gambling treatment, these consensus statements offer a pragmatic starting point to prioritise candidate components for gambling intervention research in alignment with the recently identified research priorities of the field (Czakó et al., 2025).

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Author Contribution Imran M. Keshani: data curation, formal analysis, investigation, methodology, project administration, writing—original draft, writing—review and editing. Stephanie S. Merkouris: investigation, methodology, supervision, writing—original draft, writing—review and editing. Simone N. Rodda: investigation, methodology, resources, supervision, writing—review and editing. Max Abbott, Henri-Jean Aubin, Maria E. Bellringer, Anne H. Berman, Joel Billieux, Henrietta Bowden-Jones, Colette J. Browning, Per Carlbring, Sari Castrén, Samuel R. Chamberlain, Darren R. Christensen, Zsolt Demetrovics, Jeffrey Derevensky, Fernando Fernandez-Aranda, Sally Gainsbury, Meredith K. Ginley, Mark D. Griffiths, Anders Håkansson, David C. Hodgins, Alun Jackson, Susana Jimenez-Murcia, Daniel L King, Jason Landon, Amandine Luquiens, Olof Molander, Anders Nilsson, Brian L. Odlaug, Marc Potenza, Shane A. Thomas, and James Whelan: writing—review and editing. Nicki A. Dowling: conceptualisation, investigation, methodology, resources, supervision, writing—original draft, writing—review and editing.

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Declarations

Ethics Approval and Informed Consent All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Hel-

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Conflict of interest Imran M. Keshani: Imran Keshani declares no conflict of interest in relation to this manuscript.
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References

Abraham, C., & Michie, S. (2008). A taxonomy of behavior change techniques used in interventions. *Health Psychology, 27*(3), 379–387. https://doi.org/10.1037/0278-6133.27.3.379

Angus, D. J., Anjoul, F., Shannon, K., & Blaszczynski, A. (2020). Gambling related harms – Community and clinical comparisons. *Addiction Research & Theory, 28*(3), 194–203. https://doi.org/10.1080/16066359.2019.1622001

Bickl, A. M., Kraus, L., Loy, J. K., Kriwy, P., Sleczka, P., & Schwarzkopf, L. (2023). Development of gambling behaviour and its relationship with perceived social support: A longitudinal study of young adult male gamblers. *Journal of Gambling Studies, 40*, 307–332. https://doi.org/10.1007/s10899-023-10200-7

Castro-Calvo, J., King, D. L., Stein, D. J., Brand, M., Carmi, L., Chamberlain, S. R., Demetrovics, Z., Fineberg, N. A., Rumpf, H.-J., Yücel, M., Achab, S., Ambekar, A., Bahar, N., Blaszczynski, A., Bowden-Jones, H., Carbonell, X., Chan, E. M. L., Ko, C.-H., de Timary, P., ..., & Billieux, J. (2021). Expert appraisal of criteria for assessing gaming disorder: An international Delphi study. *Addiction*, *116*(9), 2463–2475. https://doi.org/10.1111/add.15411

Collins, L. M., & Kugler, K. C. (2018). *Optimization of behavioral, biobehavioral, and biomedical interventions* (Vol. 10). Springer. https://doi.org/10.1007/978-3-319-72206-1

Collins, L. M., Baker, T. B., Mermelstein, R. J., Piper, M. E., Jorenby, D. E., Smith, S. S., Christiansen, B. A., Schlam, T. R., Cook, J. W., & Fiore, M. C. (2011). The multiphase optimization strategy for engineering effective tobacco use interventions. *Annals of Behavioral Medicine, 41*(2), 208–226. https://doi.org/10.1007/s12160-010-9253-x

Cowlishaw, S., Merkouris, S., Dowling, N., Anderson, C., Jackson, A., & Thomas, S. (2012). Psychological therapies for pathological and problem gambling. *Cochrane Database of Systematic Reviews*(11). https://doi.org/10.1002/14651858.CD008937.pub2

Crane, D., Garnett, C., Michie, S., West, R., & Brown, J. (2018). A smartphone app to reduce excessive alcohol consumption: Identifying the effectiveness of intervention components in a factorial randomised control trial. *Scientific Reports, 8*(1), 4384. https://doi.org/10.1038/s41598-018-22420-8

Czakó, A., Potenza, M. N., Hodgins, D. C., Yu, S. M., Wu, A. M. S., ..., & Demetrovics, Z. (2025). Research priorities in gambling: Findings of a large-scale expert study. *Journal of Behavioral Addictions*, in press.

de Lisle, S. M., Dowling, N. A., & Allen, J. S. (2012). Mindfulness and problem gambling: A review of the literature. *Journal of Gambling Studies, 28*(4), 719–739. https://doi.org/10.1007/s10899-011-9284-7

Diamond, I. R., Grant, R. C., Feldman, B. M., Pencharz, P. B., Ling, S. C., Moore, A. M., & Wales, P. W. (2014). Defining consensus: A systematic review recommends methodologic criteria for reporting of Delphi studies. *Journal of Clinical Epidemiology, 67*(4), 401–409.

Dowling, N., & Smith, D. (2007). Treatment goal selection for female pathological gambling: A comparison of abstinence and controlled gambling. *Journal of Gambling Studies, 23*(3), 335–345. https://doi.org/10.1007/s10899-007-9064-6

Dowling, N. A., Smith, D. P., & Thomas, T. (2009). A preliminary investigation of abstinence and controlled gambling as self-selected goals of treatment for female pathological gambling. *Journal of Gambling Studies, 25*(2), 201. https://doi.org/10.1007/s10899-009-9116-1

Eriksen, J. W., Fiskaali, A., Zachariae, R., Wellnitz, K. B., Oernboel, E., Stenbro, A. W., Marcussen, T., & Petersen, M. W. (2023). Psychological intervention for gambling disorder: A systematic review and meta-analysis. *Journal of Behavioral Addictions, 12*(3), 613–630.

Fitch, K., Bernstein, S. J., Aguilar, M. D., Burnand, B., LaCalle, J. R., Lazaro, P., et al. (2001). The RAND/UCLA appropriateness method user's manual. RAND Corporation. Available from: https://www.rand.org/pubs/monograph_reports/MR1269.html. Accessed 15 Sept 2025.

Free, B. L., Halle Smith, E., Ginley, M. K., Whelan, J. P., & Pfund, R. A. (2024). Does cognitive-behavioral treatment affect putative mechanisms of change among individuals with problem gambling? A systematic review and exploratory meta-analysis. *Addictive Behaviors, 158*, 108110. https://doi.org/10.1016/j.addbeh.2024.108110

Garnett, C., Crane, D., West, R., Brown, J., & Michie, S. (2015). Identification of behavior change techniques and engagement strategies to design a smartphone app to reduce alcohol consumption using a formal consensus method. *JMIR mHealth and uHealth, 3*(2), e73. https://doi.org/10.2196/mhealth.3895

Gattrell, W. T., Logullo, P., van Zuuren, E. J., Price, A., Hughes, E. L., Blazey, P., Winchester, C. C., Tovey, D., Goldman, K., Hungin, A. P., & Harrison, N. (2024). ACCORD (ACcurate COnsensus Reporting Document): A reporting guideline for consensus methods in biomedicine developed via a modified delphi. *PLOS Medicine, 21*(1), e1004326. https://doi.org/10.1371/journal.pmed.1004326

Gooding, P., & Tarrier, N. (2009). A systematic review and meta-analysis of cognitive-behavioural interventions to reduce problem gambling: Hedging our bets? *Behaviour Research and Therapy, 47*(7), 592–607.

Goslar, M., Leibetseder, M., Muench, H. M., Hofmann, S. G., & Laireiter, A.-R. (2017). Efficacy of face-to-face versus self-guided treatments for disordered gambling: A meta-analysis. *Journal of Behavioral Addictions, 6*(2), 142–162. https://doi.org/10.1556/2006.6.2017.034

Guyett, A., Merkouris, S.S., Keshani, I., Rodda, S.N., & Dowling, N.A. (2025). Clinical consensus statements on gambling treatments: A Delphi study. Manuscript in preparation.

Hodgins, D. C., & el-Guebaly, N. (2004). Retrospective and prospective reports of precipitants to relapse in pathological gambling. *Journal of Consulting and Clinical Psychology, 72*(1), 72–80. https://doi.org/10.1037/0022-006X.72.1.72

Hodgins, D. C., Currie, S. R., el-Guebaly, N., & Diskin, K. M. (2007). Does providing extended relapse prevention bibliotherapy to problem gamblers improve outcome? *Journal of Gambling Studies, 23*(1), 41–54. https://doi.org/10.1007/s10899-006-9045-1

Hsu, C.-C., & Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research & Evaluation*, *12*(1). https://doi.org/10.7275/pdz9-th90

Humphreys, G., Evans, R., Makin, H., Cooke, R., & Jones, A. (2021). Identification of behavior change techniques from successful web-based interventions targeting alcohol consumption, binge eating, and gambling: Systematic review. *Journal of Medical Internet Research, 23*(2), e22694. https://doi.org/10.2196/22694

Jorm, A. F. (2015). Using the delphi expert consensus method in mental health research. *Australian & New Zealand Journal of Psychiatry, 49*(10), 887–897. https://doi.org/10.1177/0004867415600891

Keshani, I. M., Merkouris, S. S., Guyett, A., Rodda, S. N., & Dowling, N. A. (2025). Clinical consensus statements on change techniques for gambling treatment: A Delphi study with clinicians. *Journal of Behavioral Addictions*. https://doi.org/10.1556/2006.2025.00004

Kypri, K., Langley, J. D., Saunders, J. B., & Cashell-Smith, M. L. (2007). Assessment may conceal therapeutic benefit: Findings from a randomized controlled trial for hazardous drinking. *Addiction, 102*(1), 62–70. https://doi.org/10.1111/.1360-0443.2006.01632.x

Ladouceur, R. (2005). Controlled gambling for pathological gamblers. *Journal of Gambling Studies, 21*(1), 49–57. https://doi.org/10.1007/s10899-004-1923-9

Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., Leblond, J., & Jacques, C. (2001). Cognitive treatment of pathological gambling. *The Journal of Nervous and Mental Disease, 189*(11), 774–780. https://doi.org/10.1097/00005053-200111000-00007

Ladouceur, R., Sylvain, C., Boutin, C., Lachance, S., Doucet, C., & Leblond, J. (2003). Group therapy for pathological gamblers: A cognitive approach. *Behaviour Research and Therapy, 41*(5), 587–596. https://doi.org/10.1016/s0005-7967(02)00036-0

Ladouceur, R., Lachance, S., & Fournier, P.-M. (2009). Is control a viable goal in the treatment of pathological gambling? *Behaviour Research and Therapy, 47*(3), 189–197.

Levati, S., Campbell, P., Frost, R., Dougall, N., Wells, M., Donaldson, C., & Hagen, S. (2016). Optimisation of complex health interventions prior to a randomised controlled trial: A scoping review of strategies used. *Pilot and Feasibility Studies, 2*(1), 17. https://doi.org/10.1186/s40814-016-0058-y

Luquiens, A., Guillou, M., Giustiniani, J., Barrault, S., Caillon, J., Delmas, H., Achab, S., Bento, B., Billieux, J., Brevers, D., Brody, A., Brunault, P., Challet-Bouju, G., Chóliz, M., Clark, L., Cornil, A., Costes, J.-M., Devos, G., Díaz, R., & Grall-Bronnec, M. (2022). Pictograms to aid laypeople in identifying the addictiveness of gambling products (PictoGRRed study). *Scientific Reports, 12*(1), 22510. https://doi.org/10.1038/s41598-022-26963-9

Månsson, V., Samuelsson, E., Berman, A. H., & Nilsson, A. (2022). Treatment for problem gambling and counselors' perception of their clinical competence: A national web survey in Sweden. *Addiction Science & Clinical Practice*. https://doi.org/10.1186/s13722-022-00347-w

Maynard, B. R., Wilson, A. N., Labuzienski, E., & Whiting, S. W. (2015). Mindfulness-based approaches in the treatment of disordered gambling: A systematic review and meta-analysis. *Research on Social Work Practice, 28*(3), 348–362. https://doi.org/10.1177/1049731515606977

McCambridge, J., & Day, M. (2008). Randomized controlled trial of the effects of completing the Alcohol Use Disorders Identification Test questionnaire on self-reported hazardous drinking. *Addiction, 103*(2), 241–248. https://doi.org/10.1111/j.1360-0443.2007.02080.x

Merkouris, S. S., Thomas, S. A., Browning, C. J., & Dowling, N. A. (2016). Predictors of outcomes of psycho logical treatments for disordered gambling: A systematic review. *Clinical Psychology Review, 48*, 7–31.

Merkouris, S. S., Rodda, S. N., Aarsman, S. R., Hodgins, D. C., & Dowling, N. A. (2023). Effective behaviour change techniques for family and close friends: A systematic review and meta-analysis across the addictions. *Clinical Psychology Review, 100*, 102251.

Mersha, A. G., Kennedy, M., Eftekhari, P., Lee, K. S. K., Upton, P., Segan, C., Jackson, M. A., Jennings, K., & Gould, G. S. (2023). Using the behaviour change wheel and modified Delphi method to identify behavioural change techniques for improving adherence to smoking cessation medications. *BMC Public Health, 23*(1), 1362. https://doi.org/10.1186/s12889-023-16278-3

Michie, S., & Johnston, M. (2012). Theories and techniques of behaviour change: Developing a cumulative science of behaviour change. *Health Psychology Review, 6*(1), 1–6. https://doi.org/10.1080/17437199.2012.654964

Michie, S., Whittington, C., Hamoudi, Z., Zarnani, F., Tober, G., & West, R. (2012). Identification of behaviour change techniques to reduce excessive alcohol consumption. *Addiction, 107*(8), 1431–1440. https://doi.org/10.1111/j.1360-0443.2012.03845.x

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: Building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine, 46*(1), 81–95. https://doi.org/10.1007/s12160-013-9486-6

Miller, W. R., & Rollnick, S. (2012). *Motivational interviewing: Helping people change* (Third edition ed.). The Guildford Press.

Penfold, K. L., & Ogden, J. (2023). The role of social support and belonging in predicting recovery from problem gambling. *Journal of Gambling Studies*. https://doi.org/10.1007/s10899-023-10225-y

Petry, N. M. (2005). Stages of change in treatment-seeking pathological gamblers. *Journal of Consulting and Clinical Psychology, 73*(2), 312–322. https://doi.org/10.1037/0022-006X.73.2.312

Petry, N. M., & Weiss, L. (2009). Social support is associated with gambling treatment outcomes in pathological gamblers. *American Journal on Addictions, 18*(5), 402–408. https://doi.org/10.3109/10550490903077861

Petry, N. M., Weinstock, J., Ledgerwood, D. M., & Morasco, B. (2008). A randomized trial of brief interventions for problem and pathological gamblers. *Journal of Consulting and Clinical Psychology, 76*(2), 318–328. https://doi.org/10.1037/0022-006X.76.2.318

Pfund, R. A., Peter, S. C., Whelan, J. P., Meyers, A. W., Ginley, M. K., & Relyea, G. (2020). Is more better? A meta-analysis of dose and efficacy in face-to-face psychological treatments for problem and disordered gambling. *Psychology of Addictive Behaviors, 34*(5), 557–568. https://doi.org/10.1037/adb0000560

Pfund, R. A., Forman, D. P., Whalen, S. K., Zech, J. M., Ginley, M. K., Peter, S. C., McAfee, N. W., & Whelan, J. P. (2023a). Effect of cognitive-behavioral techniques for problem gambling and gambling disorder: A systematic review and meta-analysis. *Addiction, 118*(9), 1661–1674.

Pfund, R. A., Ginley, M. K., Kim, H. S., Boness, C. L., Horn, T. L., & Whelan, J. P. (2023b). Cognitive-behavioral treatment for gambling harm: Umbrella review and meta-analysis. *Clinical Psychology Review, 105*, 1–11.

Prochaska, J. O., Diclemente, C. C., & Norcross, J. C. (1997). In search of how people change: Applications to addictive behaviors. *The American Psychologist, 47*(9), 1102–1114. https://doi.org/10.1037/0003-066X.47.9.1102

Robson, E., Edwards, J., Smith, G., & Colman, I. (2002). Gambling decisions: An early intervention program for problem gamblers. *Journal of Gambling Studies, 18*(3), 235–255. https://doi.org/10.1023/a:1016888705033

Rodda, S. N., Merkouris, S. S., Abraham, C., Hodgins, D. C., Cowlishaw, S., & Dowling, N. A. (2018). Therapist-delivered and self-help interventions for gambling problems: A review of contents. *Journal of Behavioral Addictions, 7*(2), 211–226. https://doi.org/10.1556/2006.7.2018.44

Rosenfeld, R. M., Nnacheta, L. C., & Corrigan, M. D. (2015). Clinical consensus statement development manual. *Otolaryngology-Head and Neck Surgery, 153*, S1–S14. https://doi.org/10.1177/0194599815601394

Sagoe, D., Griffiths, M. D., Erevik, E. K., Høyland, T., Leino, T., Lande, I. A., Sigurdsson, M. E., & Pallesen, S. (2021). Internet-based treatment of gambling problems: A systematic review and meta-analysis of randomized controlled trials. *Journal of Behavioral Addictions, 10*(3), 546–565.

Sancho, M., De Gracia, M., Rodríguez, R. C., Mallorquí-Bagué, N., Sánchez-González, J., Trujols, J., Sánchez, I., Jiménez-Murcia, S., & Menchón, J. M. (2018). Mindfulness-based interventions for the treatment of substance and behavioral addictions: A systematic review. *Frontiers in Psychiatry, 9*, 95. https://doi.org/10.3389/fpsyt.2018.00095

Sheeran, P., Abraham, C., Jones, K., Villegas, M. E., Avishai, A., Symes, Y. R., Ellinger, H., Miles, E., Gates, K. M., Wright, C. E., Ribisl, K. M., & Mayer, D. K. (2019). Promoting physical activity among cancer survivors: Meta-analysis and meta-CART analysis of randomized controlled trials. *Health Psychology, 38*(6), 467–482. https://doi.org/10.1037/hea0000712

Slutske, W. S. (2006). Natural recovery and treatment-seeking in pathological gambling: Results of two US national surveys. *American Journal of Psychiatry, 163*(2), 297–302. https://doi.org/10.1176/appi.ajp.163.2.297

St Quinton, T., Morris, B., Pickering, D., & Smith, D. M. (2022). Behavior change techniques and delivery modes in interventions targeting adolescent gambling: A systematic review. *Journal of Gambling Studies, 38*(4), 1503–1528. https://doi.org/10.1007/s10899-022-10108-8

Stea, J. N., Hodgins, D. C., & Fung, T. (2015). Abstinence versus moderation goals in brief motivational treatment for pathological gambling. *Journal of Gambling Studies, 31*(3), 1029–1045. https://doi.org/10.1007/s10899-014-9461-6

Suurvali, H., Hodgins, D. C., & Cunningham, J. A. (2010). Motivators for resolving or seeking help for gambling problems: A review of the empirical literature. *Journal of Gambling Studies, 26*(1), 1–33. https://doi.org/10.1007/s10899-009-9151-y

Taylor, A., Tallon, D., Kessler, D., Peters, T. J., Shafran, R., Williams, C., & Wiles, N. (2020). An expert consensus on the most effective components of cognitive behavioural therapy for adults with depression: A modified delphi study. *Cognitive Behaviour Therapy, 49*(3), 242–255. https://doi.org/10.1080/16506073.2019.1641146

Vestjens, L., Kempen, G. I. J. M., Crutzen, R., Kok, G., & Zijlstra, G. A. R. (2015). Promising behavior change techniques in a multicomponent intervention to reduce concerns about falls in old age: A Delphi study. *Health Education Research, 30*(2), 309–322. https://doi.org/10.1093/her/cyv003

Walker, M., Toneatto, T., Potenza, M. N., Petry, N., Ladouceur, R., Hodgins, D. C., El-Guebaly, N., Echeburua, E., & Blaszczynski, A. (2006). A framework for reporting outcomes in problem gambling treatment research: The Banff, Alberta consensus. *Addiction, 101*(4), 504–511. https://doi.org/10.1111/j.1360-0443.2005.01341.x

Walsh, K. A., Timmons, S., Byrne, S., Browne, J., & Mc Sharry, J. (2020). Identifying behavior change techniques for inclusion in a complex intervention targeting antipsychotic prescribing to nursing home residents with dementia. *Translational Behavioral Medicine, 11*(2), 470–483. https://doi.org/10.1093/tbm/ibaa053

Willett, M., Duda, J., Fenton, S., Gautrey, C., Greig, C., & Rushton, A. (2019). Effectiveness of behaviour change techniques in physiotherapy interventions to promote physical activity adherence in lower limb osteoarthritis patients: A systematic review. *PLoS ONE, 14*(7), e0219482. https://doi.org/10.1371/journal.pone.0219482

Yakovenko, I., Quigley, L., Hemmelgarn, B. R., Hodgins, D. C., & Ronksley, P. (2015). The efficacy of motivational interviewing for disordered gambling: Systematic review and meta-analysis. *Addictive Behaviors, 43*, 72–82. https://doi.org/10.1016/j.addbeh.2014.12.011

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