Public Health England

Protecting and improving the nation's health

'You don't just lose money, you can lose things worth so much more'

A qualitative analysis of stakeholder perspectives on gambling-related harms

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Executive summary

Introduction

In England in 2018, over half (54%) of adults reported participating in some form of gambling in the last year. In recent years, there has been a rapid growth in the availability of gambling both online and offline. The increased availability and high prevalence of gambling has led to concerns over increased levels of gambling-related harm.

The aim of this study was to identify references to gambling-related harms and explore how these harms varied among a range of stakeholders.

Methods

This report is a qualitative analysis of 2 datasets, both collecting information from stakeholders across Great Britain. One dataset was made up of stakeholder submissions to a public consultation. The other used gambling-related tweets from Twitter. We grouped these stakeholders into categories based on either the information a respondent provided to the public consultation or from a user's biographical information on Twitter. The main stakeholder types were:

- commercial
- health
- lived experience
- individual
- charity
- decision makers
- other

You can find detailed descriptions and the eligibility criteria we used to define these stakeholder types in Appendix B.

We used a 2-stage approach to analyse the datasets. This included aligning the information with the 2 core stages of iterative categorisation, which is a technique for undertaking qualitative analysis using a staged approach.

The first stage was descriptive. We used a theory-informed content analysis to identify the range and frequency of gambling-related harms referenced by different stakeholder types. The second stage was interpretive. We analysed the themes of tweets and consultation submissions that mentioned the gambling-related harms coded during the descriptive stage. This gave context to how the different stakeholder types represented the harms.

Results

The descriptive content analysis identified 8 harm categories and 24 codes. The harm categories were:

- general
- health
- financial
- relationship
- work or study
- crime
- cultural
- miscellaneous

You can find more information on the framework and the eligibility criteria we used to define these harm categories in appendices C, D and E.

General harms (which did not specify the nature of harm) was the most referenced category (comprising 50% of all the references to harms). This was followed by health (23%) and financial (15%) harms. Other gambling-related harms, including relationship, work or study, and crime, were referenced infrequently (5% or less of all references to harm). Cultural and miscellaneous harms were rarely referenced (1% of all references).

The pattern of most-to-least referenced harm categories was the same across all stakeholder types, but some stakeholders referenced harms more than others. The proportion of harms referenced by the different stakeholder types were:

- individual (36%)
- lived experience (21%)
- other (17%)
- commercial (10% or less)
- health (10% or less)
- charity (10% or less)
- decision makers (10% or less)

The interpretive thematic analysis that followed identified 3 themes with 9 subthemes. These broadly identified polarised views between commercial stakeholders and non-commercial stakeholders (including health, lived experience and charity stakeholders). Individual and other stakeholder groups held mixed views that aligned with both commercial and non-commercial stakeholders. We also identified 2 exceptions to the polarised themes between stakeholder groups, where subthemes were found across all stakeholder types.

The first theme ‘sources of gambling-related harm’ included 2 subthemes:

1. The sources of harm are complex (referenced by commercial stakeholders).
2. Gambling substantially contributes to harm (referenced by non-commercial stakeholders).

The second theme ‘scope of gambling-related harm’ included 4 subthemes:

1. Harms are experienced by a minority (referenced by commercial stakeholders).
2. Harms can be experienced across the range of gambling involvement (referenced by non-commercial stakeholders).
3. Gambling-related harms are experienced by families and wider society (omitted by commercial stakeholders).
4. The hidden nature of gambling-related harms (referenced by all stakeholder types).

The third theme ‘responses to prevent and reduce gambling-related harm’ included 3 subthemes:

1. Focus on individual interventions and treatment (referenced by commercial stakeholders).
2. Tackling gambling-related harm requires a whole systems approach (referenced by non-commercial stakeholders).
3. Consumer awareness and vendor responsibility (referenced by all stakeholder types).

Discussion

This study adds to the growing body of gambling evidence by identifying the range of gambling-related harms and the most frequently referenced harms by different stakeholder types. There are differences in how stakeholders represent the problem of gambling-related harms. Most notably there are differences between commercial and non-commercial stakeholders.

Commercial stakeholders:

- represented the sources of harm as complex
- portrayed that harm was experienced by a minority of problem gamblers
- thought that responses to harm should focus on individual intervention and treatment
- generally did not acknowledge that gambling can harm affected others

Non-commercial stakeholders:

- viewed gambling as clearly harmful
- portrayed that anyone who gambles can experience harm

- thought that responses to preventing and reducing harm should adopt a whole systems approach
- acknowledged that gambling can harm affected others

We found some overlap between commercial and non-commercial stakeholders on the hidden nature of gambling-related harms. We found they mostly agreed that responses to preventing and reducing harm could include increasing consumer awareness and vendor responsibility. Other unhealthy commodities research, such as alcohol and tobacco, has also found a similar representation of harms by commercial and non-commercial stakeholders.

Conclusions

To help prevent and reduce gambling-related harm, we should learn from other unhealthy commodities where public health gains have been achieved. This includes emphasising a public health whole systems approach that understands there is no safe level of gambling in relation to harms, including affected others. In this context, a whole systems approach to preventing and reducing harm brings together multiple complementary interventions spanning across:

1. Primary prevention (to prevent harm before it happens, such as gambling legislation to limit the number of gambling venues).
2. Secondary prevention (to identify and reduce the impact of harm once it has occurred, such as increased screening programmes in GP surgeries to identify gambling harm.
3. Tertiary prevention (to reduce harm that has lasting effects, such as government-funded treatment for clinically diagnosed problem gambling).

We also need to improve awareness of the wide-ranging harms that gambling can cause. This could help reduce gambling stigma, which would in turn reduce barriers to accessing treatment.

1. Introduction

1.1 Background

Gambling[1] is a popular activity in the UK and participation ranges from infrequent involvement to clinical problem gambling (1). In England in 2018, 54% of adults reported engaging in some form of gambling in the last 12 months (2). In the same year, it was estimated that 0.5% of adults aged 16 or over experience clinical problem gambling according to standard screening instruments. People classified as clinical problem gamblers have been found to experience a high burden of harm (3). However, there is a larger number of people who gamble in ways that could put them at risk without meeting the diagnostic threshold for problem gambling (4, 5). So, most gambling-related harm is likely experienced by this larger group (6).

Growing awareness of gambling-related harms has led to national and international calls to acknowledge that these harms can affect people across the range of participation and that policy responses to gambling-related harms should take a public health approach (7, 8). In 2018, the Public Health Minister Steve Brine and the Department for Digital, Culture, Media and Sport (DCMS) asked Public Health England (PHE) to carry out a review to inform, support and provide evidence on gambling-related harm (9, 10).

1.2 Aim of the study

The aim of this study is to contribute to the understanding of gambling-related harms by:

- identifying a range of, and the most frequently referenced, gambling-related harms
- describing the context of how these harms are discussed by different stakeholder types

The review follows the core stages of iterative categorisation, using a descriptive content analysis followed by an interpretive thematic analysis of 2 separate datasets. The datasets are:

1. Submissions to a consultation for a proposed strategy to reduce gambling-related harm.
2. Gambling-related tweets from British Twitter users.

[1] Any kind of betting, gaming or playing lotteries. Gaming means taking part in games of chance for a prize (where the prize is money or money's worth). Betting involves making a bet on the outcome of sports, races, events or whether something is true. The outcomes may or may not involve elements of skill, but they are uncertain. Lotteries (typically) involve a payment to take part in an event in which prizes are allocated on the basis of chance.

Document analysis, which includes digital documents, is a useful approach to studying social discourse (17). Content and thematic analysis are 2 forms of document analysis. Similar industries have used this approach before (18 to 20). It has also included social media activity and advertising by gambling operators (21 to 23).

1.3 Identifying gambling-related harms

Though it is generally acknowledged that gambling can cause harm, there is no universal definition for gambling-related harms (11). Australia and the UK have recently developed classifications for harm to help further these discussions (7, 11). Though not identical, both classifications use similar categories of harm relating to:

- resources (money and finances, work and study, crime)
- health (emotional, mental, and physical)
- relationships (close contacts, community, and culture)

Other similar categories also cover the temporal aspects relating to the immediacy and longevity of potential harms, as well as harm to others.

Creating a clear definition of gambling-related harm, including the range of specific harms associated with gambling, creates the foundation for a public health approach that prevents and reduces harm (12). Defining this will also allow us to develop metrics to quantify gambling-related harms and the associated costs to individuals, the community and society. Knowing these costs will help policy makers to devise appropriate prevention and treatment policies.

Without this definition and quantification, the level of harm is intangible. It may also be a barrier to successfully securing increased resources to address these harms, especially as gambling in the UK generates a large revenue for the government and is a powerful commercial sector (7). So, there is a need to better understand the extent of gambling-related harms from a public health perspective within England.

1.4 Describing stakeholder perspectives on gambling-related harms

As well as identifying gambling-related harms, it is equally important to see how discussions about harms vary across stakeholder types. Existing research on other harmful commodities, such as alcohol and tobacco, show notable differences between commercial and health or advocacy stakeholders. This includes which harms are discussed, how they are discussed and the resulting policy implications (13 to 15). For example, there were decades when the tobacco industry knew that smoking caused health harms, but they debated internally on whether to publicly acknowledge these harms (14). This was later repeated with passive smoking. Both

instances resulted in delays to primary prevention interventions aimed at regulating the tobacco industry.

An analysis of submissions to the Scottish Government's 2008 green paper 'Changing Scotland's Relationship with Alcohol' saw commercial stakeholders provide clear support for reducing alcohol harms. But they also said that harms from alcohol were overstated and did not need primary prevention interventions to reduce the burden of harm (16). A more comprehensive analysis of 4 UK government consultations on alcohol between 2010 and 2014 also found that industry stakeholders were the least supportive of primary preventive regulatory interventions compared to health stakeholders (who were the most supportive). They also tended to prefer self-regulatory, government-partnership and individual tertiary prevention approaches to harm reduction (15).

While we are still in the early stages of developing a public health approach to gambling, it is important to learn from the public health experience of other harmful commodities. This will help identify any similar patterns that occur in gambling stakeholders.

2. Methods

The study had 2 stages to identify and analyse gambling-related harms:

1. Descriptive stage using content analysis.
2. Interpretive stage using thematic analysis.

This report includes all the information required by the Standards for Reporting Qualitative Research checklist. You can find more information about this in Appendix A.

2.1 Datasets

We used 2 datasets, which were data collected from a consultation and Twitter. We chose consultation submissions to the Gambling Commission's new national strategy to reduce gambling harms as one dataset because it was directly relevant to our study aims on both the focus on harms and likely range of stakeholder types contributing to the consultation. We chose to use Twitter because previous research has shown that gambling stakeholders use this platform (24) and social media offers insight into public views that can be underrepresented in consultations (25).

You can find a summary of the datasets used in Table 1. Geographic locations were for Great Britain (GB) as neither dataset could provide geographic locations narrowed down to England only.

Table 1. Description of datasets used for analysis

Source	Platform	Eligibility	Recruitment	Time Period	Stakeholder types	Responses in raw dataset	Responses in our dataset
Consultation							
Formal consultation survey from the Gambling Commission	CitizenSpace	Commercial gambling organisations, researchers, education, lived experience and treatment recipients, and other gambling stakeholders in GB	Survey hosted online and used convenience sampling	4 December 2018 to 18 February 2019	Commercial, individual, charity, decision makers, other	110	110
Open consultation survey from the Gambling Commission	Survey Monkey	Any member of the GB general public including consumers and those with lived experience of gambling-related harm	Survey hosted online and used convenience sampling	4 December 2018 to 18 February 2019	Lived experience, individual, other	192	192
Twitter							
Twitter	Twitter	Inclusion: Any original tweet posted in GB from public Twitter accounts	N/A	11 November to 22 December 2019	Commercial, health, individual, lived experience	63,574 with 11,357 randomly sampled (see Figure 1)	929

Source	Platform	Eligibility	Recruitment	Time Period	Stakeholder types	Responses in raw dataset	Responses in our dataset
		tweeting about gambling as defined by the report Exclusion: Any tweet referencing gambling to indicate 'risky decision', only reference gambling promotions or betting tips, tweet outside of GB, or a retweet			Charity, decision makers, other		

Consultation dataset

The consultation dataset used submissions to the Gambling Commission's consultation on 'a new national strategy to reduce gambling-related harms' collected between 4 December 2018 and 18 February 2019 (26). The consultation asked stakeholders to provide feedback on a proposed national strategy, which included 5 priority areas:

1. Research to inform action.
2. Prevention.
3. Treatment.
4. Evaluation.
5. Gambling businesses.

Any interested stakeholder in GB was eligible to take part. The consultation collected data from 2 surveys, which we combined for our analysis. We received the 302 anonymised submissions from the Gambling Commission on 9 August 2019.

Twitter dataset

The Twitter dataset included a sample of tweets posted in GB referencing 'gambling' or associated key words between 11 November and 22 December 2019. We selected these dates as they included the most recent full month of data available (Twitter data allowances start and reset on the 11th of each month). The Home Office conducted the searches and provided 2 more weeks of data. So, we had 6 weeks of data total. We adopted a systematic approach for identifying and selecting tweets:

1. Identify all gambling tweets posted within GB during the eligible dates.
2. Simple random sampling to select a sample.
3. Screen for inclusion against eligibility criteria.
4. Produce a Twitter dataset eligible for coding.

Piloting terms like '#gaming' and '#bets' retrieved a large number of tweets that were not relevant to the research question. This was because they identified information relating to non-gambling games or articles, so were not included in the final search terms. Harm terms were not included to maximise the widest possible range of identifiable harms. The search identified 63,574 tweets.

We took a systematic approach to reduce the number of tweets included in the dataset. This used simple random sampling completed by one researcher for an 11,357 tweet (18%) sample. Two researchers screened these tweets against the eligibility criteria (see Table 1). Tweets were evenly split (5,678 and 5,679) with 10% double screened. The resulting dataset included

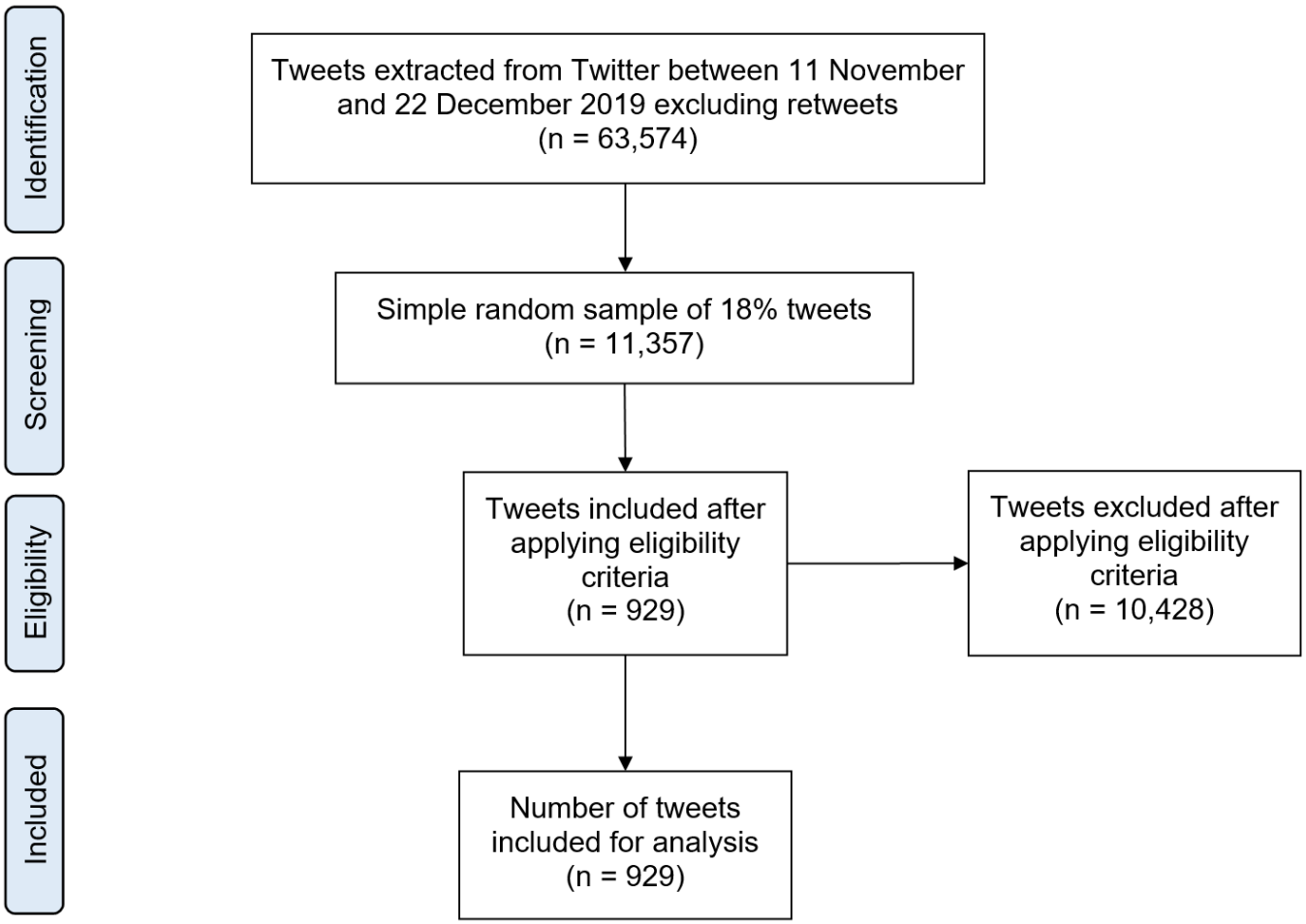
929 eligible tweets from 669 accounts[2] (see Figure 1). There is no agreed standard for sampling tweet data (27). A scope of the tweets indicated a large number were ineligible and resulted in researchers sampling 18% of the raw extract.

We anonymised the tweets before analysis, retaining only stakeholder type (see section on stakeholder type).

Figure 1 shows a flow diagram outlining the process we took to select tweets for our analysis. The first stage was the identification stage. We extracted 63,574 tweets from Twitter between 11 November and 22 December 2019. At the screening stage, we used simple random sampling to select a sample of 11,357 tweets (or 18%). We then applied eligibility criteria to this sample of tweets. This excluded 10,428 tweets from the sample. The total number of tweets included for analysis was 929.

[2] In the combined survey and Twitter dataset, there were 494 stakeholders categorised as individuals (50.9%), 129 with lived experience (13.3%), 120 (12.4%) from gambling operators and affiliated organisations, 83 from health, charity, and decision makers (8.5%) and 145 from other sectors (14.9%).

Figure 1. Flow diagram for selecting tweets



Stakeholder type

This section describes our process for assigning stakeholder type. An overview of stakeholder type by dataset is shown in Table 2.

Table 2. Stakeholder types by dataset

	Consultation		Twitter
Stakeholder type	**Formal**	**Open**	**Tweets**
Health	No	No	Yes
Lived experience	No	Yes	Yes
Commercial	Yes	No	Yes
Charity	Yes	No	Yes
Decision makers	Yes	No	Yes

	Consultation		Twitter
Stakeholder type	**Formal**	**Open**	**Tweets**
Individual	Yes	Yes	Yes
Other	Yes	Yes	Yes

In the formal consultation, respondents selected stakeholder type from a list provided by the Gambling Commission[3]. Due to conceptual similarity, we merged trade associations and gambling businesses into the commercial stakeholder type. Due to a low number of respondents, we merged researcher into the other stakeholder type.

In the open consultation, we assigned stakeholder type using survey information from the question, “does the respondent consider that they or someone close to them has suffered from gambling harm”. We assigned respondents reporting ‘did not experience harm’ as individual, ‘experiencing harm’ as lived experience and ‘prefer not to say’ as other.

We assigned the same stakeholder types for tweets, with an additional health stakeholder type based on the user’s biographical information. For both the open consultation and Twitter datasets, we applied lived experience stakeholder types only when the respondent or account clearly indicated they had experienced gambling dependence or gambling-related harm. For detailed descriptions of stakeholder type, see Appendix B.

2.2 Qualitative analysis plan

We used a 2 stage approach that aligned with the 2 core stages of iterative categorisation (28). In the first stage, we completed a descriptive analysis to give a basic characterisation of the data based on frequency counts. This included the nature and range of topics covered and frequencies of occurrence. In the second stage, we completed an interpretive analysis to identify patterns and explanations and link these to theory and research. The 2 stages were:

Stage 1**:** descriptive. A deductive, theory-informed, content analysis to identify the range and frequency of gambling-related harms referenced in the data and compare these by stakeholder types.

Stage 2**:** interpretive. A thematic analysis of harms including differences and similarities by stakeholder type.

[3] Including individual, central government body, public health organisation, local authority, charity, researcher or academic, gambling business, trade association, and other.

Stage 1: descriptive

The descriptive stage used content analysis to identify gambling-related harms and frequency of occurrence, and compare by stakeholder type. The steps we took were:

1. Create a theoretically informed codebook ('first codebook').
2. Apply codes to data.
3. Revise codes through group consensus informed by inter-rater reliability scores, frequency of occurrence, and newly identified harms.
4. Review data and apply revisions to the codebook ('second codebook').
5. Report final counts and proportions overall and by stakeholder type.

The first codebook was informed by Langham and others' dimensions of harm (11). Pilot work was undertaken by 3 researchers using practice data. This included submissions to a government consultation on gambling in Australia (29) and tweets outside the eligible date range (30). This resulted in further amendments to the first codebook. The first codebook included 7 harm categories, broadly similar to Langham's original dimensions (11), and 102 codes (see Appendix C).

Figure 2. Original and modified harm categories used in the first codebook (adapted from (11))

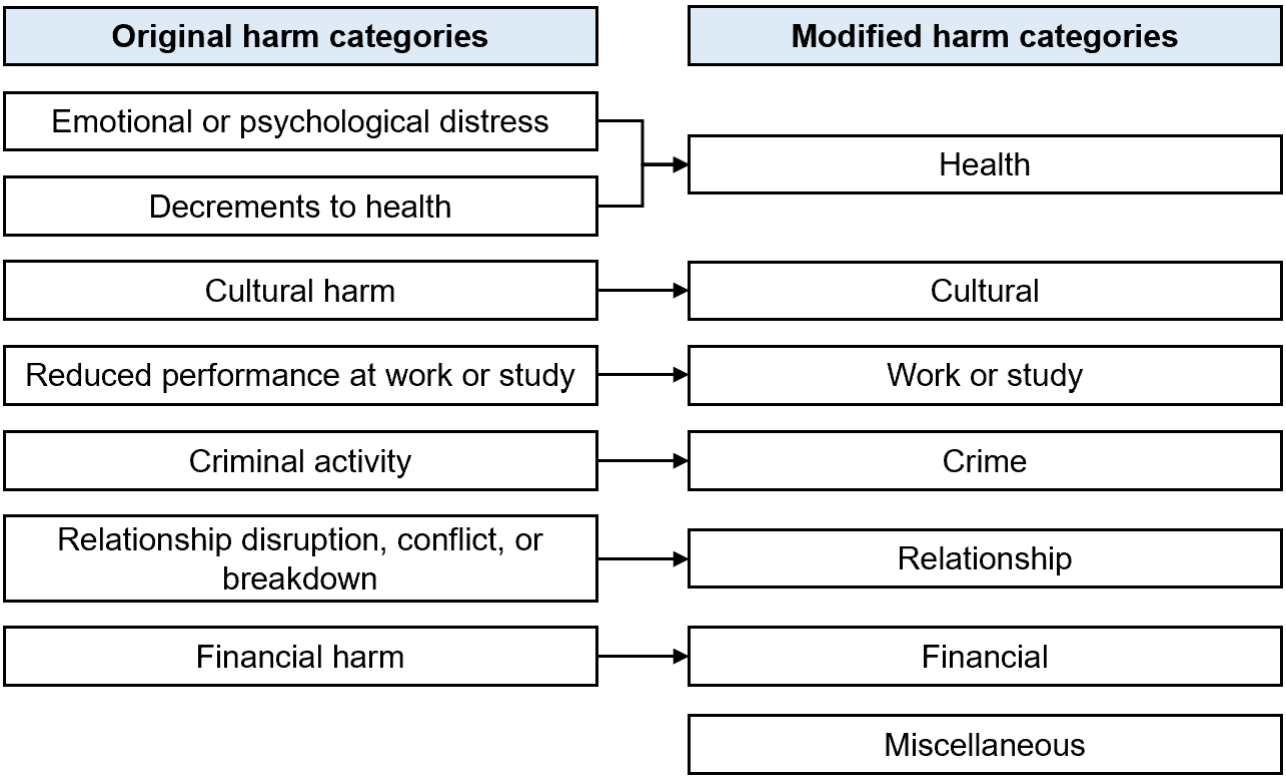


Figure 2 shows the original and modified harm categories we used in the first codebook. The original harms categories were:

- emotional and psychological distress
- decrements to health
- cultural harm
- reduced performance at work or study
- criminal activity
- relationship disruption, conflict, or breakdown
- financial harm

The modified harm categories were:

- health (combining emotional and psychological distress and decrements to health)
- cultural (from cultural harm)
- work or study (from reduced performance at work or study)
- crime (from criminal activity)
- relationship (from relationship disruption, conflict, or breakdown)
- financial (from financial harm)
- miscellaneous

We coded the datasets in NVivo12 (a qualitative data analysis application). One researcher acted as primary coder with 10% of submissions and 10% of tweets double coded by a second researcher. Coders had to read the submission or tweet at least 3 times during coding. The researchers would code a harm as 'other' if it was not included in the codebook and create a new code if they identified a new harm 3 times or more.

The researchers applied codes to sentences in the consultation submissions and entire tweets in the Twitter dataset. This was due to the differences in length, unconventional grammar, and use of humour and irony (31, 32). Free-text responses in the submissions and tweet content[4] were eligible for coding. They coded harms if they meaningfully referenced gambling-related harm and were not merely administrative[5], clearly hypothetical or fictitious. Tweets had an additional consensus code used when we needed group consensus to determine if a tweet referenced a genuine harm[6]. We calculated the inter-rater reliability scores (IRR, see below) for tweets after we agreed the consensus-coded tweets.

[4] Including text, emojis, pictures and gifs, but excluding videos, external links to websites or tweets, retweets, and tweet replies.
[5] Such as a submission quoting a question posed in the consultation asking about gambling-related harms.
[6] Due to the use of either humour, irony, sarcasm, emojis or unconventional formatting.

We calculated the IRR using the kappa statistic (estimating the level of agreement between reviewers) and frequency counts in Microsoft Excel. We did this over 9 coding rounds throughout the process. We based low kappa scores (less than 0.40) on existing benchmarks of fair or moderate scores (33). Four researchers discussed low kappa scores and revised the codebook where appropriate. Revisions included:

- merging conceptually similar codes
- removing codes with zero counts
- removing codes with low agreement (where we could not merge them with another code)

Increasing numbers of codes potentially reduces the chance of agreement. So, if paired with low counts, these codes can result in low kappa scores but with acceptably high overall percent agreement (34, 35). After all revisions, one researcher reviewed previously coded data to ensure it reflected and consistently applied all changes. Kappa scores were 0.59 for the consultation dataset and 0.57 for the Twitter dataset.[7]

After coding, we separated the miscellaneous category into 2 categories (miscellaneous and general). This was because there were a high number of ‘general’ references that were conceptually distinct from ‘miscellaneous’ harms. We developed 2 new codes:

1. Co-morbidity (gambling and mental or physical problems).
2. Unspecified harms of a severe nature.

The second codebook consisted of 8 harm categories and 24 codes (Table 3). For detailed code definitions and eligibility criteria, see Appendix E. An audit trail of changes from the first codebook to the second codebook is available upon request.

Descriptive statistics included frequency counts and percentages.

[7] For category level kappa scores, see Appendix D.

Table 3. Second harm codebook for the stage 1 descriptive analysis

Category	Code	Short description
Health	Stigma, shame and low self-worth	Feelings of shame, regret, guilt, stigma, low self-worth and low self-esteem; examples of people stigmatising gamblers
	Multiple health risk behaviours	Gambling co-occurring with health risk behaviours, such as consuming alcohol, tobacco, foods high in fat, sugar or salt, and illicit drugs
	Suicidal thoughts, attempts and death by suicide	Suicidal thoughts, self-harm, attempted or completed suicide, or implied suicide
	Co-morbidity (gambling and mental or physical health problems)	Explicit references in text to “co-morbidity” between gambling and general mental or physical health
	Low mood and anxiety	Feelings of low mood, depression, powerlessness, unease, or anxiety that can be clinical or subclinical
	Health (other or unspecified)	Other references to health harms
Financial	Financial struggles	Reduced access to daily spending or savings, increasingly using credit or selling belongings, receiving financial aid from welfare organisations
	Debt and homelessness	Bankruptcy, homelessness, and unspecified references in text to “debt”
	Chasing losses	Losing money gambling but continuing to gamble to recoup losses
	Financial (other or unspecified)	Other references to financial harms

Category	Code	Short description
Crime	Robbery, theft and burglary crimes	Crimes related to taking items or services of value without permission or fraudulently (with or without conviction)
	Prison sentence	Receiving a penalty through the legal system, such as prison time
	Societal, drug and amenity crimes	Crimes related to illicit production or distribution of drugs, damaging property, causing public disturbance, or crimes that are not committed against a specific person such as illegal gambling (with or without conviction)
	Crime (other or unspecified)	Other references to crime harms
Relationship	Deterioration or breakdown of relationships	Deteriorating or broken-down relationships (romantic or otherwise) including reduced trust, withdrawal, and low-level conflict
	Maltreatment, neglect or violence	Violence or maltreatment (physical, emotional, sexual) of close contacts or neglect causing serious impairment of dependents
	Relationship (other or unspecified)	Other references to relationship harms
General	Unspecified harms	References to general gambling harms without further detail, including referencing gambling addiction or problem gambling in a harmful context or with a negative connotation
	Unspecified harms of a severe nature	References to general gambling harms indicating they have a severe, destructive impact on the gambler (such as “ruin” and “destroy”)
	Harm to others	References to harms experienced by people due to the gambling of another, as well as interpersonal to societal harms
Work or study	Employment	Work-related harms including job loss, reduced performance, unspecific work harms

Category	Code	Short description
	Education	Education-related harms including suspension, reduced performance and unspecified education harms
Cultural	Cultural harm	Gambling-related harms negatively impacting shared group thoughts or values (represented by symbols, rituals, norms, attitudes, and beliefs) or negative feelings by people who gamble about their impact on culture
Miscellaneous	Miscellaneous harm	References to unique harms not defined by other codes

Stage 2: interpretive

The interpretive stage used thematic analysis to explore how harms identified in stage one were represented, and if there were differences by stakeholder type. We used thematic analysis as this is a flexible, interpretive approach (36) that is guided by both existing theory and from the raw data (28, 37).

The steps we took were:

1. Write analytic memos about the harms identified during the descriptive stage as necessary.
2. After the descriptive stage, export all coded data.
3. Group data by harm category and dataset, developing further memos.
4. Reorganise data by stakeholder type, developing further memos.
5. Review memos to identify recurring patterns or explanations that will be the basis for the developing themes.
6. Review the developing themes against the data to check that the theme accurately reflects the data and look for any contradictory examples. Revise as necessary.
7. Review revised themes with team and external reference group to develop final themes.

One researcher carried out the interpretive thematic analysis. The lead researcher familiarised themselves with the data through multiple readings of text coded during the descriptive stage. They wrote memos throughout the descriptive stage when they found potential connections, patterns, or anomalies.

After applying memos at the descriptive stage, the researcher extracted all coded data with stakeholder information. They compiled this information into tables in Microsoft Word. In these documents, they grouped data by:

- harm category
- harm codes
- dataset type (Twitter or consultation)

The researcher looked for potential patterns or explanations that went beyond a basic description of gambling-related harms and recorded these using memos. During this stage, although they organised text data by harm category, they also noted and analysed stakeholder information.

After analysing data organised by harm category, the researcher reorganised the data by stakeholder type and reviewed it again capturing patterns in memos. They reviewed the memos and associated coded text and used them as the basis for the 4 developing themes. They then compared the developing themes against the data to check that the theme accurately captured the data and identify any contradictory examples and revised if necessary. Part of this exercise

was to determine if the developing themes were representative across all stakeholders or only for specific stakeholder types, such as health.

After these exercises, the researcher discussed the developing themes with 2 other research members who had both separately coded 10% of the submissions and tweets during the descriptive stage so were familiar with the data. A third researcher who was not involved in coding was also involved in theme discussions.

We presented these developing themes (with minor revisions made to theme names where appropriate) to the gambling-related harms review external reference group. The external reference group's role was to inform and guide the project team undertaking the review. Following their input, we moved some previous themes to subthemes, resulting in 3 final themes.

When reporting themes, we used semi-quantification (for example, "frequent", "many", or "few"). We did this to show which themes were commonly or uncommonly expressed. It also helped us avoid inappropriately weighting patterns of results by stakeholder type. Other qualitative research has used this approach (38, 39).

3. Results

We have split the results into 2 sections. The first section reports the results of the descriptive content analysis on the frequency of codes across datasets and stakeholder types. The second discusses the themes developed through interpretive thematic analysis of harms coded in the descriptive analysis. Excerpts used as examples are direct quotes from consultation submissions and tweets. The only changes we made were to redact identifiable user information or website links and make small grammatical changes needed to improve the readability of the example. We show any changes to the excerpts in brackets.

3.1 Frequency and proportion of harm categories and codes

We coded all consultation submissions and tweets against 8 harm categories and 24 codes and compared each one by stakeholder type. Table 4 shows the frequency of harm categories and codes for all datasets combined. Table 5 shows the frequency of categories by stakeholder type for the consultation submissions and tweets separately. Tables depicting the frequency of harm categories and codes by stakeholder type for the consultation and Twitter separately are available upon request.

The counts for each code reflect when a submission or tweet has referenced the harm at least once. It does not represent the total number of times the code was referenced in each submission or tweet. The total counts for each category may sum to greater than the number of submissions or tweets. This is because we could reference more than one code in a category and so included it in the counts.

Table 4. The frequency and proportion of consultation submissions and tweets coded for each harm, by stakeholder type[8]

Codes	Commercial	Health	Lived experience	Individual	Charity	Decision makers	Other	Total
General	29 (9%)	24 (7%)	72 (22%)	119 (36%)	22 (7%)	14 (4%)	50 (15%)	330
Unspecified harms	26 (12%)	13 (6%)	50 (24%)	73 (34%)	15 (7%)	10 (5%)	25 (12%)	212
Unspecified harms of a severe nature	2 (3%)	4 (6%)	16 (23%)	31 (44%)	2 (3%)	0 (0%)	15 (21%)	70
Harm to others	1 (2%)	7 (15%)	6 (13%)	15 (31%)	5 (10%)	4 (8%)	10 (21%)	48
Health	16 (10%)	7 (5%)	29 (19%)	50 (33%)	10 (7%)	8 (5%)	33 (22%)	153
Stigma, shame and low self-worth	2 (5%)	0 (0%)	7 (19%)	18 (49%)	1 (3%)	2 (5%)	7 (19%)	37
Health (other or unspecified)	7 (21%)	1 (3%)	4 (12%)	5 (15%)	4 (12%)	3 (9%)	9 (27%)	33
Multiple health risk behaviours	2 (8%)	0 (0%)	4 (15%)	11 (42%)	1 (4%)	1 (4%)	7 (27%)	26
Suicidal thoughts, attempts and death by suicide	0 (0%)	4 (16%)	7 (28%)	8 (32%)	1 (4%)	1 (4%)	4 (16%)	25
Co-morbidity (gambling and mental or physical problems)	4 (19%)	0 (0%)	4 (19%)	4 (19%)	3 (14%)	1 (5%)	5 (24%)	21
Low mood and anxiety	1 (9%)	2 (18%)	3 (27%)	4 (36%)	0 (0%)	0 (0%)	1 (9%)	11
Financial	11 (11%)	6 (6%)	15 (15%)	42 (42%)	4 (4%)	4 (4%)	18 (18%)	100
Financial struggles	3 (7%)	3 (7%)	6 (14%)	25 (58%)	1 (2%)	1 (2%)	4 (9%)	43

[8] Stakeholder types are not uniform across datasets. See Table 5 below for stakeholder breakdown by dataset.

Codes	Commercial	Health	Lived experience	Individual	Charity	Decision makers	Other	Total
Debt and homelessness	2 (7%)	2 (7%)	6 (21%)	7 (25%)	2 (7%)	3 (11%)	6 (21%)	28
Financial (other or unspecified)	4 (20%)	1 (5%)	2 (10%)	5 (25%)	0 (0%)	0 (0%)	8 (40%)	20
Chasing losses	2 (22%)	0 (0%)	1 (11%)	5 (56%)	1 (11%)	0 (0%)	0 (0%)	9
Crime	2 (6%)	2 (6%)	10 (32%)	7 (23%)	2 (6%)	1 (3%)	7 (23%)	31
Robbery, theft and burglary crimes	2 (15%)	1 (8%)	3 (23%)	4 (31%)	0 (0%)	0 (0%)	3 (23%)	13
Prison sentence	0 (0%)	1 (14%)	4 (57%)	1 (14%)	0 (0%)	0 (0%)	1 (14%)	7
Societal, drug and amenity crimes	0 (0%)	0 (0%)	1 (17%)	1 (17%)	2 (33%)	0 (0%)	2 (33%)	6
Crime (other or unspecified)	0 (0%)	0 (0%)	2 (40%)	1 (20%)	0 (0%)	1 (20%)	1 (20%)	5
Relationship	1 (4%)	1 (4%)	10 (43%)	9 (39%)	1 (4%)	1 (4%)	0 (0%)	23
Deterioration or breakdown of relationships	0 (0%)	0 (0%)	7 (50%)	7 (50%)	0 (0%)	0 (0%)	0 (0%)	14
Maltreatment, neglect or violence	0 (0%)	1 (17%)	3 (50%)	0 (0%)	1 (17%)	1 (17%)	0 (0%)	6
Relationship (other or unspecified)	1 (33%)	0 (0%)	0 (0%)	2 (67%)	0 (0%)	0 (0%)	0 (0%)	3
Work or study	0 (0%)	1 (8%)	4 (33%)	2 (17%)	2 (17%)	0 (0%)	3 (25%)	12
Employment	0 (0%)	1 (9%)	4 (36%)	2 (18%)	1 (9%)	0 (0%)	3 (27%)	11
Education	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (100%)	0 (0%)	0 (0%)	1
Miscellaneous	1 (11%)	2 (22%)	1 (11%)	4 (44%)	0 (0%)	0 (0%)	1 (11%)	9
Cultural	0 (0%)	0 (0%)	1 (25%)	3 (75%)	0 (0%)	0 (0%)	0 (0%)	4

Codes	Commercial	Health	Lived experience	Individual	Charity	Decision makers	Other	Total
Total	60 (9%)	43 (6%)	142 (21%)	236 (36%)	41 (6%)	28 (4%)	112 (17%)	662

Table 5. The frequency and proportion of consultation submissions and tweets coded for each harm, by stakeholder type and dataset

Twitter:

	General	Health	Financial	Crime	Relationship	Work or study	Misc	Cultural	Total
Individual	84 (49%)	37 (52%)	29 (59%)	5 (29%)	6 (60%)	2 (40%)	3 (50%)	1 (100%)	167 (50%)
Other	24 (14%)	14 (20%)	5 (10%)	4 (24%)	0 (0%)	1 (20%)	0 (0%)	0 (0%)	48 (14%)
Lived experience	25 (14%)	8 (11%)	4 (8%)	4 (24%)	3 (30%)	1 (20%)	1 (17%)	0 (0%)	46 (14%)
Health	24 (14%)	7 (10%)	6 (12%)	2 (12%)	1 (10%)	1 (20%)	2 (33%)	0 (0%)	43 (13%)
Commercial	7 (4%)	2 (3%)	2 (4%)	1 (6%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	12 (4%)
Charity	5 (3%)	1 (1%)	1 (2%)	1 (6%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8 (2%)
Decision makers	4 (2%)	2 (3%)	2 (4%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8 (2%)
Total	173 (52%)	71 (21%)	49 (15%)	17 (5%)	10 (3%)	5 (2%)	6 (2%)	1 (0%)	332 (100%)

Consultation:

	General	Health	Financial	Crime	Relationship	Work or study	Misc	Cultural	Total
Lived experience	47 (30%)	21 (26%)	11 (22%)	6 (43%)	7 (54%)	3 (43%)	0 (0%)	1 (33%)	96 (29%)
Individual	35 (22%)	13 (16%)	13 (25%)	2 (14%)	3 (23%)	0 (0%)	1 (33%)	2 (67%)	69 (21%)
Other	26 (17%)	19 (23%)	13 (25%)	3 (21%)	0 (0%)	2 (29%)	1 (33%)	0 (0%)	64 (19%)
Commercial	22 (14%)	14 (17%)	9 (18%)	1 (7%)	1 (8%)	0 (0%)	1 (33%)	0 (0%)	48 (15%)
Charity	17 (11%)	9 (11%)	3 (6%)	1 (7%)	1 (8%)	2 (29%)	0 (0%)	0 (0%)	33 (10%)
Decision makers	10 (6%)	6 (7%)	2 (4%)	1 (7%)	1 (8%)	0 (0%)	0 (0%)	0 (0%)	20 (6%)
Health	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Total	157 (48%)	82 (25%)	51 (15%)	14 (4%)	13 (4%)	7 (2%)	3 (1%)	3 (1%)	330 (100%)

Twitter and consultation:

	General	Health	Financial	Crime	Relationship	Work or study	Misc	Cultural	Total
Total	330 (50%)	153 (23%)	100 (15%)	31 (5%)	23 (3%)	12 (2%)	9 (1%)	4 (1%)	662 (100%)

Frequency of harm categories, by stakeholder type

This section reports the harm categories in descending order from the largest amount of referenced harms to the least. It also provides the proportions of harms referenced by different stakeholder types.

When comparing across harms, the largest of the 8 harm categories was general (50% of referenced harms). This was followed by health (23%) and financial (15%) as seen in Table 4. Crime, relationship, and work or study categories were each 5% or less of the total references and the miscellaneous and cultural categories were 1% each. Health and financial categories being the most referenced harm-specific categories overall (after the non-specific general harms category) aligns with the findings of PHE's review on gambling-related harms.

Health had the greatest number of published qualitative and time-based studies retrieved by PHE's review. It is also the category with the greatest frequency of coded harms by stakeholders.[9] For both the review and coded harms, financial harms were the second most referenced and published category. However, where the review shows a comparable number of studies for financial and relationship harms (with relationship ranking third), stakeholders appear to reference relationship harms to a lesser extent in this data (where this category ranks as fourth). Crime and work or study harms are published on, or referenced by stakeholders, at a lower frequency. There are very few studies or stakeholder references to cultural harms.

Individual stakeholders comprised a third (36%) of all referenced harms and had the highest counts in 6 of 8 harm categories (excluding crime and work or study) (see Table 4). This may have been partly driven by the Twitter dataset as within this dataset, half (50%) of all referenced harms were from individual stakeholders. When compared to the consultation submissions, individuals comprised a fifth (21%) of all referenced harms (see Table 5).

Lived experience and other stakeholders represent around a fifth of all referenced harms (21% and 17%, respectively) except for relationships, where lived experience were the most referenced stakeholders (43%). Other stakeholders had no references (0%). Commercial stakeholders comprised about one-tenth of harms (9%) whereas the health, charity and decision makers stakeholder types comprised about 1 in 20 of referenced harms (6%, 6% and 4%, respectively). Commercial and charity stakeholders referenced harms more often in consultation submissions (15% and 10%, respectively) compared to tweets (4% and 2%, respectively) whereas the opposite was true for lived experience stakeholders (14% in consultation submissions and 29% in tweets).

[9] Only considering those harm categories with exact overlap between our review and analysis of stakeholder responses.

When comparing within stakeholder types, excluding the general category and those accounting for 5% or less of all codes, health was the most frequently referenced category. This was followed by financial for all stakeholder types (see Table 6). Note that we based the comparisons on valid percentages of stakeholders that had referenced a harm and not of all stakeholder submissions or tweets in the datasets.

Table 6. The frequency of consultation submissions or tweets coded for each harm by stakeholder type and proportion of harm categories coded within stakeholder types

Categories	Stakeholder type							Total
	Commercial	Health	Lived experience	Individual	Charity	Decision makers	Other	
General	29 (48%)	24 (56%)	72 (51%)	119 (50%)	22 (54%)	14 (50%)	50 (45%)	330
Health	16 (27%)	7 (16%)	29 (20%)	50 (21%)	10 (24%)	8 (29%)	33 (29%)	153
Financial	11 (18%)	6 (14%)	15 (11%)	42 (18%)	4 (10%)	4 (14%)	18 (16%)	100
Crime	2 (3%)	2 (5%)	10 (7%)	7 (3%)	2 (5%)	1 (4%)	7 (6%)	31
Relationship	1 (2%)	1 (2%)	10 (7%)	9 (4%)	1 (2%)	1 (4%)	0 (0%)	23
Work or study	0 (0%)	1 (2%)	4 (3%)	2 (1%)	2 (5%)	0 (0%)	3 (3%)	12
Miscellaneous	1 (2%)	2 (5%)	1 (1%)	4 (2%)	0 (0%)	0 (0%)	1 (1%)	9
Cultural	0 (0%)	0 (0%)	1 (1%)	3 (1%)	0 (0%)	0 (0%)	0 (0%)	4
Total	60 (100%)	43 (100%)	142 (100%)	236 (100%)	41 (100%)	28 (100%)	112 (100%)	662

Frequency of harm codes, by stakeholder type

This section reviews codes within harm categories. In the general category (330 submissions or tweets), unspecified harms were the most common harms coded. They made up nearly two-thirds (212 references, or 64%) of all references in this category. Unspecified harms of a severe nature had the next highest proportion (70 references, or 21%) followed by harm to others (48 references, or 15%). Stakeholder types with the highest number of unspecified harms references were:

- individual (73, or 34%)
- lived experience (50, or 24%)
- commercial (26, or 12%)

Nearly all references in the general category by commercial stakeholders were for unspecified harms (26 of 29, or 90%). But unspecified harms made up between 50% and 71% of general category harms for the other stakeholder types.

Stakeholders that contributed nearly all references to unspecified harms of a severe nature were:

- individual (31, or 44%)
- lived experience (16, or 23%)
- other (15, or 21%)

Stakeholders that contributed to the harms to others category were:

- individual (15, or 31%)
- other (10, or 21%)
- health (7, or 15%)

Commercial stakeholders contributed to the harms to others category least (1, or 2%).

These codes are not specific about the type of harm experienced, but we have analysed this further in the interpretive thematic analysis section. We did this to provide extra context on how stakeholders discuss gambling-related harms.

In the health category, the most harm references related to mental health, co-morbidity, or unspecified health harms. Health specific codes made up 48% (73) of coded health harms. These included:

- stigma, shame and low self-worth
- suicidal thoughts, attempts and death by suicide
- low mood and anxiety

Our codes included sub-clinical experiences of mental health (such as low mood and anxiety) (11, or 7% of health harms). We also included experiences of mental health that have no formal clinical diagnosis, such as stigma, shame and low self-worth (37, or 24% of health harms). But existing research has cited these as harmful aspects of mental and emotional wellbeing experienced by people who gamble (40).

The co-occurrence of gambling with multiple health risk behaviours, such as with alcohol use or co-morbidity (gambling and mental or physical health problems) were also frequently referenced by stakeholders (26, or 17% and 21, 14% of health harms respectively). The co-morbidity (gambling and mental or physical health problems) code mainly captured comorbidities with mental health problems as opposed to physical health problems. Unspecified or other references to health were captured by health (other or unspecified) and contributed over a fifth (33, or 22%) of the health category harm references (153).

Nearly half (18, or 49%) of all references to stigma, shame and low self-worth were from individual stakeholders, compared to 5% (2) from commercial stakeholders. This code included:

- explicit references to stigma as a gambling-related harm
- internalised stigma
- examples of actual stigmatising language being used to describe someone who gambles

One of the reasons that individual stakeholders made up the highest proportion of the stigma, shame and low self-worth code was due to many individual stakeholder tweets describing gamblers and gambling-related harms in stigmatising ways. Similarly, commercial stakeholders made no references to suicidal thoughts, attempts and death by suicide. But these were referenced at least once by each other stakeholder category and a relatively high amount by lived experience (7, or 28%) and individual (8, or 32%) stakeholders. Multiple health risk behaviours were also often referenced by individual stakeholders (11, or 42%).

We saw a high frequency of harm codes in the financial category, particularly relating to financial struggles (43% of referenced financial harms). But this is perhaps expected as gambling involves the risk of losing money (or money's worth). Financial struggles were heavily represented by individual stakeholders (25, or 58% of referenced financial struggles). Debt and homelessness made up 28% of referenced financial harms and was more evenly distributed across stakeholder types than financial struggles (contributions varying between 7% and 25% by stakeholder type).

Alternatively, codes in the crime category were less frequently referenced. This prevented us from comparing between crime codes and across stakeholders. Robbery, theft and burglary crimes were the most referenced code in the crime category. This possibly relates to financial problems that might lead gamblers to steal to improve their financial situation, which was described by some qualitative studies in the wider gambling harms review. However, we need

further research in this area to test this hypothesis. Stakeholders made few references to other specific types of crime (6 for societal, drug and amenity crimes) or prison sentences (7).

In the relationship category, stakeholders referenced codes relating to the deterioration or breakdown of relationships more than those relating to maltreatment, neglect or violence (14, or 61% and 6, or 26% respectively). Lived experience and individual stakeholders contributed to all references of deterioration or breakdown of relationships.

Harms within the work or study category overwhelmingly related to employment as opposed to education, though numbers for both were low (11, or 92% and 1, or 8% respectively). This aligns with our review of gambling-related harms, where there tended to be a greater number of studies exploring the relationship between gambling and employment harms, such as presenteeism.

Few references were made in the miscellaneous category, but the codes in this category captured:

- length of time playing or gambling
- desperation
- losing interest in activities

Cultural category harms were the least frequent and focused on the negative impact of gambling on the values of society. Due to the low number of references, we could not directly compare further between stakeholder type for other harm codes in the crime, relationship, work or study, miscellaneous and cultural categories.

3.2 Themes

Through the interpretive thematic analysis, we identified 3 themes with 9 subthemes. These reflected either contrasting perspectives or commonalities across stakeholder types. These themes defined the:

- sources of gambling-related harm
- scope of gambling-related harm
- responses to prevent and reduce gambling-related harm

We do not report all references reflecting these themes in the results, though we do provide example quotes from consultation submissions and tweets.

Sources of gambling-related harm

The first theme related to the sources of gambling-related harm as described by different stakeholders. In this theme, different stakeholder types held 2 distinct and opposing perspectives. These were that:

1. Sources of harm are complex. That is, gambling-related harm has complex origins which can come from many sources. This view was held by commercial stakeholders and proportionately smaller sub-section of individual and other stakeholders.
2. Gambling substantially contributes to harm. That is, gambling is a foundational source of gambling-related harm. This view was held by health, charity, and lived experience stakeholders, and a different sub-section of individual and other stakeholders (or non-commercial stakeholders).

The sources of harm are complex

Stakeholders portrayed gambling-related harms as having complex origins that were not necessarily related to gambling. They also implied that harms came from multiple sources. For example, existing co-morbid conditions or a person's propensity towards gambling involvement. This subtheme was mostly expressed by commercial stakeholders, but also appeared in a proportionally smaller section of individual and other stakeholders. Gambling was not directly rejected as contributing to harm, but neither was it explicitly identified. Instead stakeholders stressed a complicated nature of harm.

> "Gambling-related harm is a complex and multi-faceted issue" (Submission 43, commercial, consultation).

> "Problem gambling is a multi-faceted problem, with no one silver bullet" (Submission 102, commercial, consultation).

Commercial stakeholders were often vague about the sources of gambling-related harm, while reiterating the perspective that harms have many complex sources. Describing harms as a highly individual experience also depicted a complicated nature of harm. For example, some of these stakeholders contended that it is unknown why some gamblers experience problems and other gamblers do not. Since commercial stakeholders emphasise that gamblers do not experience the same kind of harm under the same set of circumstances, we can interpret that they believe it is too simplistic to attribute the harms people experience to gambling alone.

> "[T]he strategy could miss an important element of the overall understanding of why individuals experience harm when others, gambling on the same products and in the same environment, do not" (Submission 101, commercial, consultation).

> "With the exception of physical harm, all other harms related to gambling whether emotional, financial, time related, relationship or welfare harms are all different for each individual" (Submission 26, commercial, consultation).

Although commercial stakeholders rarely specified the nature of the gambling-related harm, when they did, they often highlighted co-morbidity. This included co-morbidity with other specific health risk factors or addictions, as well as unspecific references of co-morbidity. When discussing addiction, commercial stakeholders put forward the view that gamblers experiencing gambling-related harm also had addictions to alcohol and drugs, or a general propensity towards addiction. Presenting gambling-related harms with co-morbidity could be interpreted as an attempt to weaken the association between gambling and harm.

> "We must also always be cognizant of 'co-morbidity' in that many problem gamblers or people with a tendency to gamble to the extent that it is causing harm also have many other harmful habits" (Submission 110, commercial, consultation).

> "We are also concerned that anti-gambling bias can lead to gambling being seen as the only harmful element in the lives of people suffering from addiction, ignoring co-morbidity… we are concerned that when an assessment is made of gambling related harm, anti-gambling bias can lead to every possible example of harm and every possible estimate of cost being laid solely at the door of gambling" (Submission 87, other, consultation).

Commercial (and a section of individual and other) stakeholders did not generally include the gambling industry as a contributing factor in harm. But there were a small number of instances where these stakeholders described gambling as either "healthy" or "unhealthy". Saying that people can gamble in a healthy way implies that harm is not inherent to gambling but is instead the result of individual behaviour. Other times, stakeholders identified specific products or gambling environments as having a higher propensity for harm compared to other products or environments.

> "On-line does not have [the opportunity as in land based venues to communicate with people playing at harmful levels] and my concern is that often the harm has been done on-line before an algorithm is able to highlight for the operator what is happening. An algorithm cannot see someone weeping..." (Submission 110, commercial, consultation).

Commercial stakeholders tended to position harms attributed to gambling as having complex origins. They also tended to omit or downplay gambling and industry as a source of harm, as well as suggesting that individualised factors other than gambling, such as co-morbidity and

individual behaviour, were the true source of gambling-related harms. This had the effect of de-emphasising the role of gambling as a main source of harm.

Gambling substantially contributes to harm

The second, and opposing, subtheme in the sources of harm theme was gambling substantially contributes to harm. In this subtheme, gambling is clearly a foundational source of harm. It also finds that gambling structures and environments contribute to harm (including economic, social, legal, or corporate structures that influence access to gambling), and highlights specific industry actions as harmful.

Overwhelmingly, this subtheme arose from views reflected by health, charity and lived experience stakeholders. It also included a large section of individual and other stakeholders (or non-commercial stakeholders). Commercial stakeholders did not express this view.

Stakeholders described gambling products or the gambling environment as being inherently harmful or designed in ways that cause or contribute to gambling-related harm.

> “We agree that the [former gambling strategy’s] promotion of the ‘empowerment’ of individuals to make ‘healthy choices’ has de-emphasised the inherent harms associated with gambling product design and environments…” (Submission 51, charity, consultation).

> “There are of course tolerable degrees of risk in assessing safety [of gambling], like anything in life, but we must start from the scientific fact that gambling is inherently harmful for everyone, and potentially extremely dangerous for everyone too, given that nobody is completely safe from developing serious gambling habits…” (Submission 39, other, consultation).

Non-commercial stakeholders had a strong focus on the role of the gambling industry as the source of gambling-related harm. We particularly saw this from lived experience and individual stakeholders. Some of these non-commercial stakeholders, as well as a section of other stakeholders, described the gambling industry as being inherently exploitative.

> “Every form of commercialised gambling is by definition exploitative, and driven by profit, not health…” (Submission 39, other, consultation).

> “@[redacted] This is the reality of how all the big bookmakers actually operate. All the responsible gambling spiel they peddle is 100% bullshit. Everybody who bets regularly knows it. The @[redacted] do nothing about it. Need a proper industry regulator and urgently. People are dying cos of this.” (Tweet 824, individual, Twitter).

There were specific gambling industry actions highlighted as problematic by lived experience and individual stakeholders. They described the gambling industry as actively targeting people with existing gambling problems and so perpetuating harm. These targeted actions included VIP schemes, which are customer rewards or loyalty programmes offered by gambling companies. Some submissions and tweets described VIP schemes as targeting customers who have problems with gambling. This is because these customers gamble often and lose large amounts of money, so are more profitable to companies than customers who do not have large losses.

Stakeholders viewed high-loss gamblers as experiencing high levels of harm. They also thought that the free bets provided to high-loss gamblers by VIP schemes to incentivise further gambling exacerbated harm. Other harmful industry actions included having staff ignore signs of harmful gambling in high-loss (and so highly profitable) customers who could be experiencing a high burden of harm.

> "[redacted gambling company] bans men and at the same time is ringing my totally addicted son offering him free bets and the like when he has not bet for a few days" (Submission 156, lived experience, consultation).

> "The whole insidious VIP system - where the addicts with the deepest pockets get taken to football cup finals and days out to the races - is proof that the lofty aims of making gambling safe and transparent are a long way off… Free bets to addicts is like chucking petrol onto the flames of addiction…" (Submission 83, other, consultation).

Lastly, stakeholders, excluding the commercial type, pointed to structural determinants of gambling-related harm ('upstream' sources). This included the widespread physical and temporal availability of gambling and pervasive marketing. Gambling was positioned as being nearly unavoidable in society and daily life.

> "The availability of gambling apparatus planted beside other day to day businesses that are a necessity for people to visit on the high street only adds to the spread of gambling addiction." (Submission 97, individual, consultation).

> "This is causing harm and deaths yet it's still socially accepted for gambling shops on every street corner, adverts all over the television and then followed by internet advertisements. It's all over the public domain and for individuals with an addiction it's sets individuals up to fail." (Submission 86, lived experience, consultation).

Acknowledging upstream sources of harm helped stakeholders to discuss inequalities. These included references to financial and health inequalities, which involved recognising that gambling-related harms are not experienced equally by all groups.

> “@[redacted] @[redacted] when think about gambling, it's benefits and harms don't affect the same groups of people - gambling is likely to widen existing inequalities within poor households especially financial inequalities” (Tweet 76, health, Twitter).

However, some stakeholders spoke about inequalities in more general terms, without specifying the nature of these inequalities.

Although stakeholders acknowledged gambling as the clear and direct cause of people experiencing harms, the health, charity, and lived experience stakeholders (and a large section of individual and other stakeholders) recognised other individual and environmental factors also contributed to gambling-related harm. These included factors like having other existing health conditions or addictions. We can interpret this as stakeholders suggesting that attempts to prevent and reduce gambling-related harm must adopt a whole systems approach spanning primary, secondary and tertiary prevention.

> “Individuals who have a compulsion will likely have underlaying complex mental health conditions. By placing the blame and responsibility of failures to protect vulnerable people is wrong… Why is the responsibility the person who has an addiction - we know addiction and mental health go hand-in-hand..” (Submission 85, individual, consultation).

Since stakeholders described harms caused directly by gambling, industry as a cause of harm, and how these contribute to upstream sources perpetuating harm, this resulted in placing the role of gambling as a main source of harm.

Scope of gambling-related harm

The second theme discusses the scope and perceived size and breadth of gambling-related harm and its association with different levels of gambling involvement. There were 2 opposing subthemes aligned with different stakeholder types.

1. Harms are experienced by a minority. That is, harms are experienced by a minority of problem gamblers (referenced by commercial and proportionately smaller section of individual and other stakeholders).
2. Harms can be experienced across a range of gambling involvement. That is, harms are not experienced solely by problem gamblers but can be experienced at any level of gambling (referenced by health, charity and lived experience stakeholders or non-commercial stakeholders as well as a different section of individual and other stakeholders).

Harms are experienced by a minority

In this subtheme, stakeholders viewed gambling-related harms as mostly experienced by a minority group of problem gamblers. They also thought that the burden of gambling-related harm was not increasing. Stakeholders expressing this subtheme comprised mostly of

commercial stakeholders, and a proportionately smaller section of individual and other stakeholders. This was broadly aligned with the stakeholders identified in the 'sources of harm are complex' subtheme.

Commercial stakeholders focused strongly on serious or severe gambling-related harms which they also often portrayed only a small minority of problem gamblers as experiencing. There was an emphasis on separating out problem and non-problem gambling, with problem gamblers positioned as the only type of gambler needing intervention. They also reinforced the idea that this group was relatively small compared to the overall gambling population. The positioning and use of problem gambling implied clinical problem gambling, but stakeholders did not always define this.

> "Whilst we do not question that there are a small minority of gamblers who experience problems with our products, the vast majority enjoy it as part of their leisure experience, in a recreational way." (Submission 102, commercial, consultation).

> "The number of problem gamblers and excessive users is relatively small and not increasing." (Submission 67, individual, consultation).

Discussing problem gamblers was the only time that specific, severe harms about gambling were brought up by commercial stakeholders. Otherwise, they discussed gambling-related harms in a vague, unspecific way.

> "The only way we can see gambling related treatments being effective is for people that have gone so far that they've driven themselves into debt, lost their home or developed other mental health problems as a result. This would be for the extreme cases so it's no surprise to us that only 2.6% of problem gamblers use the treatment available" (Submission 32, commercial, consultation).

Stakeholders referenced few harms outside of the context of problem gamblers. But the few harms that were referenced included co-morbidity, stigma and chasing losses (see Table 3).

As well as focusing discussions of gambling-related harms on problem gamblers (rather than across the range of gambling participation), commercial stakeholders rarely discussed affected others experiencing harm. During the descriptive content analysis, commercial stakeholders only referenced harms to others once. However, it was the third most common harm code overall across all stakeholder types. Discussions by commercial stakeholders about harms were kept to individual gamblers and focused on those portrayed as problematic.

Harms can be experienced across the range of gambling involvement

Health, charity, decision makers and lived experience stakeholders (or non-commercial stakeholders), as well as a section of individual and other stakeholders expressed an opposing view to the 'harms are experienced by a minority' subtheme. Here, in the 'harms can be

experienced across the range of gambling involvement' subtheme, they viewed gambling-related harms as being wider in scope compared to the narrow scope portrayed by commercial stakeholders (and a proportionately smaller section of individual and other stakeholders). This subtheme clearly portrayed that any level of gambling, from infrequent to daily, has the potential to cause harm.

Also, these non-commercial stakeholders emphasised the severe nature of gambling-related harms and that the prevalence of gambling-related harms was large or increasing in size. In expressing this subtheme, stakeholders broadly aligned with other stakeholders expressing that gambling substantially contributes to harm.

Non-commercial stakeholders depicted gambling-related harms as being able to happen to any gambler at any amount of gambling, while still acknowledging the high burden of harm experienced by people with problem gambling.

> "@[redacted] Great of him to share this. Gambling is the fastest way to self destruction and oblivion, it's a very quick, silent and deadly process, you can think you're normal, then in the blink of an eye you're in the gutter. Take heed." (Tweet 536, individual, Twitter).

Non-commercial stakeholders were more specific about the types of harm associated with gambling at any level compared to commercial stakeholders who reserved discussion of severe harms for problem gamblers only. In demonstrating the seriousness of harms, non-commercial stakeholders would group several gambling-related harms together (such as debt, family breakdown and homelessness) when discussing gambling-related harm. Commercial stakeholders would only do this when discussing problem gamblers. Also, when addressing financial losses experienced from specific instances of gambling, non-commercial stakeholders would clearly associate these kinds of harms with further financial or social consequences. They were often treated as stepping-stones to other harm categories, which commercial stakeholders did not do in the 'harms are experienced by a minority' subtheme. This made clear that the impact of gambling goes beyond immediate financial losses.

> "All I can say is this is the truth I had a Gambling ADDITICTION for 4 years and kept pushing it aside. You dont just lose money you can lose things worth so much more. [redacted URL]" (Tweet 1, individual, Twitter).

> "An area that should be agreed upon in relation to Prevention is to have a big campaign on advertising stating the harms of gambling in all forms for relationships, debt, homelessness, lack of food and harm to children and families." (Submission 54, individual, consultation).

Non-commercial stakeholders also spoke about the severity of harm using visceral language, particularly by lived experience and individual stakeholders. In instances where the exact nature

of harm was not explicitly stated, commonly these were discussed in ways that made clear that gambling can have severe impacts. This included terms such as:

- destroy
- suffer
- misery
- ruin
- gone through hell

> “No one should be allowed to suffer the torment that is gambling addiction, and it is important the industry wakes up to the public scandal their products are responsible for creating.[redacted URL]” (Tweet 156, other, Twitter).

> “@[redacted] People who have had lives ruined by a gambling addiction may have a different take on this.” (Tweet 705, individual, Twitter).

Non-commercial stakeholders (as well as sections of individual and other stakeholders) further emphasised the severity and sense of scale of harms by comparing gambling to other health risk factors (like alcohol or illicit drugs) or life-threatening health conditions (like cancer). These analogies were not adopted by commercial stakeholders who were the dominant stakeholder type identified in the ‘harms are experienced by a minority’ subtheme.

> “[I]n gambling people should learn to know gambling is worse than cancer.” (Submission 39, other, consultation).

> “@[redacted] Addiction doesn't just have to be due to a substance like alcohol or heroin. I knew of many people addicted to gambling who lost everything committed suicide. How people cannot empathize is beyond my understanding of the human beings” (Tweet 706, individual, Twitter).

Non-commercial stakeholders also voiced the view that gambling-related harms and problem gambling were increasing. There was an understanding that this was a societal issue.

> “#Gambling is currently the fastest growing addiction both in the UK and globally. We have a shared #responsibility to highlight this growing concern. Lets work together to improve the lives of those directly or indirectly affected by gambling problem. [redacted URL] [redacted URL]” (Tweet 323, health, Twitter).

Gambling-related harms are experienced by families and wider society

The gambling-related harms are experienced by families and wider society subtheme reflected a clear recognition that gambling-related harms can extend beyond the individual gambler. Almost all stakeholder types expressed this view, particularly lived experience, individual, and

other stakeholders, and to a lesser extent charity, health and decision makers stakeholders. Noticeably, commercial stakeholders were broadly absent in discussing affected others.

In this subtheme, stakeholders depicted gambling-related harm as affecting people beyond the individual that gambles. This included people who are known to the gambler (such as friends and family), the local community and society. These harms were often discussed in ways that depicted the severe impact that gambling can have on others. Stakeholders talked about the "ruinous" and "destructive" effects of gambling on families and community. We also found these harms discussed in the 'harms can be experienced across the range of gambling involvement' subtheme. While all but commercial stakeholders emphasised harm to others as being a serious problem, often stakeholders did not specify the exact nature of the harm.

> "We believe that gambling-related harm should be considered as a public health issue because of its impact on individuals, families, communities and society." (Submission 6, other, consultation).

> "@[redacted] Oh my fucking god why do this your rich as fuck you don't need the cash your promoting gambling a industry that prays on the vulnerable people that makes them become addicted to there evil soul sucking ways that destroys family's around the world" (Tweet 240, lived experience, Twitter).

When stakeholders (excluding commercial stakeholders) provided detail on specific harms to others, they tended to focus on financial harms. These harms would come up when stakeholders talked about the impact on interpersonal relationships or society. There was an acknowledgement that close contacts may need support, perhaps by increased access to treatment or resources. But the stakeholders did not specify the kinds of harms affected others may be seeking help for.

> "I would suggest that GRH [gambling related harm] is currently a hidden cost for local authorities." (Submission 38, individual, consultation).

> "This is the crux of it. Gambling ruins lives. It puts children in poverty. [redacted URL]" (Tweet 873, individual, Twitter).

There were also personal reflections by gamblers and lived experience stakeholders on how their gambling or gambling of a loved one had negatively affected themselves or those around them. They would depict harm as extending beyond the individual gambler.

> "As a recovering gambling addict I am aware of the huge negative impact the actions of gambling and its results on wellbeing of those around me and myself." (Submission 24, lived experience, consultation).

However, other than costs to society and direct financial impacts on families and children, there was less emphasis on the specifics of how gambling harms others and a stronger emphasis on

the wider concept of affected others in gambling-related harms. This subtheme highlighted the concept of affected others in gambling-related harms by all but commercial stakeholders, even if stakeholders were rarely specific about the exact nature of these harms.

The hidden nature of gambling-related harm

The 'hidden nature of gambling-related harm' subtheme reflected the belief expressed by all stakeholder types that gambling-related harms can be hidden or hard-to-see. They identified the hard-to-see nature of harms by:

- directly referencing the hidden nature of harms or lack of awareness about gambling-related harms in society (resulting in these harms being hidden)
- the types of harms associated with gambling
- the issue of stigma as a harm itself and as a barrier to treatment

Stakeholders directly addressed the hidden nature of gambling-related harms in several submissions. They also highlighted a low level of awareness of gambling-related harms by both the public and healthcare professionals. They thought the lack of awareness of gambling-related harm exacerbated the harms people were experiencing by providing barriers to accessing appropriate care. Some stakeholders thought even healthcare professionals seemed to have a gap in their training for dealing with gambling-related harms.

> "I suffered from the age of 10 and unfortunately back then there was no education or treatment for me… I suffered in silence" (Submission 133, lived experience, consultation).

> "The hidden nature of much gambling related harm makes this an area of significant need." (Submission 17, decision makers, consultation).

> "When asked, "Overall, what are the main barriers people and organisations face when trying to tackle gambling-related harm?", their primary response was "the hidden nature of problem gambling"." (Submission 43, commercial, consultation).

The hidden nature of gambling-related harms was reflected in the types of harms people experienced, particularly harms associated with mental health like:

- shame
- isolation
- depression

Also, stakeholders referenced the increased risk of suicide, or implied suicide, among people who gamble. There were indications that these deaths were at least partially attributed to feelings associated with stigma, such as shame.

> “Gambling addicts feel shame like no other addiction…” (Submission 25, individual, consultation).

> “I suggest all of your officers put themselves in the shoes of a parent whose child is making attempts to take his or her own life because of debts and shame and addiction to gambling…” (Submission 39, other, consultation).

It is possible that the hidden nature of some gambling-related harms contributes to stigma experienced by gamblers. One submission clearly described their view on this.

> “There is a stigma that the gambler is the idiot rather than the diseased” (Submission 104, individual, consultation).

Individual stakeholders reinforced this belief by using stigmatising language to describe gamblers in the Twitter dataset. These individual stakeholders may or may not have first-hand experience with problem gambling or gamblers. These tweets reflected a personal responsibility view of gambling-related harm. In this view, harms result from an individual being unable to control their gambling or choosing to gamble irresponsibly. So, gambling-related harms are their own fault. As harms are due to individual behaviour or choices, these stakeholders viewed gambling-related harms as less worthy of government or taxpayer funded interventions to treat or reduce harms.

> “@[redacted] I don't need too mate.. many people become homeless because of drugs, alcohol and gambling problems which is their own fault.. people with actual real life problems fair enough for me but other than that absolutely not!” (Tweet 587, individual, Twitter).

> “@[redacted] If your addiction to gambling is such that you put that above eating, then be bloody thankful the govt has assisted in establishing food banks rather than blaming them. Its your own doing. Get the dopamine kick elsewhere so you can be a partially functioning member of society...” (Tweet 751, individual, Twitter).

One of the proposed ways to reduce harm included reducing gambling stigma. Some stakeholders believed this was a way to:

- improve access to treatment
- bring harms more out into the open for both gamblers and affected others
- reduce blame and responsibility from the individual

> “In our opinion there is a barrier to treatment caused by the stigma around gambling related problems and we see an opportunity to link prevention and education to encourage people to engage with services that available to help them” (Submission 11, commercial, consultation).

> “Reducing the stigma has to play a big role in this. The renaming of your strategy from "responsible gambling" to "reducing harms" definitely helps. The former title suggests problem gambling is the fault of an irresponsible person. The latter suggests a broader societal issue” (Submission 137, other, consultation).

Responses to prevent and reduce gambling-related harm

The last theme identifies the range of responses to prevent and reduce gambling-related harms. The 3 subthemes included:

1. Tackling gambling-related harm requires a whole systems approach. That is, addressing gambling-related harm requires interventions that span primary, secondary, and tertiary prevention (referenced by health, charity and lived experience stakeholders, or non-commercial stakeholders, as well as a section of individual and other stakeholders).
2. Focus on individual interventions and treatment. That is, addressing gambling-related harm is discussed only in relation to interventions for individual gamblers (referenced by commercial and a section of individual and other stakeholders).
3. Consumer awareness and vendor responsibility. That is, responses should include increasing consumer awareness and consumer safety by vendors (all stakeholder types).

Tackling gambling-related harm requires a whole systems approach

Non-commercial stakeholders who viewed gambling as being the direct source of a range of harms saw upstream population-level policies and interventions as essential to preventing and reducing gambling-related harms. In short, they ascribed to a public health approach to preventing and reducing gambling-related harms.

> “We believe that gambling-related harm should be considered as a public health issue because of its impact on individuals, families, communities and society.” (Submission 6, other, consultation).

Non-commercial stakeholders saw the need for a whole systems approach spanning primary, secondary and tertiary prevention. They made direct calls to regulate the industry, or they inferred it from statements they made on the inadequacy of current regulations.

> “The gambling establishments know exactly how each player will play or react, returning to the gambling establishment to gamble again... players with a gambling addiction suffer greatly because of this... because of this gambling establishment I was very suicidal... I just do not understand why they are not more regulated...” (Submission 21, lived experience, consultation).

> “I feel expecting a business which often depends on the misery of others to succeed, to make changes to how they operate because of “encouragement” is too simplistic and naïve and a waste of resources.” (Submission 125, lived experience, consultation).

There were explicit calls by non-commercial stakeholders to:

- regulate gambling marketing
- regulate specific modes of gambling (for example, online gambling)
- update or enforce statutory approaches

They also made comparisons with other harmful commodity industries, such as alcohol and tobacco. These discussions included public health successes that have resulted from implementing structural and regulatory interventions in these industries, implying the need for gambling to follow a similar path to reduce harms.

> “It’s time that gambling is treated the same way as smoking, a public health issue. This is causing harm and deaths yet it’s still socially accepted for gambling shops on every street corner, adverts all over the television and then followed by internet advertisements. It’s all over the public domain and for individuals with an addiction it’s sets individuals up to fail.” (Submission 86, lived experience, consultation).

> “@[redacted] Yes it is. We've banned cigarette adverts and gambling wreaks just as much havoc in people's lives.” (Tweet 809, individual, Twitter).

Treating gambling and industry as the sources of harm inevitably led to support for primary prevention activities. These activities would regulate the industry as an approach to prevent and tackle harm, as well as advocating for treatment and support for gamblers. Non-commercial stakeholders rejected the idea that gambling and its harms are an issue of personal choice, and so of personal responsibility.

> “Head of Northern Gambling Clinic explaining it's not "weak individuals" but purposely designed products which cause harm and phps suicide @[redacted] The occupation can be dangerous #OTs @[redacted] and environment needs better regulation [redacted URL]” (Tweet 404, charity, Twitter).

Focus on individual interventions and treatment

Although all stakeholders supported some form of targeted intervention (including further support to the NHS, charity sector and helpline services), commercial stakeholders positioned individually targeted interventions and treatment as the focus for addressing harms. They also rarely discussed or supported primary prevention. When supporting interventions for individual gamblers, commercial and a proportionately smaller section of individual and other stakeholders would sometimes emphasise that they only saw a minority of gamblers experiencing harm. So, in their view, the small number of total gamblers experiencing serious harms means that this is

the group that needs policy attention or intervention (see the ‘harms are experienced by a minority’ subtheme).

> “In relation to the year 1 priority, [redacted] believes the focus of available resources initially should be on recognising that there is a cohort of individuals for whom gambling is a problem, and therefore increasing our understanding of the causes and improving our prevention mechanisms for these known harms is of more value.” (Submission 72, commercial, consultation).

Commercial stakeholders would emphasise the need for interventions to treat co-morbidities and to address problem behaviours. Or they would say that people experiencing harms can get better on their own without intervention. They also gave examples of harm as a personal responsibility of the individual who is gambling rather than inherent to gambling itself.

> “At the discussion with: @[redacted] @[redacted] (@[redacted]) @[redacted] @[redacted] taking place @[redacted] #BattleOfIdeas Introduced #gambling into the debate"Problem lifestyles are often in the eye of the beholder, rather than intrinsic to the activity itself"” (Tweet 436, commercial, Twitter).

There was also a view among commercial stakeholders that not enough information was available to properly support interventions targeted beyond individual gamblers. This was due to the complex nature of gambling-related harm and potential unintended consequences of primary prevention responses. In the few instances when commercial stakeholders did address primary prevention, they regarded these approaches as being ineffective.

> “A collective approach as expounded above, which strikes a balance between making gambling safer for everyone in the first instance and encouraging gamblers to make informed choices, including using self-management tools where they find these beneficial, is likely to have the greatest overall benefit and reduces the potential for negative impact and unintended consequences for those who do not identify with problem gambling behaviours…” (Submission 9, commercial, consultation).

> “Online Gambling Rise in Popularity in Thailand Despite the Nationwide Ban on Gambling Services #Gambling #OnlineGambling #GamblingParticipation #GamblingParticipationRates #GamblingHarm #ProblemGambling #UnderageGambling #GamblingRegulation #Thailand [redacted URL]” (Tweet 233, commercial, Twitter).

Consumer awareness and vendor responsibility

The last subtheme of approaches to tackling gambling-related harm were ones related to increasing consumer awareness and consumer safety by vendors. Consumer awareness means improving consumer knowledge on the potential harms associated with gambling, as well as providing educational programmes or information. Consumer safety by vendors means

actions taken by vendors (land-based or digital gambling venues) to prevent and reduce harm in their facilities or on their platforms.

All stakeholder types identified this subtheme in relatively equal measure. Interventions that act to increase vendor responsibility interventions focused on identifying, reducing or preventing harm through:

- credit or affordability checks
- improved monitoring of player behaviour
- unified systems for tracking gambler exclusion
- improved staff training in both land-based and digital gambling venues

> "[redacted] customer affordability solutions are designed to help operators deliver responsible gambling interactions to customers most likely to be experiencing gambling related harm" (Submission 32, commercial, consultation).

There were calls by all stakeholder types, but proportionately less so by health stakeholders, for increasing the use of education and information campaigns to raise awareness of gambling-related harms or reduce the associated stigma. Lived experience and charity stakeholders also suggested the gambling industry should financially support gambling interventions, including mandatory levies to fund treatment and prevention. There were several individual and lived experience stakeholders that described industry as creating harm and so needed to take further responsibility in addressing it.

> "We agree that there should be considerable focus on education that promotes responsible gambling so that harms are prevented and education around stigma so that those in need of help can come forward." (Submission 106, decision makers, consultation).

> "The industry has created a monster that needs real resources to fund interventions." (Submission 63, lived experience, consultation).

4. Discussion

4.1 Identifying gambling-related harms

Types of gambling-related harm

The results of the descriptive content analysis found that, at the category-level, general harms (which did not specify the nature of harm) were most commonly mentioned across all datasets and stakeholder types. They accounted for 50% of all harm references. The second most common harm category was health (23% of all harms), then financial (15%). There were fewer references to crime, relationship and work or study categories (all with 5% or less), and a very low frequency of cultural and miscellaneous categories (1% each).

Like the findings for the category-level analysis, at the code-level, the 3 most commonly referenced harms all belonged to the general harms category. This is perhaps unexpected, given that the Gambling Commission consultation asked respondents for their "view[s] on the new national strategy to reduce gambling harms" (26). This may have prompted responses on the broad impact of gambling on harms, but the respondents then may (or may not) have gone on to discuss more specific harms. However, our findings from submissions and tweets may, in part, reflect linguistic properties of the data where vagueness is a common feature (41). Alternatively, language lacking clarity and specificity may be a deliberate rhetorical strategy to avoid responding directly to a question. In this case, they avoided highlighting specific harms from gambling. The latter hypothesis is perhaps plausible, since commercial stakeholders referenced unspecified harms proportionally more, relative to other stakeholder types.

More evidence for this hypothesis comes from our interpretive thematic analysis. This found that commercial stakeholders tended to reference unspecified category-level harms rather than attribute detail to harms. This vagueness may be an intentional strategy to downplay the prevalence or severity of gambling-related harms. This might be expected, since the profits of commercial stakeholders and their industries rely on people engaging in gambling.

In the health harms category, most codes related to mental health and wellbeing or general health (meaning that the type of health harm was not specified). This finding aligns with the published literature, where most evidence has established causal or correlational relationships between gambling and mental disorders (42, 43) Also, there is limited published evidence showing a relationship between gambling and physical health conditions, such as hypertension. The common association between gambling and mental health problems may provide a clear focal point to better align gambling-related harm with a public health approach.

In line with findings from PHE's review on gambling-related harm, financial harms were the next most referenced harm category (15% of referenced harms). The most common financial harms were financial struggles (43% of all references in the financial harms category) and, to a lesser extent, debt and homelessness (28%). We could expect to see these findings as gambling

involves risking money (or money's worth) in games of chance with the financial returns to players structured in a way that they are unlikely to get a return over the long run (44).

Gambling industries build in statistical advantages to ensure profitability over the long-term. They do this while exploiting cognitive biases that lead people who gamble to incorrectly assess their skill level, control, and likelihood of success when gambling (45). This contributes to persistent gambling in the face of consistent or large financial losses. Importantly, our thematic analysis suggests that stakeholders recognise other gambling-related harms, such as health harms, are intertwined with financial harms because debt, for example, is associated with stress, depression and anxiety, or crime (46).

Frequency of gambling-related harms

In our thematic analysis, we could regard the frequency of references to gambling-related harms as a proxy for how stakeholders perceived the importance of different types of gambling-related harms. Other factors could also influence these results. The type and frequency of referenced harms may partially reflect the existing body of evidence identifying gambling-related harms, or the level of cultural visibility about what makes up a harm or at what frequency.

Our thematic analysis identified 'hidden harms' as a subtheme, so it is possible that harms are occurring, but are not widely acknowledged, and so are not reflected in our data. References to harms could also reflect our modes of data collection. The consultation was structured in a way that would encourage views on policy and intervention responses to gambling-related harms rather than harms necessarily (26). However, tweets were free form.

The results are likely to be a combination of these factors and a genuine representation of the range and amount of gambling-related harms that stakeholders think are experienced by gamblers and affected others. For example, questions in the consultation requested stakeholder views on a public health model of gambling. This may have prompted more references to health harms than if this question was not included. However, when comparing consultation submissions to tweets, which did not have such prompts, the proportion of all health harms were similar between datasets (25% and 21% respectively). This may suggest that stakeholders perceive health harms to be the most prominent gambling-related harms experienced by gamblers.

4.2 Describing gambling-related harms

In the second part of the analysis, we conducted an interpretive thematic analysis on the harms coded in the descriptive content analysis and compared how different stakeholders discussed harms. Broadly speaking, we saw a distinction between representations by commercial and non-commercial (consisting of health, charity and lived experience) stakeholders. Different sections of individual and other stakeholders were present in both groups.

Sources of gambling-related harm

Research shows unhealthy commodity industries, including alcohol, tobacco, and high fat, salt, and sugar (HFSS) food and beverages, frame health behaviours as complex problems as a strategy to argue against effective primary prevention policies (47 to 49). These policies include increasing prices and restricting availability and marketing. This framing also enables unhealth commodity industries to reject whole systems approaches that span primary, secondary and tertiary prevention. These are of course the very measures that the evidence shows to be the most effective and cost-effective for reducing harm, whether it be alcohol (50), smoking (51) or HFSS products (51, 52).

Arguing that gambling is a complex issue that does not need a regulatory primary prevention response has also been featured on the websites of, and in publications by, the gambling industry (47). This further supports our finding that saying gambling is complex is a strategy commonly adopted by gambling industry actors. Notably, though our results found that commercial stakeholders described the sources of harm as complex, they were simultaneously vague on the sources of harm. An exception included emphasising the role of co-morbidities. Commercial stakeholders specifically portrayed co-morbid gambling and drug and alcohol dependence or other health conditions as sources of gambling-related harms. This implies that the dependence or other health problem was the dominant issue, not gambling itself. This further adds to the way commercial stakeholders frame gambling as a complex issue.

Though commercial stakeholders generally did not talk about the wider gambling industry as contributors to harm, there were instances where they would identify one mode of gambling as being more harmful than other modes. For example, they would say online platforms were more harmful than land-based venues. This perhaps reflects that the gambling industry is not a homogenous group and can have competing internal interests or different business models.

Non-commercial stakeholders clearly identified gambling as an important source of harm that carries inherent risk and thought that some specific gambling industry practices further increased this harm. This view is almost completely opposite to the view put forward by commercial stakeholders. Non-commercial stakeholders broadly adopted a public health perspective, often making direct calls to action to treat gambling-related harms as a public health issue. Presenting gambling as an activity that has no safe level of consumption to harm aligns with the public health perspective and the health messaging of other unhealthy commodity products, such as alcohol (53, 54). For example, alcohol harms are experienced in a dose-response fashion, with increased consumption increasing the risk of harm (54). In recognition of the risk-producing potential of alcohol, the UK Chief Medical Officers' 2016 drinking guidelines emphasise no safe level of consumption and encourages all drinkers to adopt the low-risk limits (53). Given that non-commercial stakeholders recognised the risk of gambling-related harms at any level of gambling engagement, public health stakeholders could adopt a similar approach to health messaging for gambling.

Scope of gambling-related harm

On the scope of gambling-related harms, commercial stakeholders defined the problem as localised to a minority of problem gamblers. This opposed the views of non-commercial stakeholders that the risk of harm can occur at any level of gambling. Commercial stakeholders also emphasised these differing views by putting the responsibility for the harms on the individual and their choices, rather than gambling and its wider structures. Simply, they often see gambling-related harms as a problem of a minority and that they arise from individual characteristics, such as a lack of self-control.

The portrayal of health risk behaviours as a matter of personal responsibility by commercial stakeholders has been identified in previous work focusing on the gambling industry (55 to 57). Research supports this framing as having been used by other unhealthy commodity industries (such as alcohol and HFSS products) (15, 16, 47, 58) and is highly aligned with neoliberal ideology (57) and so also with people that adopt neoliberal ideology.

Non-commercial stakeholders did not separate ‘problem’ and ‘non-problem’ gamblers when discussing harms. Instead, their narrative suggests that gambling-related harms exist across a spectrum of risk, with greater engagement in gambling incurring a greater risk of harm. This reflects the principles underpinning the ‘prevention paradox’ in public health. To use an alcohol analogy, this is where the smaller number of dependent drinkers contribute to less total alcohol-related harm compared to the greater number of non-dependent drinkers who drink at relatively lower levels, but that are still sufficient to increase their risk of health and social harm (59). Published research has shown this principle applies to gambling (6). The nature of the harms distribution within the concept of the prevention paradox leads to a logical conclusion that a whole systems approach to reducing harm is necessary. That is, an approach that spans primary, secondary and tertiary prevention.

A subtheme that emerged from the scope of gambling-related harm theme was the extent to which stakeholders acknowledged that gambling-related harms can reach beyond individual gamblers, affecting:

- families
- friends
- colleagues
- wider communities
- society

Notably, acknowledging that gambling-related harms affect others was broadly absent from references by commercial stakeholders, but were present in comments by non-commercial stakeholders. These findings complement published studies analysing government consultations on proposed alcohol policies, where alcohol’s harms to others, such as its cost to society, were raised by non-industry stakeholders and omitted or raised less often by industry stakeholders (18). This is perhaps unsurprising since acknowledging that harm extends beyond

individual gamblers is not coherent with the personal responsibility narrative presented by commercial stakeholders. The idea that gambling harm affects others also does not align with the commercial stakeholders' view that the approach to tackle gambling-related harm should target only individual gamblers, as opposed to taking a whole systems approach.

Alcohol experts recognise that harms to others are central to the financial burden and social harms related to alcohol. This is reflected by the fact that harms from alcohol result in higher financial costs to taxpayers (through health, social care and legal costs associated with alcohol) than individual consumers (through the amount spent on alcohol) (54) and that specific government programmes are in place to support the families of people experiencing alcohol dependence (60).

Historical experience from tobacco control, where reframing smoking in the 1980s from a risky individual behaviour to one that harmed others through second-hand smoke, showed how important that including affected others was in promoting a public health approach that resulted in strict industry regulations (61). Experiences from these sectors with a longer public health history show that addressing harms to affected others is an important part of the overall approach to reducing harms.

In the 'scope of gambling-related harm' theme, all stakeholder types acknowledged the hidden nature of harm. This was characterised by health professionals and the public both having low levels of awareness of gambling-related harms. Stakeholders thought that this lack of awareness created barriers for gamblers accessing treatment, where public health professionals were the direct gatekeepers of services (62), and the public perpetuated gambling-related stigma and shame, resulting in lower treatment engagement (63).

Our results found examples of stigmatising language towards people experiencing gambling-related harms, particularly in the Twitter dataset. Where we saw these examples, they supported a personal responsibility narrative. This aligns with other qualitative research that found increased stigma arises from people framing gamblers as "stupid" or "lacking self-control", and this can increase feelings of shame and guilt among gamblers (40). So, efforts to address stigma may be an important factor for improving treatment access.

Approaches to destigmatise gamblers could use information and awareness-raising campaigns that focus on shifting the public focus from the individual gambler to the addictive quality of gambling products. These campaigns could also emphasise the inherent risks associated with gambling, and clearly communicate the harms associated with gambling (64). Indeed, our data supported these proposals to reduce stigma. All stakeholder types made calls for awareness-raising activities to help reduce stigma and non-commercial stakeholders promoted a shift in narrative to emphasise the 'no safe level' approach to gambling.

There has been limited research into interventions aimed specifically at reducing gambling-related stigma (65). However, systematic reviews evaluating the effectiveness of stigma

reduction interventions in other fields have found evidence that providing information (to the general public or clinical and professional groups), or having stigmatised people share their experiences, have a short-to-medium term impact on improving knowledge and attitudes (66 to 68). This further supports the importance of developing information and awareness-raising campaigns centred on gambling, involving people with lived experience. This could help to reduce stigma, and in turn reduce barriers to accessing treatment.

Responses to prevent and reduce gambling-related harm

There were 3 distinct responses promoted for preventing and reducing gambling-related harm theme. They were:

- a whole systems approach
- a focus on individual interventions and treatment
- interventions to increase consumer awareness and improve vendor responsibility

These responses were to some extent intrinsically linked to the source and scope of harms presented by stakeholders. For example, because commercial stakeholders presented gambling-related harms as complex, often arising due to co-morbid conditions, and occurring in the minority of gamblers who lacked personal responsibility, their logic followed that tertiary prevention at the individual level should be the approach to reduce gambling-related harm. Suggesting that harm-reducing approaches concentrate on interventions delivered to the minority of problematic users is a common approach used by alcohol and HFSS industries (15, 47, 48, 69). At the same time, these industries portray primary prevention approaches aimed at regulating the commodity itself as:

- naively simplistic
- having potentially harmful unintended consequences
- ineffective or casting doubt on the evidence underpinning them

Instead, they promote largely ineffective or targeted interventions. This was reflected in our results, where commercial stakeholders either did not mention or were critical of primary prevention interventions that aimed to legislate or regulate gambling. But they were vocal in supporting health education (discussed further below) and interventions aimed only at a minority of problem gamblers, such as treatment.

Non-commercial stakeholders represented gambling-related harms as potentially occurring at any level of gambling (and having the potential to harm others), and so they emphasised a whole systems approach to tackling gambling-related harm spanning primary, secondary and tertiary prevention. They thought that this approach involved supporting regulation aimed at the gambling industry, such as taxation or restrictions on marketing. This perspective is supported and adopted by health stakeholders working to reduce harm from other unhealthy commodities, like alcohol (15). Given that these approaches reduce engagement in risk behaviours, and so

reduce industry profits, it becomes clear why industry actors would so strongly oppose a public health approach.

Though there was a clear divide between non-commercial stakeholders supporting whole systems approaches and commercial stakeholders focusing solely on individual interventions and treatment, all stakeholders, to varying extents, supported interventions relating to consumer awareness and vendor responsibility. These interventions include actions such as providing information through campaigns. This overlap in views between commercial and non-commercial stakeholder perspectives is perhaps understandable. For public health whole systems approaches, making information widely available can raise awareness of harm and improve consumer knowledge. It also fulfils a fundamental consumer right to know if a product they are consuming or purchasing is harmful. Evidence shows that well-designed, evidenced-based social marketing campaigns, reaching enough of the population, can increase knowledge and motivation to change behaviour (54, 70). When they are part of a wider harm reduction or prevention programme, campaigns can result in behaviour change as has been found for smoking, nutrition and drink-driving.

Commercial actors may support campaigns for different reasons. For example, experimental data suggests that information campaigns produced by the alcohol industry were less effective at motivating participants to stop drinking compared to public health campaign messages (71). As such, commercial stakeholders supporting information campaigns, likely designed by themselves, is perhaps less surprising than would first appear. More widely, harm-causing industries tend to engage in corporate social responsibility (CSR) activities, which can improve their reputation (72 to 75) and contribute to delays in government regulation or effective policy implementation (76). CSR can also act as a form of ‘soft marketing’, where a company could use the CSR activity as an opportunity to promote their brand or products (77).

4.3 Strengths and limitations

There are some strengths and limitations to consider when interpreting the results of this study. To improve the trustworthiness of the analysis, we used multiple datasets with different stakeholder profiles: a formal consultation and tweets. Using multiple datasets provides a wider lens through which we could identify gambling-related harms referenced by stakeholders, compared to using a single dataset. Using Twitter data in particular expanded the range of stakeholders likely to be identified and, to some extent, overcame the self-selecting sampling biases that come with responses to formal consultations. This is important as formal consultations can underrepresent the public’s views (25). However, Twitter users are not necessarily representative of the general population (78). For example, they may underrepresent the views of older people or people who are less technologically literate.

One researcher led the descriptive content analysis coding and interpretive thematic analysis. However, 2 other researchers double coded a randomly selected 10% of the consultation submissions and tweets to ensure the coding was consistently applied. There were also 3 other

researchers that contributed conceptually to the final themes from the interpretive thematic analysis. This minimised the influence of the perspective of a single researcher.

Creating stakeholder types was different for the consultations and Twitter, and there was not a complete overlap. Submissions to the formal consultation survey were self-identified by respondents from a set list developed by the Gambling Commission. Tweets and responses to the open consultations were assigned stakeholder types by the research team. These were assigned to overlap as far as possible with the stakeholder types in the formal consultation to enable fairer comparisons between stakeholder types. For tweets, type was assigned according to a user's biographical information. This likely resulted in underrepresenting the lived experience group as biographical information is mostly unlikely to include an individual's gambling status. Similarly, researchers assigned submissions to the open consultation based on a respondent's responses to a question on their experiences of gambling-related harm. This could be as a sensitive question (79), such that people who responded "prefer not to say" may have been those with lived experience of gambling. Yet, because we could not confirm a respondent's lived experience, we assigned and counted these submissions in our analysis as other stakeholder type. The result of this approach to assigning stakeholder type may mean we counted lived experience stakeholders as other or individual stakeholders, and their views aggregate with people who have no lived experience.

In the initial application of codes during the descriptive content analysis, multiple codes received low kappa scores (defined as less than 0.4). Though this may suggest poor agreement between coders, in practice, this related to the large size of the first codebook. With an increased number of codes, there is a reduced chance of agreement. Also, low kappa scores were often driven by very low counts for some codes and this small denominator disproportionately affected the level of overall agreement (34, 35). However, to ensure all coders had high levels of conceptual similarity, we conducted 9 coding rounds throughout the coding process. We also discussed any discrepancies to identify the cause of the low score and appropriate outcomes to rectify low scores (such as consensus coding, merging or code removal).

We based techniques to enhance trustworthiness of the results on the concepts of:

- transparency
- maximising validity
- maximising reliability
- being comparative
- reflexive (80)

We kept an audit trail of the changes we made in our coding and analysis for transparency (available on request). We maximised reliability by looking across multiple datasets aimed at different stakeholder profiles, using multiple coders to allow calculation of IRR (kappa statistic) and keeping a transparent account of decisions.

5. Conclusions

There are clearly differences in how stakeholders represent gambling-related harms. Most notably there are tensions between commercial and non-commercial stakeholders. Other unhealthy commodities research has found similar descriptions of harms by these differing stakeholders.

We should learn lessons for gambling prevention and harm reduction from other commodities where public health gains have been achieved. These lessons include emphasising a public health whole systems approach, which understands there is no safe level of consumption relating to harms. This approach also acknowledges affected others and enacts change that spans primary, secondary and tertiary prevention.

Also, public health stakeholders need to take action to improve awareness of the wide-ranging harms that can be caused by gambling and help to reduce stigma, which would in turn reduce barriers to accessing treatment.

6. Conflict of interests and contributions

6.1 Conflict of interests

You can find the full list of authors of this report on the About Public Health England details page at the back of this report.

CS, CH, MR, SF and NP declare no conflict of interests.

RB is a Visiting Researcher with King's College London, Institute for Psychiatry, Psychology and Neuroscience and at the University of Southampton, Faculty of Medicine. RB has received payment for consultancy with the World Health Organization within the last 12 months.

JM is currently a Professor of Addiction of Psychology with King's College London, Institute of Psychiatry, Psychology, and Neuroscience. JM is a Visiting Professor with the University of Adelaide, School of Medicine and Chulalongkorn University, Department of Psychiatry. JM is a Clinical Academic Consultation to the National Institute of Drug Abuse, National Institutes of Health. JM is currently Editor-in-Chief for the academic journal Addiction. JM is the Clinical Scientific lead for study on depot buprenorphine and personalised psychological intervention for opioid use disorder under a research grant from Indivior to sponsor King's College London.

6.2 Author contributions

RB (doctoral mid-career researcher with PHE, specialising in quantitative methods analysing alcohol-related harms and population level interventions, UK national, woman) conceived the study, contributed to the development of both stages of the method and analysis plan, contributed to implementation and interpretation, and contributed to revising the manuscript.

MR (PHE national lead on gambling and a DrPH candidate with previous professional experience in non-communicable diseases and mental health, migrant from Ireland, woman) project managed the wider gambling review, conceived the study and analysis plan, contributed to preparing the datasets, contributed to implementation and interpretation, and contributed to revising the manuscript.

CS (early career researcher with PHE with postgraduate training in alcohol studies and qualitative research, migrant from Canada, woman) contributed to the development of both stages of the analysis plan, contributed to preparing the datasets, implemented both stages of the analysis plan, and wrote the first draft and its revision.

SF (PHE data scientist with 7 years' experience in data science and public health, British, man) implemented the tweets sampling strategy.

NP (undergraduate trained civil servant in early career work placement covering corporate and policy roles, British, woman) contributed to preparing the datasets.

CH (PHE national lead on alcohol with previous professional experience as an addictions nurse, UK national, man).

RC (PHE national lead on evidence and evaluation with a background and professional experience in public health evidence and knowledge mobilisation, British, woman).

JM (senior professor and practitioner psychologist, UK national, man) contributed to interpretation and revising the manuscript.

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Appendix A. Standards for Reporting Qualitative Research checklist

In our report, we include all information required by the Standards for Reporting Qualitative Research (SRQR) checklist, but we do not use the same headings.

Table 7. Standards for Reporting Qualitative Research (SRQR) checklist

Topic	Page number
Title and abstract	
Title	1
Abstract	4 to 5
Introduction	
Problem formulation	6 to 7
Purpose or research question	7
Methods	
Qualitative approach and research paradigm	8
Researcher characteristics and reflexivity	49 (further details available upon request)
Context	8
Sampling strategy	9 to 12
Ethical issues pertaining to human subjects	Not applicable
Data collection methods	9 to 12
Data collection instruments and technologies	9 to 12
Units of study	9 to 17, Appendix B
Data processing	9 to 12, Appendix C and D
Data analysis	12 to 17, Appendix E
Techniques to enhance trustworthiness	9 to 17, 46 to 48
Results and findings	
Synthesis and interpretation	18 to 39
Link to empirical data	18 to 39
Discussion	

Appendix B. Descriptions of stakeholder types

This appendix lists the descriptions of stakeholder types in the consultation and Twitter datasets.

Table 2. Descriptions of stakeholder types

Type	Eligibility criteria
Charity	Inclusion: Twitter: Any self-identified charity or organisation and registered with the UK charity registry. Formal consultation: Self-identified as 'charity'. Open consultation: Not applicable. Exclusion: Twitter: Gambling treatment providers.
Commercial	Inclusion: Twitter: Any business whose primary profit derives from the production, promotion, or sale of gambling services or products. Any individual account that acts as a business platform. A media account whose primary aim or audience is about gambling content. Any individual account where the twitter biography lists current or past affiliations with a gambling company or the entire purpose is to promote gambling products or odds (even if the individual does not profit from this promotion). Formal gambling trade associations. Formal consultation: Self-identified as a 'gambling business' and 'trade association'. Open consultation: Not applicable. Exclusion: Twitter: Businesses that do not provide gambling services or products or whose products may be used peripherally in the gambling industry (for example, safe producers). An individual account that references affiliations with gambling but is clearly an account for personal use.

Type	Eligibility criteria
Individual	Inclusion: Twitter: An individual account not affiliated with one of the other listed stakeholder types, or that references affiliations with gambling but is clearly an account for personal use (for example, amateur bettors), or with personal names but with no biographies or identifying information. Formal consultation: Self-identified as ‘individual’. Open consultation: Reported not experiencing gambling harm. Exclusion: Twitter: Individual accounts with no biographies and bot-style twitter usernames.
Health	Inclusion: Twitter: Any accounts associated with providing treatment for gambling (including treatment for dependence, helplines, counselling services and debt services), or which is for an individual that acts as a business platform for treatment. An individual account that references affiliations with health-related organisations but is for personal use. Formal consultation: Not applicable. Open consultation: Not applicable. Exclusion: Twitter: Accounts for services like debt management if no reference to gambling.
Lived experience	Inclusion: Twitter: An individual account whose Twitter details indicate they have experienced gambling dependence or harm. Accounts representing online groups or forums for people who have experienced gambling dependence or harm. Formal consultation: Not applicable. Open consultation: Reported experiencing gambling harm. Exclusion: Twitter: An individual account that does not have a clear reference in their Twitter details to gambling dependence or harm.

Type	Eligibility criteria
Decision makers	Inclusion: Twitter: An official UK local authority account. Current member of parliament, parliamentarian, formal government committee, forum or group. Formal consultation: Self-identified as ‘local authority’. Open consultation: Not applicable. Exclusion: Twitter: Past member of parliament, parliamentarian, formal government committee, forum or group.
Other	Inclusion: Twitter: Any account type not listed above including general news outlets, professional sports organisations, businesses not associated with gambling, and researchers or research organisations. Accounts with no biography or bot-style usernames. Formal consultation: Self-identified as ‘researcher or academic’ and ‘other’. Open consultation: Reported preferring not to say if they had experienced harm. Exclusion: Twitter: An account associated with sport that are integrally tied to gambling (for example, horse racing and dog racing). Think tanks should be coded using different stakeholder types like ‘charity’, ‘commercial’, and ‘individual’ as appropriate.

Appendix C. First codebook for descriptive content analysis

The codebook for the descriptive content analysis was set before we started the review, based on an existing conceptual framework by Langham and others. We undertook pilot work on submissions to a 2010 Australian inquiry into gambling and tweets outside the eligible dataset. We made further amendments accordingly to produce a second codebook. See Table 3 for the first codebook used during descriptive coding.

Table 3. Codebook used for pilot coding

Category	Code
Financial	Loss of money to spend on non-essential goods and services
	Loss of money to spend on essential goods and services
	Erosion of savings
	Increased use of credit
	Penalties for default
	Selling personal items
	Bankruptcy
	Homelessness
	Financial disadvantages due to credit history
	Debt
	Cost to public services
	Cost to public services: Justice
	Cost to public services: Health
	Cost to public services: Other
	Chasing losses
	Financial harm to others
	Financial harm to others: Intimate partner
	Financial harm to others: Children
	Financial harm to others: Close contacts

Category	Code
	Financial harm to others: Community
	Financial harm to others: Society
	Financial harm to others: Unspecified
	Financial (other)
	Financial (unspecified)
Relationship	Relationship breakdown
	Relationship breakdown: Intimate partner
	Relationship breakdown: Children
	Relationship breakdown: Close contacts
	Relationship breakdown: Community
	Relationship breakdown: Unspecified
	Intimate partner violence
	Intimate partner violence: Physical
	Intimate partner violence: Emotional
	Intimate partner violence: Sexual
	Intimate partner violence: Unspecified
	Maltreatment of children
	Maltreatment of children: Physical
	Maltreatment of children: Emotional
	Maltreatment of children: Sexual
	Maltreatment of children: Unspecified
	Neglect
	Child protection
	Child protection: Formal
	Child protection: Informal
	Social isolation
	Neglect of relationships
	Distrust from others
	Dishonest with others

Category	Code
	Conflict due to involvement in gambling
	Sanctions by others
	Vulnerability to relapse due to relationship issues, disruption, conflict or breakdown
	Relationship (other)
	Relationship (unspecified)
Health	Guilt or shame
	Distress
	Depression or low mood
	Suicidal ideation
	Self-harm
	Suicide
	Low self-esteem
	Hopelessness
	Stigma
	Health harm to others
	Health harm to others: Intimate partner
	Health harm to others: Children
	Health harm to others: Close contacts
	Health harm to others: Community
	Health harm to others: Unspecified
	Noncommunicable diseases
	Exacerbating existing health conditions
	Poor health due to reduced self-care
	Reduced physical activity
	Loss of sleep
	Multiple health risk behaviours
	Health (other)
	Health (unspecified)
Cultural	Decreased engagement in cultural practices

Category	Code
	Culturally based shame
	Cultural (other)
	Cultural (unspecified)
Work or study	Job discipline or loss
	Educational discipline or expulsion
	Reduced performance
	Increased absenteeism
	Reduced employment or educational opportunity
	Work or study (other)
	Work or study (unspecified)
Crime	Neglect crimes
	Violence crimes
	Sexual crimes
	Robbery, theft and burglary crimes
	Amenity crimes
	Drug crimes
	Societal crimes
	Conviction not otherwise specified
	Time spent in prison
	Impact of criminal record on life opportunities
	Crime (other)
	Crime (unspecified)
Miscellaneous	Unspecified harms
	Harm to others
	Miscellaneous harm

Appendix D. Inter-rater reliability scores

We conducted 9 rounds of inter-rater reliability (IRR). In each round and for each category and code, we calculated the:

- percentage agreement
- percentage disagreement
- kappa scores

Then we calculated the final kappa score for each category and dataset from these scores, as seen in Table 4. Kappa scores for each coding round and code-level kappa scores are available upon request.

We do not report the work or study and cultural categories as they did not appear in the data that was double coded.

Table 8. Kappa scores for consultation (formal and open consultations) and Twitter from all coding rounds, for each harm category and overall score

Harm categories and codes	Consultation Kappa	Twitter Kappa
Crime	0	0.43
Financial	0.28	0.63
Health	0.73	0.26
Miscellaneous[a]	0.56	0.64
Relationship	0	0
Overall kappa scores	0.59	0.57

Note: [a]Including codes which would later be moved to the general category

The primary reason for lower kappa scores (less than 0.4) was the large number of codes and low frequency of their occurrence. This is particularly relevant for the relationship and crime category which occurred infrequently in the datasets (5% or less in each of all references to harm) and were relatedly very infrequent during double coding exercises.

Appendix E. Eligibility criteria for second descriptive analysis codebook

This appendix presents the eligibility criteria for the second and final codebook used for the descriptive analysis, seen in Table 5. Unless otherwise specified, all harms relate to people that gamble and the harm must be partially or wholly due to gambling. A version of the codebook with further examples and instructions to coders are available on request.

Table 9. Eligibility criteria for the final codebook

Code	Detailed description
Financial	
Financial struggles	Inclusion criteria: This code is to be used for references to: A reduction in spending or ability to spend on essential goods and services or discretionary spending. This can include groceries, medical treatment, housing costs or repairs, insurance, clothing, utilities, transport costs, rent, “bills”, children’s expenses, going out, holidays or electronics, or non-gambling related entertainment. Requiring help from welfare organisations for essentials like food and paying bills (for example, the use of a food bank). A reduction of savings or investments. Using credit cards, accessing credit (including balance transfers and loans or informal loans from close contacts), pay-day or short-term loans or other forms of predatory lending (including references to slang

Code	Detailed description
	terminology like ‘loan shark’), to pay for further gambling or goods and services where money is no longer available due to gambling. Restrictions or higher costs for services or goods due to declaring bankruptcy or poor credit ratings (such as premium costs for services, increased security bonds, no further formal credit available). Selling belongings. This could include references to pawning or asset losses. Losing more than they can afford. This can include specific monetary amounts (if described contextually as being more than the person can afford to lose) or being “broke”, “skint”, “losing too much”, “huge losses”, “losing their month’s wages”, and so on. Exclusion criteria: This code would not apply if money or goods were stolen or was implied they were stolen rather than a legitimate and consensual form of credit. Any ‘financial struggle’ experienced by someone who is not the gambler should be coded using the harm to others code.
Debt and homelessness	Inclusion criteria: This code is to be used for references to: Bankruptcy, insolvency, or liquidation. Homelessness (including rough sleeping, living in formal temporary accommodations, living in unfit or extremely overcrowded housing, staying temporarily with close contacts, repossession of home, and being threatened with eviction). ‘Debt’ explicitly, or money owed to others, not covered by the above codes.

Code	Detailed description
	Gambling causing or exacerbating poverty or gambling harms are felt in areas of relative deprivation. This could include references such as “poor”, “deprivation”. Exclusion criteria: This would not include social sanctions or penalties. Any financial penalties experienced by someone who is not the gambler should be coded using the harm to others code. This code would not be used if the only references to gambling’s impact on poverty was regarding the density or geographical clustering of gambling establishments in an area. It must indicate that gambling is specifically causing or exacerbating harm, not as a risk factor for gambling harms.
Chasing losses	Inclusion criteria: This code is to be used when the gambler has lost money gambling and continues gambling specifically to recoup their financial losses. Exclusion criteria: This code would not be used if only general references to loss of money or finances due to gambling were made.
Financial (other or unspecified)	Inclusion criteria: This code is to be used for references to other financial harms or hardship that are not defined by one of the other existing codes. These can be specific, unique harms not listed above or general references to lack of finances due to gambling. This would also include general references to ‘losses’.

Code	Detailed description
	Additionally, simply reporting a loss of money does not indicate harm for our purposes. The text needs to either pair the loss of money with affordability or negative impact to be coded as a financial (other or unspecified). Exclusion criteria: This code is not to be used the above listed financial harms. Any financial (other or unspecified) experienced by someone who is not the gambler should be coded using the harm to others code.
Relationship	
Deterioration or breakdown of relationships	Inclusion criteria: This code is to be used for references to: Threat, actual separation, or rejection from a relationship. This can be used for any form of relationship breakdown so not exclusively romantic. Actual or threaten loss of contact, estrangement or rejection from someone who gambles by a close contact. This can be the result of others choosing to disengage from the person who gambles or forced loss of contact. Temporary or permanent breakdown. These can be bidirectional (that is, can be reported by either the person who gambles or affect others). Disengagement, withdrawal and reduced time spent with others due to the person who gambles being ‘caught up’ in their gambling and not meeting the responsibility of these relationships.

Code	Detailed description
	When a gambler experiences complete or nearly complete social isolation from their existing social networks. This would also include close contacts who have been socially isolated due to their family member's gambling. Loss of trust from others due to unreliability, or being unavailable, or dishonest communication by the gambler. Explicit reference needs to be made to 'trust' or a similar concept to trust or reference actions that imply distrust (for example, not leaving their wallet out). This would also include references to when a gambler was dishonest with partners, children, family, friends, employers or the community about something gambling related. General relationship conflicts, including fights and arguments. Exclusion criteria: This code would also not be used if the text only referred to decreasing engagement in religious or cultural practices, which should use the code cultural harms. This code would not apply if the neglect of a dependent was likely to impact the person's long-term health or development. If so, this would be coded as maltreatment, neglect or violence. People self-excluding or not attending places is not explicit enough to code if it does not reference social isolation or impact on relationships. Any stigmatising language that does not reference the concepts of distrust or dishonesty should not use this code and instead use stigma, shame and low self-worth.
Maltreatment, neglect or violence	Inclusion criteria: This code is to be used for references to:

Code	Detailed description
	Incidences or escalation of violence (physical, emotional or sexual) inflicted on a close contact, including intimate partner, child, friend, relative, or anyone else sharing a home with the gambler. Physical violence includes examples such as hitting, pushing and beating. Emotional violence includes examples like insults, humiliation, threats as well as volatile or belittling arguments. Sexual violence is to be used in instances of any form of forced sexual activities or instances of sexual coercion involving someone who gambles. Violence can be bi-directional (that is, it could be experienced by the gambler or an affected other). General maltreatment of dependents, meaning a gambler acts in a way with their dependents that is stressful or traumatic for the dependents. The persistent failure of a person who gambles to provide or otherwise be unresponsive to the basic physical and emotional needs of dependents (such as children and the elderly) that is likely to cause serious impairment to health, functioning or development. This includes failing to provide adequate food, clothing, shelter, access to medical care. It also includes ignoring emotional, developmental, societal needs. Or failing to provide reasonable supervisory protection from danger. This code may also be applied when there is reference to removing dependents from a person who gambles for safeguarding reasons. Exclusion criteria: This would not include low level emotional or verbal or neglect conflicts. For example, if a person who gambles forgot to pick their child up from school one day due to a bout of gambling, this would not qualify.
Relationship (other or unspecified)	Inclusion criteria: This code is to be used for references to other relationship harms not defined by one of the other existing codes. These can be specific, unique harms not listed above or general references relationship harm. This would also include references toward fixing or mending relationships that were harmed while the person was gambling. This code would also include references to ‘domestic harms’ as these are generally related to the home and the family.

Code	Detailed description
	Exclusion criteria: This code is not to be used for more specific references to relationship harms listed above.
Health	
Stigma, shame and low self-worth	Inclusion criteria: This code is to be used for references to: Feeling of responsibility or remorse, real or imagined including regret, guilt, and shame or not feeling proud or pride. Low self-worth or pride, low self-esteem, feeling unsatisfied with themselves, feel they are no good or have no good qualities, feeling useless, feelings of no respect for themselves, feeling like a failure, or feeling worthless. Experienced or perceived experience of stigmatising behaviours or experienced self-stigma due to their gambling. Self-stigma would include being aware of public negative attitudes and stereotypes of gambling problems and internalising them. This code would also include examples of active stigma including holding low opinions of gamblers as well as judging someone who gambles. Exclusion criteria: This code would not be used if the feelings of guilt or shame were associated with cultural traditions, explicit cultural mores and taboos, or religion (this should instead be coded as cultural harm).
Low mood and anxiety	Inclusion criteria: This code is to be used for references to: Sadness, despair, unhappiness, low mood, difficulty dealing with normal daily life and a loss of pleasure in activities. Some physical symptoms associated may be loss of energy, changes to eating or sleeping habits,

Code	Detailed description
	changes in weight. These symptoms can be mild or severe and would include clinical and subclinical experiences. No sense of future, powerless to change things, hopeless, despair, helpless and disempowerment. If there are no direct references to suicidal ideation, this would also include phrases such as “I don’t see a way out of this”. Unease, worry, fear, danger, anxiety, anxious feelings, stress, or dread. Some physical symptoms associated may be irritability, tenseness, or anxiety attacks. These symptoms can be mild or severe and would include clinical and subclinical experiences. This would also include emotional or psychological distress felt by the gambler due to their gambling or its impact on others. Exclusion criteria: This code is not to be used for references to suicidal thoughts, self-harm or attempted or completed suicides. Additionally, if changes in weight or sleeping habits were referenced in isolation and not with other depressive symptoms, these should be coded as health (other or unspecified).
Suicidal thoughts, attempts and death by suicide	Inclusion criteria: This code is to be used for references to: Suicidal thoughts (requiring explicit reference to suicide or “ending it all”). This would include calling helplines aimed at helping people experiencing suicidal thoughts. Self-harm. Attempted or completed suicide. Gambling causing death and mortality or causing immediate risk to the gambler.

Code	Detailed description
	Exclusion criteria: This code would not be used to refer to non-life-threatening instances of low mood or depression which should be coded as low mood and anxiety.
Multiple health risk factors	Inclusion criteria: This code is to be used for references to engaging in other health risk factors including consuming alcohol, tobacco, prescription medications, consuming food or drinks that are high in fat, sugar, or salt (HFSS), and other illicit drugs. The consumption of these substances does not need to be implied as being caused by gambling (this can be coded if co-occurring use is happening). Exclusion criteria: Any references to general co-morbidity, or specific physical or mental health conditions, should not use this code and should use the other appropriate codes in this category.
Co-morbidity (gambling and mental or physical)	Inclusion criteria: This code is to be used for direct references to general ‘co-morbidity’ or pairing gambling with specific physical or mental health conditions where it is not clear that gambling caused the condition. Exclusion criteria: This would also not include references to consuming other substances or having other addictions at the same time as problems with gambling, as these would be coded as multiple health risk factors.
Health (other or unspecified)	Inclusion criteria: This code is to be used for references to other health harms that are not defined by one of the above health codes. These can be specific, unique harms not listed above or general references to health harms. This may include text that uses words like ‘illness’ or ‘sickness’. Exclusion criteria: This code is not to be used for more specific health harms listed above.

Code	Detailed description
Cultural	
Cultural harms	Inclusion criteria: For this purpose of this code, culture is a shared group of thoughts or values and is represented by symbols, rituals, norms, attitudes, and beliefs. This also covers religion and traditions. This code is to be used for references to: Cultural harms. This needs to include engagement or community impact of specific cultural or religious practices, events, rituals or traditions such as missing out on mass, prayers, and other cultural events. This code can also be applied in terms of reduced contributions due to gambling on cultural practices affecting other people in that culture or community. This would include holidays such as Christmas, Ramadan, Easter, confirmations and communions. Cultural shame or culturally specific stigma in relation to roles and expectations. This would have to specifically reference the shame or stigma being related to their culture or religion, or explicit violation of mores or taboos in these institutions, otherwise would be captured within stigma, shame and low self-worth code. Exclusion criteria: This code would not be used when referencing missed birthdays and would likely be more applicable to the relationship codes, like deterioration or breakdown of relationships. This code would not be used for expressions of guilt, shame, or stigma experienced by a gambler outside of a cultural or religious context which should be coded as stigma, shame and low self-worth.
Work or study	
Employment	Inclusion criteria:

Code	Detailed description
	This code is to be used for references to work-related harm including work-related discipline job loss, joblessness, reduced performance, negative impact on future career opportunities (such as being rejected for a promotion), unspecified references to work harms, or other related harms not listed. Some phrases which may flag the potential use of this code include disciplinary hearings, dismissal, garden leave, fired, let go, expulsion and suspension. Exclusion criteria: This code is not to be used for any education harms.
Education	Inclusion criteria: This code is to be used for references to education-related harm including study-related formal discipline, suspension or expulsion, truancy, lower academic grades, negative impact on future education opportunities (such as not being admitted to a course), unspecified references to study harms, or other study harms not listed. Exclusion criteria: This code would not be used if for any employment harm.
Crime	
Robbery, theft and burglary crimes	Inclusion criteria: This code is to be used for references to any form of taking resources, goods, services, or money without permission or knowledge of the owner or through misrepresenting themselves to the owner. Examples include robbery, theft, burglary, extortion, shoplifting, stealing from close contacts, petty theft, petty white-collar crime, crimes of dishonesty, and embezzlement. This code can be used even if a person has not been convicted of the crime, but it has been made clear they have engaged in the crime.

Code	Detailed description
	Exclusion criteria: This code would not apply if the person who gambles has acquired resources, good, services, or money through other illicit means, such as drug trafficking or crimes related to sex work which would be more appropriate for societal, drug and amenity crimes code. This code would also not be used if the person who gambled did not repay a formal or informal loan and would be coded as harm to others.
Societal, drug and amenity crimes	Inclusion criteria: This code is to be used for references to crimes: Related to controlled drugs or the illicit production, distribution or sale of controlled drugs. This code would also be used if the gambler was found in possession of drugs with the intent to supply or convicted of a possession offence. Involving damage to another's property including arson, vandalism and graffiti. Disrupting public order such as shouting, screaming and littering. That have societal impact rather than impact against a specific person, such as sex work (exploitation of prostitution, soliciting for the purposes of prostitution), obstruction, bail offences, money laundering, illegal gambling, traffic offences, and absconding from lawful custody. This code can be used even if a person has not been convicted of the crime, but it has been made clear they have engaged in the crime, except for possession of illicit drugs which requires a conviction. Exclusion criteria: This code would not be used for references to:

Code	Detailed description
	Damage to their own property. Simple possession or use of drugs with no conviction or time spent in prison. This would instead be coded as multiple health risk factors. Embezzlement crimes as these are covered by the robbery, theft and burglary code.
Prison sentence	Inclusion criteria: This code is to be used for references to going through the legal system and receiving a penalty, such time in prison, community service, or a suspended sentence. Exclusion criteria: This code would not be used if there was no reference to any penalty received through the legal system.
Crime (other or unspecified)	Inclusion criteria: This code is to be used for references to other crime harms that are not defined by one of the other existing codes. These can be specific, unique harms not listed above or general references to crime harms. Exclusion criteria: This code is not to be used for specific crime harms listed above.
General	
Unspecified harms	Inclusion criteria: This code is to be used for references to general or generic ‘harms’ of gambling without any further detail. This would include gambling ‘addiction, dependence and abuse’ or ‘problem, pathological, compulsive and disordered’ gambling when used in a harmful context or negative connotation and seems to be a standalone harm on its own. For example, if the sentence read “gambling addicts feel really shameful”, this would just be

Code	Detailed description
	coded as stigma, shame and low self-worth. However, if the sentence read “gambling addiction is a really horrible affliction”, then this would be coded as unspecified harms. Exclusion criteria: This code is not to be used if the text refers to a specific harm. An appropriate code above should be used instead. Additionally, general references to unspecified harms should not be coded if they are administrative (that is not focusing on the harm but instead using reference of that harm to ‘set the scene’, address the question asked to them, repeating the name of a document only, and so on).
Harm to others	Inclusion criteria: This code is to be used any time there is a reference to harms experienced by people due to the gambling of another. This includes any harms to a person that are financial, health, cultural, work or study, crime, or general categories. This can apply at all levels of relationship, from one-to-one relationships such as intimate partners to impact on the society and economy. Exclusion criteria: This code is not to be used if it is clear the harm is only in relation to the gambler or there is no explicit or clearly implied reference to an ‘other’ who is impacted by the person who gambles. If referencing health costs specifically, this would not include references to treatment provided by GamCare, GambleAware, Gordon Moody as these are industry funded rather than of public funds.
Unspecified harms of a severe nature	Inclusion criteria: This code is to be used when references are made about general gambling harms indicating they have a severe, destructive impact on a gambler’s life. These would include phrases such as ‘ruin’, ‘destroy’, ‘destructive’, ‘untold misery’ and so on.

Code	Detailed description
	Exclusion criteria: This code is not to be used when general references to gambling harm are made and no indication is provided that the harms levelled by gambling are severe to a person's life. This code is also not to be used when references are made to severe impacts by gambling only impacting affected others. These would be coded as harm to others.
Miscellaneous	
Miscellaneous harm	Inclusion criteria: This code is to be used for references to other harms not defined by one of the other existing codes. These must be specific, unique harms not listed above.

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

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