Gambling Harms in Adult Social Care: Developing an 'Introductory' Question to Identify Gambling Harms Among Service Users

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Abstract

Gambling harms are disproportionately experienced among disadvantaged groups and as such, adult social care (ASC) practitioners are well-placed to identify and support affected individuals. There exists no evidence-based 'introductory' question for practitioners to identify those at risk of gambling harms, which includes family and friends ('affected others'). To develop an 'introductory' question for use in English ASC, we conducted a scoping review that identified fifteen potential questions.

Questions were refined through expert panel review groups ($n = 13$), cognitive interviewing ($n = 18$), test–retest reliability checks ($n = 20$) and validity testing ($n = 2,100$) against gold-standard measures of problem gambling behaviour. The question development process produced two questions suitable for testing in local authority (LA) ASC departments. These were (i) 'Do you feel you are affected by any gambling, either your own or someone else's?' and (ii) 'If you or someone close to you gambles, do you feel it is causing you any worries?' Each had good face validity, strong test–retest reliability, correlated highly with well-being measures and performed reasonably against validated measures of problem gambling. These two questions are currently being piloted by ASC practitioners in three English LAs to assess their feasibility for adoption in practice.

Introduction

Gambling harms are adverse impacts from gambling on individuals, families, communities and society (Wardle *et al.*, 2018). These include financial harms, poorer health and increased crime (Velleman and Orford, 2015). Gambling harms are a significant public health problem (Rogers, 2019; Wardle *et al.*, 2019; Blank *et al.*, 2021a) which may impact both the person gambling and those around them (affected others) (Salonen *et al.*, 2015; Blake *et al.*, 2019a,b; Bowden-Jones *et al.*, 2022).

In Great Britain, it is conservatively estimated that disordered or problem gambling affects 0.7 per cent of the population (Connolly *et al.*, 2018) with a 'typical' disordered gambler affecting approximately six others (Goodwin *et al.*, 2017; Castrén *et al.*, 2021), significantly increasing estimates of those affected by gambling harms. Some screening tools or questions have been developed to include affected others; however, no evidence-based 'introductory' question was identified for use in adult social care (ASC; Forward *et al.*, 2022). The literature pertaining to affected others is often in terms of measuring harms for help-seeking individuals rather than focusing on the identification of affected others (Dowling *et al.*, 2014; Landon *et al.*, 2018; Castrén *et al.*, 2021).

Gambling harms are associated with poorer health outcomes (Ekholm *et al.*, 2018), other addictions (Tackett *et al.*, 2017), domestic violence (Dowling *et al.*, 2014) and high rates of suicidality (Wardle *et al.*, 2019). Gambling harms can affect anyone but disproportionately affect those from backgrounds that are commonly encountered by local authority (LA) practitioners such as social workers, for example, people with mental health problems, people with learning disabilities and the socially

isolated (Bramley *et al.*, 2017). Treatment for gambling harms is effective but often not sought until a 'crisis' point (Di Nicola *et al.*, 2020).

The UK government has recognised the need to reduce the harms caused by gambling (Office for Health Improvements and Disparities, 2023). Public health departments in LAs have also started to address gambling harms (see Gambling Commission, 2022) and the Royal Society of Public Health (RSPH) has campaigned to reduce gambling outlets and raise awareness of gambling harms (RSPH, 2018). Increasingly, a whole systems-based approach is recommended to both prevent and address gambling harms (Johnstone and Regan, 2020), and LAs are encouraged to tackle gambling harms using a 'whole council' lens which includes tacking the problem across several departments, such as licencing, public health and ASC, the latter by identifying those vulnerable to gambling harms and providing signposting to support services (Local Government Association, 2018). Alcohol and tobacco are routinely screened for, but gambling is not. This study sought to see if asking about gambling harms could be embedded in a way that is sensitive to the context of ASC. Gambling harms are noted by many ASC practitioners (Rassool, 2011; Rogers, 2013) and among affected others such as partners and family members (Landon *et al.*, 2018). Thus, early recognition in ASC may be helpful in identifying, preventing and managing gambling's harmful consequences through timely signposting and support (Wardle *et al.*, 2018). Gambling support services are notably underutilised and therefore an important aspect of this study is the role of ASC staff in supporting clients to access suitable support. This relies on a question that is effective and acceptable to both staff and clients to use in practice. This article focuses on the development of such a question. The testing of the question in practice will be published elsewhere in due course.

ASC practitioners are reported to recognise the importance of addressing gambling harms in practice but feel ill-equipped with the knowledge or tools to respond (Bramley *et al.*, 2019). Some LAs have introduced screening for gambling harms (Gambling Commission, 2022) but this often relies on using shorter forms of clinical screens which still use multiple questions that can be administratively cumbersome and, crucially, do not capture harms experienced because of someone else's gambling.

This study aimed to work with ASC practitioners to develop an introductory question about gambling harms, suitable to capture both harms from others and harms from a person's own gambling, that could be embedded into their working practices and could be used over the telephone or face to face. This article describes the stages undertaken to develop these questions including the involvement of people with lived experience (PWLE) and advisory groups. The fundamental aim of the broader project is to then field-test the implementation of these

questions within ASC departments of three LAs. Staff asking the questions will have training on gambling harms, including the associated stigma, and support options to ensure those who disclose gambling harms will be signposted to appropriate assistance. The findings from the feasibility testing will be published elsewhere.

Methods

To develop introductory questions suitable for use in ASC, we followed standardised methods for question development, enhancing the robustness and validity of the questions tested (Macnamara and Collins, 2011; Murray *et al.*, 2017). We also consulted with people with lived experience (PWLE), led by our public involvement partners, Betknowmore UK (a gambling support charity established by individuals with lived experience of gambling harms). This approach ensured that the questions would be acceptable to those being asked the questions and that the questions were feasible to ask within the context of seeking or receiving ASC support.

The process followed is outlined in Figure 1.

This article reports on Stages 2–5. Stage 1 (a Rapid Evidence Assessment) identified fifteen different potential questions to be used in Stage 2 (see: Forward *et al.*, 2022; see Figure 2 for questions identified).

Expert panels

We identified fifteen candidate questions in our scoping review (Forward *et al.*, 2022). During September and October 2021, these questions were reviewed at two expert panel meetings (see Stage 1, outlined in Figure 2). The first panel included two questionnaire development experts and an academic. They were identified through the study group's networks and were recruited by email. The second panel included six ASC practitioners and three PWLEs. LA practitioners were recruited by managers from the three LAs involved in the study. PWLE participants were contacted through the study's PWLE group lead. Panel meetings took place virtually due to the COVID-19 pandemic. Discussions examined the structures of the questions and their likely acceptability in ASC practice. Language and terms deemed unsuitable or outdated were discussed. Meetings were recorded; with notes and recommendations recorded by the lead author. Meeting notes were entered in a data extraction spreadsheet, drawing on Framework Analysis (Gale *et al.*, 2013), synthesising data across key themes and thus enabling analysis within and between panel groups.

1. **Rapid Evidence review** to identify questions

2. Candidate questions reviewed at two **expert panels** with a) question design experts and b) ASC staff

3. **Cognitive testing** of revised candidate questions with ASC service users, ASC staff and PWLE

4. Candidate questions revised and shortlisted post cognitive testing by project team.

5a. Test performance of candidate questions in a **general population survey**

5b. **Test/retest** of candidate questions with ASC service users

Recommendation for questions to be field tested in three ASC departments.
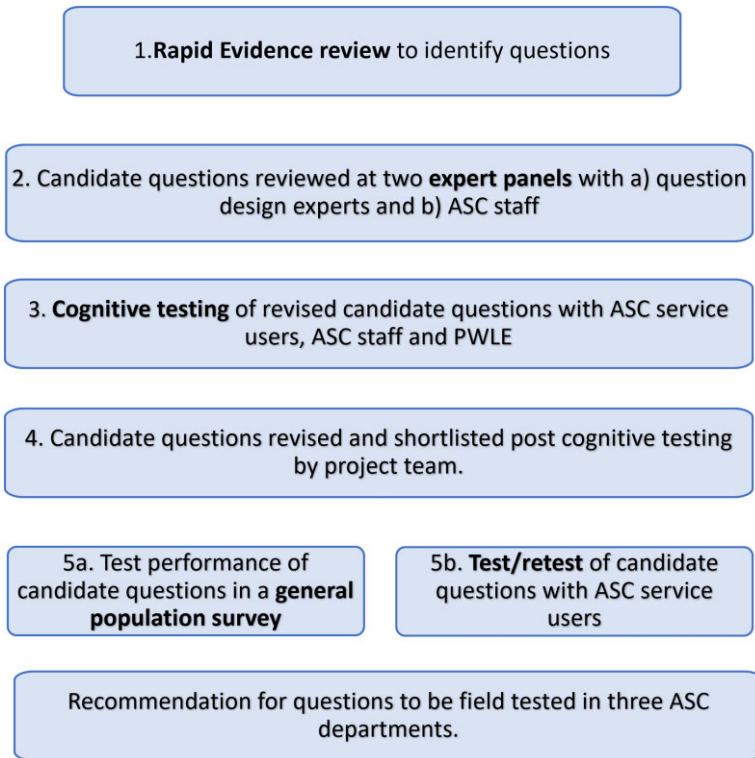
Figure 1: Question development process.

Data from these meetings were analysed by (C.N. and C.F.) to ensure consistency of understanding and comprehensibility (Schwarz, 2007). Findings were discussed with the full study team and our advisory groups at which points of agreement and divergences across groups were discussed. A shortlist of questions was agreed by the study team to take forward for cognitive testing (CT).

Cognitive testing

CT involves in-depth interviews where participants consider survey questions and this process is used to explore their comprehension of key concepts (Collins, 2015). It is based on the four cognitive stages of comprehension, retrieval, decision and response (Tourangeau, 1984). CT interviews can be carried out using think aloud or verbal probing techniques or, as with this study, a combination of both (Collins, 2003).

15 Questions from evidence review

- 1. Do you feel you or someone else might have a problem with gambling?
- 2. Have you or anyone in your family an issue with gambling?
- 3. Have you, or anyone in your family, an(y) issues [problem(s)/difficulty(ies)] with gambling?
- 4. Are you affected by your own or someone else's frequent gambling?
- 5. Are you [negatively] affected by your own or someone else's frequent or costly gambling?
- 6. Is gambling affecting [harming/damaging] you, or anyone close to you?
- 7. Is gambling causing you or someone close to you problems [issues]?
- 8. Is your gambling or someone else's causing problems for you or your family?
- 9. Has your gambling [or betting] or someone else's causing you financial [money] problems [difficulties] or stress or relationship problems?
- 10. Has your gambling [or betting] or someone else's causing you problems [difficulties] or stress?
- 11. Has your gambling [or betting] or someone else's causing you financial [money] problems [difficulties], anxiety or stress, or relationship problems?
- 12. Has your gambling [or betting] or that of someone close to you made you feel stressed, worried or anxious?
- 13. Has your gambling [or betting] or that of someone close to you made you feel stressed, anxious or depressed?
- 14. Is your gambling [or betting] or that of someone close to you, affecting your wellbeing?
- 15. Is your gambling [or betting] or that of someone close to you, affecting your wellbeing or finances?

6 questions for cognitive testing

3 questions for validity and reliability testing

- 1. Do you feel [your/client's] gambling, or that of someone close to [you/client], is affecting [your/their] health and wellbeing?
- 2. Is [your/client's] gambling, or that of someone close to [you/client] causing [you/them] any issues?
- 3. Do you feel that [your/client's] gambling, or that of someone else, is causing [you/client] difficulties?
- 4. Are [you/client] experiencing problems caused by [your/their] gambling, or some else's gambling?
- 5. Is [your/client's] gambling, or that of someone else, causing [you/client] stress/ or to worry?
- 6. Do you feel [you/client] are [negatively] affected by [your/client's] own, or someone else's gambling?

2 questions for testing in Local Authorities

- If you or someone close to you gambles, do you feel it is causing you any difficulties?
- If you or someone close to you gambles, do you feel it is causing you any worries?
- Do you feel you are affected by any gambling, either your own or someone else's?

- If you or someone close to you gambles, do you feel it is causing you any worries?
- Do you feel you are affected by any gambling, either your own or someone else's?

Figure 2: Development of questions.

CT was conducted with five ASC service users, seven PWLE and eight ASC practitioners, to cover those asking or answering the questions. Recruitment was undertaken through our partner LAs, our wider Unit's Public and Patient Involvement and Engagement Group; and the study's PWLE lead, respectively.

Interviews were undertaken virtually, recorded and transcribed. Data from the transcriptions were then added to a spreadsheet for analysis. Participants were asked to discuss their thinking processes as they listened to, considered and then answered each question. Probing questions were then asked to explore areas further such as the comprehension, recall and retrieval of information and why participants answered in the way they did. Interviews were carried out in a semi-structured format, enabling flexibility.

Data were analysed using Framework Analysis (Gale *et al.*, 2013), synthesising data across key themes. This allows case-by-case comparison across all themes. Analysis was undertaken by CF and reviewed by CN. Findings were discussed in a full study team meeting (March 2022).

Statistical testing

Following the CT phase, the remaining three candidate questions were subject to test–retest reliability testing to explore their performance across time. This was done by asking the questions to participants ($n = 20$) over the telephone, and then repeating this two weeks later.

Test–retest

The minimum sample size needed to produce a correlation of 0.7, at 80 percent power (Bujang and Baharum, 2017), was estimated to be 20 social care users aged 18 and over. These were recruited via emails distributed by leads in our partner LAs, HealthWatch organisations (statutory groups involving local communities and citizens in service provision) and through our wider Unit PPIE group. Participants were administered the candidate questions at Time (T)1 ($n = 20$) and re-administered the questions between 7 and 15 days later (T2) ($n = 20$). For two participants, T2 data were collected 30 days after T1 because of their limited availability. For each question, response options were coded: yes (1) or no (0). Data were collected via telephone interviews. Responses to each question were recorded by researchers into a spreadsheet at each time. Cohen's Kappa was used to test the reliability of responses. Analysis was conducted in Stata version 15.

Online survey – Data collection

To assess the performance of the new questions, with respect to their association with other measures of gambling harms and measures of health and well-being, the candidate questions were included in a general population survey of adults aged eighteen years and over.

Data were collected by YouGov (an online market research company) from its non-probabilistic online panel of over one million members living in Britain. Participants were contacted by YouGov through direct email invitations and received YouGov points (worth about 50p, redeemable for vouchers) in remuneration. A total of 2,079 adults, aged eighteen years and over, took part in the survey.

Online Survey – Measures

Three candidate questions were included to identify gambling harms. These were:

- If you or someone close to you gambles, do you feel it is causing you any difficulties?
- Do you feel you are affected by any gambling, either your own or someone else's?
- If you or someone close to you gambles, do you feel it is causing you any worries?

The presentation order of these three questions was randomised, and all respondents were asked all three iterations of the question. Those

who answered 'yes' were asked a follow-up question to specify whether this was because of their own gambling, that of someone else or both. Using these data, we created two variables for each candidate question: (i) whether someone experienced difficulties/worries/was affected by their own gambling and (ii) whether someone experienced difficulties/ worries/was affected by someone else's gambling. Each variable was coded yes (1) or no (0).

Participants also completed the nine-item Problem Gambling Severity Index (PGSI) (Ferris and Wynne, 2001). Items were scored using a four-point scale (0 'Never'; 1 'Sometimes'; 2 'Often'; 3 'Almost always'), with a composite score (range 0–27) computed across items (Cronbach's $\alpha = 0.94$). Participants were grouped into non-problem gambling (PGSI score 0), low-risk gambling (PGSI scores 1 and 2), moderate-risk gambling (PGSI scores 3–7) and problem gambling (PGSI scores >8).

Experience of psychological distress was measured using the CORE-10, which consists of ten items measuring the following: six problem domain items, three functioning domain items and one risk item. Items are scored on a five-point scale ranging from 'Not at all' to 'most of the time', with a composite score (range 040). Scores are grouped into healthy (0–5), low (6–10), mild (11–14), moderate (15–19), moderate-to-severe (20–24) and severe (≥ 25) (Barkham *et al.*, 2013).

Personal well-being was captured using the harmonised Office for National Statistics four-item measure of personal well-being (Office for National Statistics, 2016). Participants rated their current levels of life satisfaction; whether they do things that they feel are worthwhile; how happy they felt yesterday; and how anxious they felt yesterday on a scale of 0–10.

Risky alcohol consumption was identified using the Modified Single Alcohol Screening Questionnaire (Canagasaby and Vinson, 2005). This uses one item from the Alcohol Use Disorders Identification Test about the frequency of consuming eight or more units of alcohol for men or six more units of alcohol for women in a single event in the past year. A score of three or more identifies higher-risk drinkers. All participants were asked if they currently smoked cigarettes and to rate their self-assessed general health on a five-point scale ranging from very good to very bad.

Online Survey – Analysis

Frequencies examined the proportion of respondents endorsing each candidate's question (Table 1). Using unadjusted binary logistic regression, we assessed the association between endorsement of each candidate's question with factors known to be associated with gambling harms (psychological distress, personal well-being, risky alcohol consumption,

Table 1. Frequencies of endorsing each harm question

	Gambling caused difficulties. % (*n*)	Gambling affected the participant. % (*n*)	Gambling caused worries. % (*n*)
Harm question response:			
Yes	9.1 (189)	6.1 (126)	13.1 (272)
No			
Who harms were related to:			
Own gambling	11.1 (21)	24.6 (31)	9.2 (25)
Someone else's gambling	65.1 (123)	60.3 (76)	63.6 (173)
Both	7.4 (14)	7.1 (9)	9.6 (26)
Do not know	16.4 (31)	7.9 (10)	17.6 (48)

cigarette consumption, general health and PGSI categorisation). For each regression, endorsement of each candidate question was the dependent variable. Unadjusted logistic regressions were produced looking at endorsement of each candidate question 'because of your own gambling' (Table 2) and endorsement 'because of someone else's gambling' (Table 3). Finally, for candidate questions relating to your own gambling, sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) were computed based on comparing responses to these questions with those with a PGSI score of 8 or more (Table 4). Missing data were minimal and excluded from analyses. Weights were computed by YouGov to adjust the profile of the resulting sample to the age, sex and regional profile of adults in Great Britain.

Findings

Figure 2 summarises the development of the questions through the literature review and expert panel meetings, CT interviews, test–retest interviews and the YouGov survey. The findings from each stage of refining the questions from fifteen to two are described below. The literature review process and findings are reported elsewhere (Forward *et al.*, 2022).

Findings—expert panel meetings

In the two panel meetings, the word 'gambling' was preferred to 'betting', as it was considered to refer to a wider range of gambling activities, including online activities and in-venue gambling (e.g. at a betting shop or in a casino). It was also agreed that the question should probe a wide range of possible gambling harms, rather than solely asking about financial harm. The terms 'anxiety' and 'depression' were also viewed as too 'clinical' for the anticipated cohort. A time frame was also considered, such as 'In the last year...' (Rockloff, 2012; Sacco *et al.*, 2019), but this was excluded by the PWLE and ASC practitioners. This was partly to

Table 2. Unadjusted odds ratios for 'harms to self' questions

	N (%)	Gambling caused difficulties		Gambling affected the participant		Gambling caused worries	
		OR	95% CI	OR	95% CI	OR	95% CI
PGSI		$p < 0.001$		$p < 0.001$		$p < 0.001$	
Non-problem gambling (PGSI score = 0)	1826 (88.2)	1		1		1	
Low-risk gambling (PSGI score = 1–2)	133 (6.4)	1.13	1.18–8.73	5.54	4.66–28.81	0.96	0.99–7.32
Moderate risk gambling (PGSI score = 3–7)	63 (3.0)	18.5–8	9.19–48.99	76.70	42.75–228.70	24.24	10.60–57.13
Problem gambling (PGSI score = 8+)	49 (2.4)	67.58	28.74–155.52	306.82	163.64–872.71	142.52	55.92–307.49
CORE-12 score (psychological distress)		$p < 0.05$		$p < 0.01$		$p < 0.01$	
Healthy	591 (28.7)	1		1		1	
Low	557 (27.1)	0.53	0.13–2.15	0.63	0.15–2.66	0.92	0.31–2.74
Mild	377 (18.3)	2.39	0.84–6.77	1.89	0.57–6.25	2.06	0.76–5.57
Moderate	245 (11.9)	2.49	0.79–7.80	5.01	1.70–14.82	4.65	1.83–11.80
Moderate-to-severe	154 (7.5)	3.97	1.26–12.50	8.17	2.75–24.27	5.19	1.90–14.17
Severe	135 (6.6)	3.78	1.13–12.56	5.48	1.65–18.22	4.62	1.59–13.41
Personal Well-being							
Life satisfaction		$p < 0.05$		$p < 0.05$		$p = 0.23$	
Satisfaction score (higher scores, higher satisfaction)	Mean score: 6.5 (SD: 2.2)	0.86	0.06–0.98	0.86	0.06–0.98	0.93	0.06–1.05
Whether life has meaning		$p = 0.17$		$p = 0.09$		$p = 0.49$	
Meaning (higher scores, greater meaning)	Mean score: 6.7 (SD: 2.3)	0.91	0.06–1.04	0.90	0.06–1.02	0.96	0.06–1.08
Happiness		$p = 0.86$		$p = 0.50$		$p = 0.76$	
Happy (higher scores, higher happiness)	Mean score: 6.3 (SD: 2.3)	0.99	0.07–1.14	0.96	0.06–1.09	0.98	0.06–1.10
Anxiety		$p < 0.01$		$p < 0.01$		$p < 0.01$	
Anxiety (higher score greater anxiety)	Mean score: 4.2 (SD: 2.9)	1.24	0.08–1.40	1.23	0.07–1.38	1.25	0.07–1.39
Alcohol consumption		$p = 0.31$		$p < 0.05$		$p = 0.83$	

(continued)

Table 2. (continued)

	N (%)	Gambling caused difficulties		Gambling affected the participant		Gambling caused worries	
		OR	95% CI	OR	95% CI	OR	95% CI
No high risk alcohol consumption	1684 (81.0)	1		1		1	
High risk alcohol consumption	395 (19.0)	1.49	0.69–3.20	2.08	1.06–4.07	1.32	0.69–2.55
Cigarette smoking status		$p < 0.01$		$p < 0.01$		$p < 0.01$	
Smokes Cigarettes	261 (12.6)	5911		1		1	
Does not smoke cigarettes	1818 (87.4)	0.31	0.15–0.63	0.29	0.15–0.56	0.38	0.20–0.71
General Health Status		$p = 0.41$		$p = 0.38$		$p = 0.50$	
Very good/good	1270 (62.3)	1		1		1	
Fair	570 (28.0)	1.63	0.79–3.34	1.60	0.82–3.13	1.40	0.76–2.59
Bad/very bad	198 (9.7)	1.07	0.31–3.67	1.24	0.42–3.65	1.41	0.58–3.47

Table 3. Unadjusted odds ratios for 'harms from others' questions

	Gambling caused difficulties		Gambling affected the participant		Gambling caused worries	
	OR	95% CI	OR	95% CI	OR	95% CI
CORE-12 score (psychological distress)	$p < 0.05$		$p < 0.05$		$p < 0.05$	
Healthy	1		1		1	
Low	1.08	0.64–1.81	1.00	0.52–1.93	0.93	0.61–1.43
Mild	1.39	0.81–2.39	1.07	0.52–2.20	1.14	0.72–1.80
Moderate	1.79	1.00–3.19	1.83	0.90–3.72	1.65	1.03–2.65
Moderate-to-severe	1.73	0.88–3.41	1.88	0.83–4.23	1.28	0.71–2.33
Severe	2.53	1.34–4.80	2.95	1.40–6.24	2.19	1.27–3.77
Personal well-being						
Life satisfaction	$p = 0.17$		$p = 0.56$		$p = 0.67$	
Satisfaction score (higher scores, higher satisfaction)	1.06	0.05–1.15	1.03	0.05–1.14	1.02	0.04–1.09
Whether life has meaning	$p = 0.72$		$p = 0.88$		$p = 0.70$	
Meaning (higher scores, greater meaning)	1.01	0.04–1.09	0.99	0.05–1.09	1.01	0.03–1.08
Happiness	$p = 0.16$		$p = 0.24$		$p = 0.62$	
Happy (higher scores, higher happiness)	1.06	0.04–1.14	1.06	0.05–1.17	1.02	0.03–1.08
Anxiety	$p < 0.01$		$p < 0.05$		$p < 0.01$	
Anxiety (higher score greater anxiety)	1.08	0.03–1.15	1.09	0.04–1.18	1.11	0.03–1.16
Alcohol consumption	$p = 0.12$		$p = 0.15$		$p = 0.27$	
No high risk alcohol consumption	1		1		1	
High risk alcohol consumption	0.67	0.17–1.10	0.62	0.20–1.18	0.80	0.16–1.19
Cigarette smoking status	$p = 0.22$		$p = 0.64$		$p = 0.45$	
Smokes Cigarettes	1		1		1	
Does not smoke cigarettes	0.74	0.18–1.19	0.86	0.27–1.61	0.89	0.19–1.36
General health status	$p = 0.09$		$p = 0.34$		$p = 0.59$	
Very good/good	1		1		1	
Fair	1.39	0.28–2.06	1.27	0.32–2.07	1.09	0.19–1.53
Bad/very bad	1.67	0.46–2.86	1.58	0.55–3.11	1.35	0.32–2.15

streamline the question, partly recognising the ongoing legacy of gambling harms and partly to minimise confusion, as at the time of the panel discussions the one-year reference period was assumed by some to be referring to the period of the COVID-19 pandemic.

The opening phrase 'Do you feel…' was deemed appropriate by some as it acknowledged the subjective and variable nature of gambling harms. Other panel members preferred a more factual opening to questions, such as, 'Is gambling…' or 'Have you…' as this was more concrete. Terms such as 'problems,' 'issues,' 'worries' or 'stress' had mixed responses from different members of the panels. Academics and PWLE felt the term 'problem' was outdated and stigmatising, whereas the word 'stress' was not consistently understood.

Table 4. Sensitivity, specificity, PPV and NPV of harms from own gambling questions and a Problem Gambling Severity Index score of 8+.

	Gambling caused difficulties	Gambling affected the participant	Gambling caused worries
Sensitivity	0.31	0.46	0.53
Specificity	0.99	0.99	0.99
PPV	0.56	0.58	0.62
NPV	0.98	0.98	0.98

As a result of the panel meetings, six questions were taken forward for cognitive testing—see Figure 2.

Findings—cognitive testing

Figure 2 shows the development of the questions based on CT findings. Comprehension of the term 'health and wellbeing' was inconsistent across different cultural backgrounds and age groups and was also perceived by some as jargonistic. In terms of individuals being able to recall the impact of gambling harms from their professional experience, it was felt that the phrase 'health and wellbeing' may not connect with practical difficulties such as being affected financially or having housing concerns. The word 'problem' was also excluded as some PWLE participants reported connotations with individuals being blamed for their gambling harms. The terms 'stressed' and 'worried' were both considered to be potentially useful. Some participants considered 'stressed' to have a higher threshold for response than 'worried'. Other participants thought 'stressed' has clinical connotations but is widely used colloquially with different meanings; both words were therefore taken forward for further testing. The term 'difficulties' was particularly favoured by ASC practitioners who reported that it reflected the kind of language they might currently use with the public and was therefore something they might feel comfortable using.

Respondents often preferred 'Do you feel...' as the opening to the questions as this was considered more likely to enable people to disclose concerns. However, comments were made that this phrase does not translate to British Sign Language or other languages easily and might be problematic for neurodiverse service users. Therefore 'Are you...' was also taken forward to the validation stage.

Respondents were generally positive about such a question being asked in a LA ASC setting, reporting that, from their experience, being asked this question within the context of an overall assessment of their well-being needs would be acceptable and appropriate. Some respondents felt that, depending on the need, some people might question the relevance of including such a question within an assessment.

Furthermore, other respondents, in regular contact with ASC practitioners, expressed some frustration and fatigue with the increase in the extent of questioning, which they thought might affect responses.

There were further concerns that responses may be affected by the perceived use of the information disclosed about gambling harms. For example, if the information was disclosed about financial problems because of gambling, then there was concern that this disclosure might impact eligibility for social security benefits, those holding proxy roles for the administration of other people's monies or those in a child-care dispute. However, these hypothetical concerns were generally thought to be associated with a thornier matter namely, the potential difficulty of encouraging people to disclose gambling harms due to the potential perceived and enacted stigma associated with experiencing gambling harms personally or as an affected other.

As a result of the CT, three questions were taken forward for reliability and validity testing. These were:

- If you or someone close to you gambles, do you feel it is causing you any difficulties?
- Do you feel you are affected by any gambling, either your own or someone else's?
- If you or someone close to you gambles, do you feel it is causing you any worries?

Findings—test–retest reliability

All three questions had Cohen's Kappa values of greater than 0.6, representing substantial agreement. The 'difficulties' question had a Kappa value of 0.66, the 'affected' question had a value of 0.69 and the 'worried' question had a value of 0.76; where 90 percent of those who said that gambling had caused them worries at T1 reported the same two weeks later. This indicates good test–retest reliability, that is, the questions show consistent results over time and add to confidence in their quality and suitability to be used in practice.

Findings—validity testing with YouGov survey

Overall, 13.1 per cent of the survey sample agreed that either their own gambling or that of someone else had caused them worries in the past 12 months; 9.1 per cent agreed that gambling had caused difficulties and 6.1 per cent agreed that either their own gambling or that of someone else had affected them.

For all three questions, most (over 60 per cent) reported that it was someone else's gambling which caused them worries, difficulties or had

affected them. The highest endorsement rates were observed for those saying that their own gambling had affected them (24.6 per cent), followed by 11.2 per cent for difficulties and 9.1 per cent for worries (Table 1).

Unadjusted binary logistic regression showed that PGSI scores, psychological distress, anxiety scores and cigarette smoking were all associated with reporting that a person's own gambling had caused them difficulties, worries or had affected them. For example, the odds ratios for experiencing difficulties, worries or being affected by your own gambling ranged from being 3.78 times higher to 5.48 times higher for those with a CORE-10 score indicating severe psychological distress compared with those with healthy CORE-10 scores. Likewise, the odds ratios for endorsing each question increased by about 1.25 for each increase in anxiety scores. PGSI scores were strongly associated with the endorsement of each item, with the odd ratios increasing as PGSI scores increased.

Life satisfaction and risky alcohol consumption were also associated with reporting that your own gambling had affected you, with the odd ratios being 2.08 times higher among those with risky alcohol consumption and decreasing by 0.86 for every decrease in life satisfaction score (Table 2).

Looking at the endorsement of each question because of someone else's gambling displayed some similar patterns (Table 3). Endorsement of each item because of someone else's gambling was associated with CORE-10 scores, with odd ratios being highest among those with CORE-10 scores indicating severe psychological distress. Likewise, the odd ratios increased from 1.08 (difficulties) to 1.11 (worries) for each increase in anxiety scores. There was no evidence of any other factor being associated with the endorsement of each candidate's question because of someone else's gambling.

Sensitivity and specificity tests were calculated for each question looking at the experience of difficulties, worries or being affected by your own gambling by comparing endorsement of each with whether the respondent also had a PGSI score of 8 or more, indicating experience of problem gambling (Table 4).

All candidate questions had good specificity (0.99) meaning that they correctly categorised almost all (99 per cent) of the sample as not having a PGSI score of 8 or more. Results for specificity (the candidate questions' ability to correctly identify those with a PGSI score of 8 or more) were more varied, ranging from 0.31 for difficulties, 0.46 for affected and 0.53 for worried. This means that of those who endorsed each question, 31, 46 and 53 per cent had a PGSI score of 8 or more for each question, respectively.

PPVs had slightly improved results—of those with a PGSI score of 8 or more, 56 per cent reported experiencing difficulties due to their own

gambling; 58 per cent reported being affected by their own gambling; and 62 per cent reported being worried because of their own gambling. NPVs were 98 per cent for all questions, meaning that 98 per cent of those with a PGSI score lower than 8 also did not endorse each candidate question.

These results indicated that whilst all three demonstrated acceptable quality in testing, the two candidate questions which scored the highest were the most suitable to be tested in LAs. This testing will assess the performance of the questions in practice and their acceptability to practitioners and those approaching them.

Two questions were identified for testing in LAs:

- Do you feel you are affected by any gambling, either your own or someone else's?
- If you or someone close to you gambles, do you feel it is causing you any worries?

Discussion

This article outlines the development of an 'introductory' question to identify those at risk of gambling harms who approach LA ASC services. As discussed, practitioners in the panel groups and CT interviews were enthusiastic about addressing gambling in their work, reinforcing this as a suitable context for asking about gambling harms (Bramley *et al.*, 2019; Blank *et al.*, 2021b).

Existing screening questions or tools have used both consequences of, and the behaviours associated with, 'disordered gambling' to identify gambling disorders (Browne and Rockloff, 2020). As this study aimed to identify people experiencing gambling problems and affected others, the focus was developing a question that could capture the potential consequences of gambling harms for both groups. This study found two questions similar in reliability and acceptability which could be used in practice.

The findings highlighted the importance of language when developing initial 'introductory' questions to probe a complex and sensitive topic such as gambling. This is because gambling harms are associated with shame and stigma that inhibits gambling being discussed openly. The findings underline the importance of developing a question that practitioners feel comfortable with and that is acceptable to ask. Findings also demonstrate that it is important to select appropriate language in terms of both comprehensibility and acceptability for members of the public from a range of backgrounds, including those with learning disabilities, neurodiversity, or for whom English is not a first language. Whilst there were divergences in the associations or understandings of certain words,

the importance of making the question non-judgemental was consistent, reflecting other evidence (Wood and Williams, 2007; Harrison *et al.*, 2020) as well as feedback from PWLE advisors.

The questions developed showed reasonably acceptable performance against other measures, being correlated in expected ways with factors associated with gambling harms—for example, the experience of psychological distress, anxiety and, where appropriate, PGSI scores. All displayed adequate test–retest reliability.

Focusing on experiences because of someone's own gambling and comparing endorsement of each question against PGSI classification showed that, unsurprisingly given that most people do not have these experiences, the questions performed well in terms of specificity and NPV. The results with regard to specificity and PPV were more varied. This is, perhaps, to be expected. The PGSI includes nine different questions which focus on measures of dependence (such as tolerance) and a wide range of consequences and negative experiences from gambling. It is unlikely that one single question could capture the full range and breadth of this experience. Out of the three candidate questions, the question which used the word 'difficulties' produced the least robust results, with sensitivity values of just 0.31 and PPVs of 0.56. Gambling causing 'worries' performed the best, identifying 53 per cent of those with a PGSI score of 8 or more and being endorsed by 63 per cent of those with a PGSI score of 8 or more (results for being 'affected' by your own gambling were similar).

Some of the findings for specificity and PPVs may be due to the different underlying conceptions of the questions. You may not need to have a PGSI score as high as 8 to be worried about your gambling or to be affected by it. This is commensurate with research evidence showing that, at the population level, more harms are generated by those with a PGSI score of less than 8 because of their greater population number (Browne and Rockloff, 2018). It is, however, interesting that over a third of those with a PGSI score of 8 or more, did not report being worried, affected or experiencing difficulties because of their gambling. Not all items on the PGSI instrument relate to negative consequences: it is plausible to have a PGSI score of 6 by saying that you almost always need to gamble with greater amounts to get the same excitement and that you almost always chase losses. Furthermore, some people may not yet be at a stage within their gambling experience that they are able to admit or recognise that this causes them worries or difficulties or affects them.

Nevertheless, there is clearly some overlap with PGSI scores, with all three questions tested. Nearly two-thirds of those with a PGSI score of 8 or more endorsing that their gambling caused them worries, showing some positive predictive power of this candidate question and thus identifying a group of people who may benefit from further support and signposting. However, these results are not strong enough to suggest that

these questions can or should be used as a single-item screening instrument to replace fuller screening instruments like the PGSI.

Very few studies have attempted to measure harms experienced because of others' gambling and thus, unlike harms from your own gambling, there is no gold standard measure against which to assess the performance of these questions. However, those who reported difficulties, worries or being affected by other people's gambling were more likely to experience more severe psychological distress and experience greater levels of anxiety. This is commensurate with our expectations for these questions.

Taking this evidence together, we concluded that the candidate questions asking about whether someone had been affected by their own gambling or that of someone else and whether someone's own gambling or that of someone else had caused them worries could be trialled within ASC departments. This would help identify many (though not all) people experiencing problems with gambling and appeared to perform well in terms of excluding those for whom these questions were inappropriate. The next stage of this study will be further testing within ASC settings to evaluate the acceptability to practitioners and the public of the use of such a starter question in practice. Training will be provided to staff to support their skills and knowledge of gambling harms. This part of the study will enable consideration of wider issues around asking members of the public about gambling harms such as acceptability, location (which team or department), timing (at which point or contact within an ASC department and an assessment), method (such as face-to-face or over the phone) and staff confidence in asking the public about gambling harms and responding appropriately to positive responses. The findings from this part of the study will be reported elsewhere.

Limitations

There are limitations to this research. For example, the CT and test–retest involved participants who were self-selecting members of the public with ASC experiences and may not represent the needs and demographics of wider user groups. Our survey sample was drawn from a non-probability panel with attendant loss of generalisability. Nevertheless, our purpose was to compare patterns of response between our candidate questions and other factors. Online non-probability methods can perform satisfactorily (albeit with some limitations) when focusing on the relationship between variables, which this study does (Callegaro *et al.*, 2014). Experience of problems with gambling in the past year was relatively rare among participants, thus, we could not compare the performance of our candidate questions separately for men and women. We also lacked a gold-standard instrument against which to

compare the performance of questions because of someone else's gambling. Instead, when looking at these questions, we were limited to exploring cross-sectional associations with other factors.

Conclusion

This article reports on developing questions for identifying gambling harms to individuals and affected others which might be used by LA practitioners. To our knowledge, this is the first time a question has been tested for identifying both groups affected by gambling harms within the context of ASC and social work.

We have detailed how two potential questions were developed through scientific processes and with considerable co-production involvement activity, namely:

- Do you feel you are affected by any gambling, either your own or someone else's?
- If you or someone close to you gambles, do you feel it is causing you any worries?

This process of developing these questions has demonstrated the importance of asking people if they are affected by someone else's gambling, as the highest rates of endorsement in the population survey were from affected others.

Further work is being undertaken in three LAs to test which of the two questions is more acceptable to practitioners and with people in contact with ASC—bearing in mind that the question will only be effective if social care practitioners are happy to ask these questions, and, similarly, if individuals are willing to respond. This further part of the study will enable a more detailed consideration of the implementation of a question like this, such as the need for staff skills around rapport building and the effects of stigma and shame when disclosing experiences of gambling harms.

Ethical considerations

This study was approved by the Health Research Authority (HRA) Social Care Ethics Research Committee reference: 21/IEC08/0017. Participants for the CT and test–retest were given vouchers as an appreciation of their involvement. Due to the sensitive subject, researchers prepared a list of suitable support organisations should participants become distressed. Participants were informed in an information sheet about processes in place should any disclosures be made about someone being harmed or at risk of harm. All participants were required to give

informed consent. The PWLE lead assessed that the involvement of our PWLE advisers in the study would not be harmful to them.

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Authors' contributions

C.F.: Drafted the present article, undertook CT and test–retest data collection and analysis, question revision, attended at data analysis workshops. C.N.: Project management, some CT data collection, attendance at data analysis, question revision workshops and revision of article. S.B.:

Attendance at data synthesis workshops, question revision article revision. L.R.: People with lived experience recruitment, attendance at data synthesis workshops, question revision and article revision. J.S.: Attendance at data synthesis workshops, question revision and article revision. J.M.: Attendance at data synthesis workshops, question revision and article revision. G.S.: Article revision, adult social care staff recruitment and question revision. J.M. Attendance at data synthesis workshops, question revision and article revision. H.W.: Co-drafted article, survey design, survey data analysis, attendance at data synthesis workshops, question revision and revision of article.

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