<u>**Annual Report content ideas**</u>

- To cover participation, Impact of gambling. Other topics/themes in separate topical reports
- Report feel – Different to Health Surveys
- Should we structure like path to play?

Content

Play experience:

What gambling activities do people take part in? (past 4 week only)

- To incorporate multivariate analysis where possible
- Explore all variable and present as tables in Excel file. Pull out age and sex in main report (as a combined analysis) and other areas where the data shows something interesting.
- Mention in report that we will use past 4 weeks in the report but refer to past 12 months figure for context to PGSI/Harms. Past 12 months participation by activity in tables only.
  - Headline participation rates past 4 weeks (any gambling, any gambling excl. NL/SL,) by age and gender (multi analysis) (Main report and tables)
    - Changes between wave-on-wave last year and reasons why (Paragraph in main report and tables)
  - Activities – headline participation rate for each of the 20 activities (plus Lotto, betting, F&S detail etc.) and a summary high level list i.e. any lotteries, and casino etc – detailed by age and gender (Main report and tables)
  - By ethnic group (Main report and tables)
  - By economic activity and education level (Tables)
  - By country and region (Main report by country, all rest in tables)
  - IMD/Income/Tenure (in tables)
  - Relationship between activities i.e. do NL players also play SL etc? What is the typical relationships between products? (Main report)

How do people gamble (past 4 week)

- Run off for each of 20 activities for Excel tables, but just talk about them in the narrative i.e. which activities are most commonly done more frequently, least frequently.
- Perhaps pull out any frequency information by age and sex. The other categories below can be in the form of Excel tables unless there is something interesting to say.
  - Any online gambling, any online gambling excl. NL/SL, and in person gambling, and in person gambling excl. NL/SL – cut each by age and gender (multivariate). Also cut each headline measure by activity too (Main report and tables)
  - How people gamble i.e. Number of gambling activities – grouped, mean, mode, also excl NL/SL in count. (Main report and tables)
  - Frequency of gambling – each activity by frequency (Main report and tables)
  - Frequency – pick out a couple of activities that are different to one another in terms of frequency and demographics (Main report for a couple of activities, rest in tables)
  - Any online gambling, any online gambling excl. NL/SL, and in person gambling, and in person gambling excl. NL/SL – by age and gender (together). Cut by activity (Main report and tables)

- How people gamble i.e. Number of gambling activities – grouped, mean, mode, also excl NL/SL in count. (Main report and tables)

Gambling behaviour in context of other behaviours (main report for all that's interesting – rest in tables)

- Smoking
- Alcohol
- Wellbeing/general health
- Leisure activities
- Profile of different types of people i.e. 8+, gamblers, Lottery only, non-gamblers etc
- Binge?

Impact of gambling   - section based on past 12month gamblers

- Section needs to talk about the positive and negative impact of gambling
- Likely to report the PGSI gambler rate only. Need to include non-PG, 1-2 score, 3-7 score and 8+ score.
- Feelings towards gambling
- Reasons to gamble – group the reasons and report? How motivations and triggers vary across different demographic groups/ types of people. Pull out positive factors too.
- Start off by presenting PGSI and harms alongside each other (data presented on past 12 month gamblers as the base)

PGSI

- PGSI distribution of scores from 0 to 27.
- PGSI by age and sex – and confidence intervals (Main report and tables)
- PGSI score by statement. (Tables and full out any key findings)
- Number of each classification in GB population (and each nation?) and confidence intervals (TBC)
- PGSI by activity – and confidence intervals (Main report and tables)
- PGSI for any online activity/any in person activity, online only activities, in person only activities etc. – and confidence intervals. Gambling excl. NL/SL. (Main report and tables)
- PGSI by number of gambling activities – and confidence intervals (Main report and tables)
- PGSI by sociodemographic characteristics – where relevant (ethnic group, economic activity, income, IMD, education level, tenure, region, country)– and confidence intervals (report if interesting, otherwise tables)
- PGSI by health indicators -where relevant (WEMWBS score, general health, alcohol/smoking consumption) – and confidence intervals (report if interesting, otherwise tables)

Harms from own gambling

Experience of severe harms (bankruptcy, crime, relationship breakdown, violence or abuse)

- Overall % 1 or more severe harm

- % breakdown of each type of severe harm
- % reporting suicide ideation or attempts due to gambling

Harms - Experience of other harms

- % breakdown by each type of harm
- Average number of harms experienced

Problem gambling, harms and wellbeing
- Relationships between PGSI scores and harms experienced
- Association between harms and wellbeing

Access to services (foodbanks or welfare, mental health services, relationship support, gambling support)
- % accessing one or more service
- % breakdown of each service

Association between gambling activities and harms (TBC)
Number of activities and harms (TBC)

Demographic breaks
- *Gender*
- *Age*
- *Socio-economic*

Harms from someone else's gambling

Experience of severe harms (bankruptcy, crime, relationship breakdown, violence or abuse)
- Overall % 1 or more severe harm
- % breakdown of each type of severe harm

Experience of other harms
- % breakdown by each type of harm

Average number of harms experiences

Impact on wellbeing

Access to services (foodbanks or welfare, mental health services, relationship support, gambling support)
- % accessing one or more service
- % breakdown of each service

Demographic breaks
- *Gender*
- *Age*
- *Socio-economic*

Could also include difference between being living with a gambler and wider association with gamblers

Impact of gambling further analysis - Factors associated with at-risk/PG (8+)/harms gambling.

- o Multivariate logistic regression used to examine factors associated with likelihood of being PGSI risk gambler and /or high harm score.

Conclusions

Can we also talk about the Commission's evidence conference under AOB?

Thanks for this. This is a useful starting point. My main thought is that there is a lot of content here - and that we will need a good amount of time to produce, quality assure and go backwards and forwards between us to finalise. This outline looks not dissimilar to the BGPS report content, and that used to take us **at least** 3 months from getting the clean/weighted data to publication. I may be speaking out of turn here (and NatCen can jump in) but we will need to take a strong look at deadlines and timescales for delivery.

Looking forward to chatting soon!

Heather

On Wed, Jan 17, 2024 at 1:40 PM ███████████████
██ @gamblingcommission.gov.uk> wrote:

> Hi all,
>
> I'm sharing a document that we have been working on, looking at what content we think would be useful to include in the Annual GSGB report, but we are really keen to hear your ideas too.
>
> ████████████ – I've added in your thought on the reporting of harms too.
>
> Speak to you all shortly.
>
> Thanks,
>
> ████████

Thanks for sharing, we'll take a look

From: Heather Wardle <heather@████████████>
Sent: Wednesday, January 17, 2024 5:01 PM
To: ████████████████████████ @gamblingcommission.gov.uk>
Cc: ████████████████████████████████
██████ @gamblingcommission.gov.uk>; ████████████
██████ @gamblingcommission.gov.uk>; ████████████████████████
████████████████████████████████
██████ @gamblingcommission.gov.uk>; ████████████
██████ @gamblingcommission.gov.uk>
Subject: Re: Gambling weekly meeting

Hiya,

For those of you who haven't been around since the Ark, I thought it might be useful to see the combined HSE/SHeS 2012 headline report (see link below). This was participation, PG and at-risk gambling by age and sex - so pretty stripped back. As it says in the intro, this was headline data published in April before a fuller report in the Summer - I think that came in September. The main reason was that HSE and SHeS data was published separately at that point, and we wanted to get the corrected combined figures out before too many people tried to add them and come up with the wrong numbers. There's a strong parallel here for year 1, given that Q2 will be in the public domain by early June.

https://assets.ctfassets.net/j16ev64qyf6l/2tHWKeU4DN1dj06yxY61ck/4dcb8e0034eee05559c2edcac103ef1c/Gambling-behaviour-in-England-Scotland-Headline-findings-from-the-Health-Survey-for-England-2012-and-Scottish-Health-Survey-.pdf

I can't recall there being any problems with this approach - and I'm sharing for content, rather than stylistic approach (which is pretty dry, but factual).

Hope this helps a bit,

Heather

On Wed, Jan 17, 2024 at 1:40 PM ████████████████████████
████ @gamblingcommission.gov.uk> wrote:

> Hi all,
>
> I'm sharing a document that we have been working on, looking at what content we think

would be useful to include in the Annual GSGB report, but we are really keen to hear your ideas too.

█████████████ I've added in your thought on the reporting of harms too.

Speak to you all shortly.

Thanks,

███

Oh great, sounds interesting, I have another call to make after the GSGB meeting but let's see what time we finish – I'm sure we'll have time for a quick chat.

Thanks,

███

█████████████

From: Heather Wardle <heather@███████████████>
Sent: Wednesday, January 17, 2024 2:28 PM
To: ████████████ @gamblingcommission.gov.uk>
Subject: Re: Illegal gambling research

CAUTION: This email is from an external source - be careful of attachments and links

Hiya,

Great timing, we are going live tomorrow! The questions we developed are number 7 to 18 in the attached. Never perfect, but performed well in cog testing - we did have some people who reported gambling with unlicensed operators/crypto, which I was surprised about. Happy to chat - could stay on the line after today, if that works.

█

On Wed, Jan 17, 2024 at 2:26 PM ████████████████ @gamblingcommission.gov.uk> wrote:

> Hi Heather,
>
> Hope you're well. I'm just getting touch to see how your research on the illegal market is going? I think you said you were going to be doing some cog testing in December, and I wondered if you'd learned anything helpful from that. We are in the scoping phase of our piece with Yonder so would be good to feed in any insights that you have.
>
> Would you be free for a chat next week? Monday and Tuesday afternoons look good for me.

Great news, thank you!

From: Heather Wardle <heather████████████████>
Sent: Wednesday, January 24, 2024 11:33 AM
To: ████████████ @gamblingcommission.gov.uk>
Cc: █████████████████████████████████
█████████████████████
Subject: Re: Conference speakers

Thanks ██████ I've confirmed with my Addictions PRU colleagues that attendance is commensurate with our COI guidelines, so have now registered!

Thanks

Heather

On Wed, Jan 24, 2024 at 10:52 AM ████████████████ @gamblingcommission.gov.uk> wrote:

> Hi All
>
> For the conference, could I ask you to complete the following registration form (if you haven't already) so we have any dietary requirements logged and you are also included in the headcount for the day.
>
> Registration: Gambling Commission 2024 Spring Conference - Better Evidence, Better Outcomes (office.com)
>
> Thanks
>
> ██████
>
> GAMBLING COMMISSION
> **www.gamblingcommission.gov.uk**
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July report - core content

- To cover participation and impact of gambling.
- Other topics/themes in separate topical reports (NatCen to confirm timescales for these and ideas for potential topics)
- July report should be a GB focused report with nation and regional data found in tables and dashboard
- Standard cross breaks for the report should be age and gender combined and ethnicity if sample size allows

Gambling participation

What gambling activities do people take part in? (past 4 weeks)

- Headline participation rates past 4 weeks (and comment on how this compares to other hobbies Q1 and Q2) with cross breaks
- Participation excl. lottery only draws past 4 weeks (by this we mean excluding those who only play National Lottery and/or Society Lottery Draws) with cross breaks
    - Changes between wave-on-wave last year and reasons why
- Past 4 week participation by activity – headline participation rate for each gambling activity (including detail for betting) (no cross breaks)
- High level grouped activity list i.e. any lotteries, and casino etc – with cross breaks
- Where possible analysis on relationship between activities (to showcase what we have not been able to do before)

How do people gamble (past 4 weeks)

- Any online gambling past 4 weeks, any online gambling excl. lottery only draws, and in person gambling, and in person gambling excl. lottery only draws – with cross breaks.
- Draw out differences at grouped activity level with cross breaks
- Relationship between online and offline - correlation between online and offline activities
- How people gamble i.e. Number of gambling activities – grouped, mean, mode, also excl lottery only draws in count. (with cross breaks)

Impact of gambling

- Feelings towards gambling - (and also excluding lottery draw only players) (no cross breaks)
- Reasons to gamble (overall, no cross breaks)

- For PGSI section include cross breaks where possible, priority is to have them for PGSI categories. Also need to include confidence intervals in this section.
- PGSI distribution of scores from 0 to 27.
- PGSI categories
- PGSI score by statement.
- PGSI by activity
- PGSI for any online activity/any in person activity (and online/in person excluding lottery draw only players)

- PGSI by number of gambling activities

- **Harms from own gambling section (with cross breaks where possible) Also need to include confidence intervals**
- Experience of severe harms (bankruptcy, crime, relationship breakdown, violence or abuse)
  - Overall % 1 or more severe harm
  - % breakdown of each type of severe harm
  - % reporting suicide ideation or attempts due to gambling
- Harms - Experience of other harms (other negative impacts)
  - % breakdown by each type of harm
  - Average number of harms experienced.
- Problem gambling & harms
  - Relationships between PGSI scores and harms experienced – this is important as we haven't been able to do this before.

(and repeat for harms from others gambling)

Hi Heather,

No problem - thanks for letting me know. If you happen to get any time to briefly chat through it before the conference on 6th March then that would be great, but completely understand if you're busy.

████████████████████████████

Best wishes,

████

Hi ████

This sounds great. ██ ████████████████████ so it would w/c March 4th before I have capacity to look at anything and think about it properly. Sorry that this seems so far away - but if we did something later that week, that would all me to really look at this properly and think about it.

Thanks

Heather

Heather Wardle
Professor of Gambling Research and Policy
████████████████████████████ ████████████

Open access book now available: Games without Frontiers? Socio-historical perspectives at the gaming/gambling intersection **https://link.springer.com/book/10.1007/978-3-030-74910-1**

Sent: 07 February 2024 15:09
To: Heather Wardle <Heather.Wardle@███████████
Cc: ██████████ @gamblingcommission.gov.uk>
Subject: Meeting to discuss harms questions

Hi Heather,

I hope you're well! I just wondered whether you have any time over the next couple of weeks to meet with █████ and I to discuss our analyses of the harms questions. Happy to send you a summary of our analysis if that would be helpful - it'd be great to get your feedback and advice.

Thanks & hope to speak to you soon!

Best wishes,

████

██████████

██████████████████

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Victoria Square
Birmingham
B2 4BP

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super helpful, thanks. ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ I'm trying to get them to sort this out.

BW
Heather

Heather Wardle
Professor of Gambling Research and Policy
▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ ▮▮▮▮▮▮▮▮▮

Open access book now available: Games without Frontiers? Socio-historical perspectives at the gaming/gambling intersection **https://link.springer.com/book/10.1007/978-3-030-74910-1**

From: ▮▮▮▮▮▮▮▮▮▮▮ @gamblingcommission.gov.uk>
Sent: 08 February 2024 17:32
To: Heather Wardle <Heather.Wardle▮▮▮▮▮▮▮▮▮▮▮
Subject: Re: Gambling Commission Research Frameworks

Hi Heather

We publish all of our invitation to tenders via the research and insights marketplace on the governments dynamic purchasing service. Details can be found here: https://supplierregistration.cabinetoffice.gov.uk/dps?fh=1

Thanks

▮▮▮▮

From: Heather Wardle <Heather.Wardle▮▮▮▮▮▮▮▮▮▮
Sent: Thursday, February 8, 2024 5:10:49 PM
To: ▮▮▮▮▮▮▮▮▮▮ @gamblingcommission.gov.uk>
Subject: Gambling Commission Research Frameworks

Hi ▮▮▮▮

Just a quick question, does the GC have a research framework through which it publishes it's opportunities to tender. If so, do you know what the processes are to get approved on this?

From:
To: ███████████████████; Heather Wardle (heather█████████████
Cc:
Subject: P Sturgis report - Assessment of GSGB
Date: 05 February 2024 13:46:05
Attachments: image002.png
Report_final_3FEB24.docx

Hi All

Hope you are well.

I have attached a final version of Patrick Sturgis's report on the GSGB for you to review and happy to discuss your thoughts/feedback in our catch up this week. Please don't share this any more widely at the moment.

Our plan is to get this published ahead of the Wave 1 data, either on the 15 or 19 Feb. It will be published within the LSE library and we will publish a news article on our website on the same day.

I have also just re-read the draft annual technical report and there are a couple of comments we said we'd come back to once we had Patrick's report which I think we will need to. I don't think there is much to add in, but a couple of sentences to acknowledge latest report by Patrick would be useful.

Thanks

███████

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Assessment of the Gambling Survey for Great Britain (GSGB)

Professor Patrick Sturgis, London School of Economics and Political Science

Background

The core objective of the Gambling Commission is to safeguard consumers of gambling services and the wider public by monitoring and regulating gambling in a way that makes it both safe and fair. As part of this remit, under section 26 of the 2005 Gambling Act, the Commission has a duty to collect and disseminate evidence about the extent and nature of the gambling behaviour of the general public in Great Britain. It largely, though not entirely, fulfils this remit through the periodic collection of general population surveys which ask adult respondents to report on their frequency of gambling, the types of gambling they participate in, and the social and psychological effects they experience from it.

This is a challenging task. Gambling behaviour and its associated psychological impacts on individuals who gamble as well as their friends and families can only feasibly be collected through error-prone self-reports. Given the widespread negative social norms around gambling, particularly harmful gambling, obtaining representative samples and accurate response data is at the more difficult end of what survey researchers seek to measure in general populations.

Historically, the Gambling Commission has employed the methodology of random sampling and face-to-face interviewing (with respondent self-completion for sensitive questions) for collecting this data. The first such survey carried out in Britain was the 1999 British Gambling Prevalence Survey (BGPS), though this preceded the existence of the Commission and was funded by the gambling charity GamCare. The 1999 BGPS used a multi-stage, stratified sample design with postcode sectors randomly sampled from the Postcode Address File (PAF). Addresses, then households and individuals, were sampled randomly and sequentially within these primary sampling units (PSUs). This first sweep of the BGPS achieved a response rate of 65%, which was quite typical for this type of design at that time, yielding an achieved sample size of 7,680 individuals.

Subsequent BGP surveys, now funded by the Gambling Commission and using the same sample design, followed in 2007 and 2010. While the sample sizes of these later surveys remained at the same approximate level (9,000 and 7,756, respectively), the response rates were considerably lower, at 47%. This is still high by contemporary standards but the decline compared to earlier years would naturally raise concerns about the accuracy of the survey's population estimates.

Although the cost of these surveys is not publicly available information, it is safe to assume that, like other face-to-face interview surveys during this period, they were rising by considerably more than inflation from one year to the next. And this was at a time of increasing pressure on survey research budgets, falling as it did at the outset of the coalition government's programme of budgetary austerity.

Following the 2010 BGPS, the costs of delivering a sample of this design had become prohibitively expensive in this context and the Commission looked for other ways of fulfilling its evidential remit in a more cost-effective manner. It ultimately settled on an approach which involved running question modules within the Health Surveys for England and Scotland on a periodic basis (in England, gambling surveys were conducted in 2012, 2015, 2016, 2018, and 2021), while data in Wales was collected via a face-to-face omnibus survey. Great Britain estimates were produced by combining the data across these national surveys, though this was a somewhat complicated process given differences in methodology and timing of the surveys across nations.

The national health surveys in England and Scotland use the same basic methodology as the BGPS, so the time-series estimates were, in this respect, comparable, though less so for Wales. In order to obtain more frequent estimates for key variables of interest, the Health surveys were supplemented with a Computer Assisted Telephone Interview (CATI) survey, with results published on a quarterly and annual basis. However, given the differences in sample design, mode of administration, and question content, making direct comparisons between the CATI and health survey estimates required strong assumptions. Additionally, the Gambling Commission did not have a satisfactory level of control over the timing of the inclusion of gambling modules within the health surveys, nor of the volume and content of the questions that could be included.

For these reasons, in 2020, the Commission initiated a consultation on gambling survey research, with the intention of using the findings to transition to a bespoke survey design that would deliver timely and high-quality estimates of gambling participation, prevalence, and harm. Before turning to an assessment of the outcome of that consultation, I first consider how the development of the new survey design sits within the broader landscape of survey research over the past fifteen years or so.

The Changing Survey Landscape

The development of the methodological infrastructure for measuring gambling behaviour in Great Britain would, in many respects, serve as a useful case study of the changing pattern

of survey research more generally over the past fifteen to twenty years. As response rates continued to decline and survey costs increased, survey commissioners sought new approaches to obtaining cost-effective, representative, high-quality survey data for general populations. While this led to a multiplicity of new methodological approaches, the single biggest and most important development in the 21st Century survey landscape was the widespread transition from interviewer administration to online self-completion (Callegaro et al. 2014).

Online self-completion provides substantial cost savings compared to interviewer administered modes. For example, the American Community Survey estimated a cost of $10 per online completion compared to $192 for a face-to-face interview (Griffin, 2011). While the unit cost of an online self-completion is lower than interviewer administration, the marginal cost of each additional interview is even lower, meaning that sample sizes can be increased by large amounts for a comparatively modest additional outlay. This means it is possible to conduct more granular analyses for a fixed cost, producing robust estimates for small population sub-groups.

As well as the key benefit of cost efficiency, online self-completion offers other attractive features, such as greater flexibility over when respondents complete the questionnaire and the ability to use audio and visual capabilities or 'passive' data collection using online digital devices (Lessof and Sturgis 2018). For example, researchers are now starting to capture geographical mobility and online digital behaviour passively using apps and 'data donation', opening up exciting new possibilities for the types and volume of data that can be collected in surveys (Bosch and Revilla 2022).

Online self-completion, like all self-completion methods, also has desirable properties when measuring socially undesirable attitudes and behaviours because respondents are less willing to provide accurate responses to questions on such topics in the presence of an interviewer (Tourangeau and Smith 1996). This is clearly of high relevance to a survey of gambling behaviour, where there are good grounds to believe that the presence of an interviewer induces a downward bias on estimates of the prevalence of gambling harm (Sturgis and Kuha 2022).

The main barrier to the uptake of online self-completion designs has been the lower response rates they have tended to achieve compared to face-to-face interview designs. Low response rates increase the risk of biased estimates where the propensity to respond to the survey is correlated with the variable(s) of interest. However, this concern has diminished somewhat in recent years for two main reasons. First, push-to-web designs have started to achieve higher response rates while the reverse has been the case for in-person

interview surveys, as technological and societal change has tended to favour the former type of design over the latter. Second, in recent years survey methodologists have consistently found that the correlation between response rate and nonresponse bias is considerably weaker than has conventionally been assumed (Groves and Peytcheva 2008; Sturgis et al. 2017).

Most of the early online surveys carried out during the 2000s used opt-in (non-probability) sampling, which served as a barrier to the use of the online mode for official statistics and other high quality survey vehicles. A corresponding growth in online probability surveys was hindered by high rates of 'off-liners' in the general population, slow internet connections, and a lack of suitable sampling frames of the online population. However, as the size of the offline population has continued to decline, advances in address-based sampling, improved connection speeds and device sophistication have facilitated the growth of online probability surveys (Cornesse et al. 2020) and these are now increasingly common, both in the UK and overseas.

Survey commissioners who would previously not have considered a web survey due to concerns over sample and data quality are, therefore, now increasingly making the transition to the online self-completion mode of administration. Many UK surveys have already made, or will soon be making, this change including but not limited to the British Social Attitudes survey, the Labour Force survey, the European Social Survey, the National Survey of Sexual Attitudes and Lifestyles, the Participation Survey (formerly Taking Part), the British Election Survey, and Understanding Society.

This shift from in-person to online self-completion was already well underway in the early 2010s but was accelerated significantly during the Covid-19 pandemic, when in-home interviewing was brought to a sudden halt in March 2020. The pandemic not only forced the pace of technological change, it also increased the facility of the general population with online digital devices and accelerated the expectation that transactions and interactions be accomplished online rather than through in-person interaction.

Anecdotally at least, the pandemic also seems to have had a negative impact on people's willingness to invite survey interviewers into their homes, with post-pandemic response rates notably lower in the small number of surveys that have reverted to in-person interviews. The difficulty of maintaining interviewer field forces during the pandemic and the subsequent shortages experienced in the UK labour market have also been factors militating against a post-pandemic return to face-to-face interviewing.

Online probability survey designs currently fall under two broad methodological approaches in the UK. The first is a stand-alone 'push-to-web' method in which respondents are

randomly sampled from an address-based frame (PAF) and invited through the mail to complete a single survey online for a small monetary incentive. The second is an online probability panel, where respondents are recruited to become members of a 'standing panel' who receive regular invitations to complete surveys, again for small monetary incentives. The mode of recruitment for probability panels has been through both face-to-face interview, or mail push-to-web, though the latter is increasingly becoming the norm for the reasons noted above regarding the cost and limitations of in-person interviewing.

In choosing between a standalone push-to-web and an online probability panel, the main considerations will be response rate, sample size, data quality, and cost. While costs will, all things equal, generally be lower when using a panel, standalone surveys will achieve a somewhat higher response rate than can be obtained from a panel due to the attrition that occurs after the recruitment survey in the latter design. The sample size available through a panel will also have a lower maximum, so if a large sample is required a standalone survey is likely to be the best option. There are also potential data quality issues that arise through panel membership, notably the possibility of 'practice effects' or 'panel conditioning', where respondents' answers are affected by their participation in previous surveys (Sturgis, Allum, and Brunton-Smith 2009).

Both push-to-web and panel designs must deal with the issue of the minority of the population who are not able (or choose not) to have access to the internet. Studies have shown that, although this group is small, it is demographically, behaviourally, and attitudinally distinct, such that their exclusion can result in biased estimates (Cornesse et al. 2022). One approach here is to provide internet access and a mobile device to enable 'offliners' to complete surveys, though this is only practical for probability panels and has two problematic limitations. First, a large minority of the offliner group have *chosen* not to be online and so offering them online access is not a solution. Second, offering online access is likely to change the characteristics of an individual who would otherwise be offline and so will potentially produce biased estimates, for this sub-group at least.

Offliners can also be included in online probability surveys via telephone interview, or a paper questionnaire and both approaches are currently used in the UK context. Telephone interviewing has the benefit of enabling complex routing and integration of information from previous answers, although there is a substantial risk of measurement mode differences negatively affecting comparability with online response data. Paper questionnaires have the inverse properties of greater comparability in terms of measurement but not allowing routing and previous answer integration. Paper questionnaires generally need to be shorter than online and telephone interviews in order to achieve comparable unit and item response

rates. This means surveys sometimes include some questions that are asked in the online part of the survey only.

Another difficult issue that push-to-web sampling must grapple with is the selection of respondents within households where the design seeks to select a single individual, as is common for in-person interview surveys. This is done by the interviewer in face-to-face surveys. Existing research has shown that it is difficult to get respondents to implement random selection procedures successfully (Williams, 2016). An alternative approach to within household selection of a single adult is to request interviews with all eligible household members, thereby removing (or reducing) the potential for selection bias at this stage, albeit at the expense of introducing the additional potential for nonresponse amongst other household members. Some push-to-web surveys ask for interviews with all adults in a household, up to a maximum of four as this covers the vast majority of households in the UK. Although taking multiple adults at each address can increase sampling variance due to within household dependencies, this is usually compensated for by the gain in efficiency from reduced variance in design weights compared to a single adult design.

A disadvantage of allowing up to four interviews per household is that it creates an incentive for smaller households to fabricate interviews when there is a monetary incentive for each completion. A compromise design is to allow up to two interviews per household. Because approximately 85% of UK households contain fewer than three adults, in only a minority of households do the residents have any discretion over who completes the survey in this design. There is also less incentive for households to fabricate interviews when the maximum number of fake interviews per household is one. A study by Kantar Public (now Verian) found there was little difference on survey outcomes between these different approaches to respondent selection (Williams 2019).

The growing difficulty of implementing conventional survey modes has also served to sharpen the imperative to transition surveys online. Telephone interviewing – the main historical alternative to face-to-face interviews - is no longer able to provide sufficient cost savings or sample quality to make it a viable option. Although never as widely used in the UK as in other parts of the world, the trend toward a much-reduced volume of telephone interviewing that has been documented in the US (Olson et al. 2021) is also evident in the UK, and for broadly similar reasons.

The willingness of the general population to provide interviews over the telephone has fallen sharply since the early 2000s, with single digit response rates to Random Digit Dialling (RDD) surveys now the norm (Lavrakas et al 2017). This has mostly been driven by the steep decline in the number of fixed landline telephones and the commensurate rise in

'mobile-only' households over the past twenty years but it also seems to derive from a heightened general unwillingness amongst members of the public to complete interviews over the telephone.

Not only has the shift from fixed landline to mobile phones in the general population contributed to the decline in telephone response rates, as mobile users are less willing to respond to surveys, it has also posed new challenges for sampling and weighting. This is because dual frame (a mix of landline and mobile phone numbers) samples are more difficult to design and implement and require complex weighting adjustments for valid population inference. While the shift from landline to mobile phones has mostly been seen as representing a higher risk of biased estimates, it has also increased the cost of telephone surveys. This is because of the low and declining 'strike rate' (the number of calls made per achieved interview) for dual frame RDD samples.

In short, while telephone interviewing continues to play an integral role in survey research as an alternative mode of completion for existing respondents, it is not a viable alternative to face-to-face interviewing for sample recruitment. When a random probability survey needs to move away from in-person interviewing, online self-completion is increasingly the only viable choice.

A final factor currently pulling surveys to online self-completion is that this transition seems inevitable for most surveys at some point in the coming years anyway. Given the likely continuation and exacerbation of the problems hampering conventional modes of surveying, there is a strong case that transitioning from conventional to online modes should be implemented sooner rather than later. Another way of considering this is that, while moving surveys online will reduce *backward* comparability, it has the offsetting benefit of improving comparability with surveys that will be carried out in the *future*.

The design of the new survey – the Gambling Survey for Great Britain (GSGB)

The process for the redesign of the Commission's gambling survey commenced with a consultation with key stakeholder groups in December 2020. The key outcome of the consultation was the decision to assess the suitability of a standalone push-to-web design and to commission a pilot survey as the first step in this process. The contract for the pilot was awarded to NatCen Social Research in collaboration with the University of Glasgow and Bryson Purdon Social Research.

The design of the pilot followed a standard approach for the implementation of push-to-web surveys in the UK. A stratified random sample of 3,775 addresses was drawn from the PAF,

with sampled addresses sent an invitation letter asking up to 2 adults aged 16[1] or above to take part by completing the online survey with the link and unique identifiers in the letter. A £10 voucher was offered for completing the questionnaire. Three reminders were sent to nonresponding households, with the second reminder containing a paper version of the questionnaire. Fieldwork for the pilot was conducted in January and February 2022.

The pilot survey achieved 1,078 responses, representing a response rate of 21%, of which 57% were online completions and 43% paper. This response rate is comparable to other push-to-web surveys conducted in the UK at this time. Analyses carried out by NatCen and partners found that inclusion of paper questionnaires not only increased the response rate, but adjusted estimates of gambling behaviour downward, as would be expected (Ashford et al. 2022). The option of an offline completion mode therefore seems essential as a means of including parts of the population with quite different patterns and experiences of gambling, whose exclusion would likely bias key survey estimates.

In terms of substantive findings, the push-to-web pilot found considerably higher rates of gambling and gambling harm when compared to the most recent health survey data. For example, the pilot found 63% of the public had gambled in the previous 12 months, compared to 54% in the 2018 Health Survey for England (HSE). Estimates of the experience of problem gambling were even more discrepant, with the pilot finding prevalence of problem, moderate risk and low risk gambling three times higher than the 2018 HSE.

The differences were somewhat lower but still substantial using a trend adjusted estimate that accounted for an apparent small decline in gambling measured in the CATI survey over the intervening years. Because the estimates of problem gambling prevalence and in the BGPS and health surveys had been broadly stable since 2007, the substantial increase observed in the pilot would appear to have arisen primarily as a result of methodological differences between the surveys. This was in line with the conclusions of Sturgis and Kuha (2022) who found consistently higher gambling prevalence and harm estimates in both probability and non-probability online samples.

Based on the results of the pilot survey, the Commission embarked on a programme of additional research to determine the optimal approaches to within household selection and the measurement of gambling behaviour. For within household selection, this involved an experimental comparison between the 2-person approach used in the pilot and inviting up to a maximum of 4 adults. Measurement of gambling activities and harms involved comparison of binary and 4-point response scales and updating the list of activities to reflect recent

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[1] The minimum age was subsequently raised to 18 for the experimental stages and the main-stage survey due to very low response rates amongst 16-17 year olds in the pilot.

changes in the types of gambling people do and experimental comparisons of how the list of activities is presented to respondents. This programme of work also involved testing (though not experimentally) the use of a QR code in the invitation letter to facilitate respondent access to the online questionnaire.

None of the experimental comparisons produced very strong or decisive differences but were sufficient to provide an evidential platform for determining the third and final design of the experimental stage. This would serve as a full test of the new push-to-web design before the main stage survey was launched in July 2023. Within household selection for the phase 3 design was up to 2 adults aged 18 or over, with the household members who have the most recent birthdays asked to complete the survey in households containing more than 2 adults. The updated list of gambling activities was presented to respondents in the form of a single long list and QR codes were included in the invitation letter. In all other respects the survey had the same design as the 2022 pilot described earlier, apart from the minimum age of respondents increasing from 16 to 18 and a somewhat longer questionnaire.

Fieldwork for this 'dress rehearsal' survey took place during April and May 2023, achieving a response rate of 17% and a sample size of 3,774. It found significantly higher rates of moderate risk and problem gambling on the PGSI compared to the 2022 pilot survey. This may be due to an increase in problem gambling in the population, but it might also have arisen as a result of the updated list of gambling activities used to filter respondents to the PGSI.

Conclusions and recommendations

My assessment of the development of the Gambling Survey of Great Britain (GSGB) is that it has been exemplary in all respects. Given the very high cost and declining response rates of in-person interview surveys, it was not feasible to continue with this sort of design into the future. This was true even before the Covid-19 pandemic hit but its effects on the general viability of in-home interviewing have made mode-choice even more stark. For different though equally compelling reasons, telephone interviewing is no longer a realistic alternative for obtaining cost-effective and accurate population estimates in Great Britain. The move to self-completion was therefore, in my judgement, the correct decision.

In making this transition the Gambling Commission has consulted widely with a broad range of stakeholders and followed industry standards of best practice in developing a mixed-mode push-to-web design that will yield high quality estimates of gambling prevalence in Great Britain on a quarterly and annual basis in the years ahead. The new design has been based

on a carefully planned programme of methodological research and development to ensure key design choices are evidence-based.

The shift to push-to-web will bring a number of important benefits. Prime amongst them will be the increased frequency of measurement afforded by the new design which will enable better detection and understanding of patterns and trends in gambling behaviour.

The push-to-web/paper design also yields a considerably larger sample size (approximately 20,000 interviews annually) compared to a face-to-face design. This will enable more precise estimates to be produced for population sub-groups and for detecting change within and between groups over time. This is a key evidence need for policy makers which has, up to now, not been satisfactorily met. It is important to note that this benefit of improved measurement of time-trends accrues even if estimates of the *level* of gambling and gambling harm are biased. That is to say, even if the estimates of gambling frequency and harm are too high due to nonresponse (as discussed below), the survey will still produce good estimates of change in these variables over time.

There are some issues that will require further consideration following the launch of the new design, to ensure public and stakeholder confidence in the quality and robustness of the statistics. Chief among them is the question of why the estimates of gambling prevalence and harm are so much higher in the push-to-web design than in the face-to-face interview surveys up to 2018. This has already been the subject of two investigations. Sturgis and Kuha (2022) placed most emphasis on the possibility of nonresponse bias in the push-to-web design inflating estimates of prevalence and harm, while Ashford et al (2022) came down more on the side of social desirability bias in the interviewer-administered surveys pushing the estimates downward from their true value. However, neither study was able to come to a definitive conclusion about the relative magnitudes of these errors nor, as a consequence, which estimates are closer to the truth.

Until there is a better understanding of the errors affecting the new survey's estimates of the prevalence of gambling and gambling harm, policy-makers must treat them with due caution, being mindful to the fact there is a non-negligible risk that they substantially over-state the true level of gambling and gambling harm in the population.

One possibility, considered in the pilot report (Ashford, et al. 2022) is that response propensity will be higher amongst gamblers when gambling is mentioned as the focus of the survey in the invitation letter. This is because we know that people are more likely to take part in a survey if the topic is personally salient to them. This would help to explain why a survey which is explicitly about gambling obtains a higher response rate amongst gamblers than a survey that is generically about 'health'. However, we might question whether this

would apply to problem gamblers, who may wish to avoid answering questions about their gambling as it may cause them emotional distress. Moreover, the 2010 BGPS was explicitly about gambling and also obtained similar estimates to the 2018 HSE. Understanding the direction of this relationship is crucial because this determines whether nonresponse is a compounding or an offsetting error with respect to social desirability.

I make seven recommendations for how the Gambling Commission should address the key remaining unresolved issues relating to how the shift to self-completion has affected estimates of gambling behaviour. Recommendations 1-4 should be considered of highest priority, while recommendations 5-7 are for longer term implementation and are, to some extent, dependent on circumstances beyond the Commission's control.

Recommendation 1: the Commission should conduct research to better understand the relationship between survey topic and the propensity of gamblers to respond to survey invitations.

The Ashord et al pilot survey report found that, at the same level of gambling, respondents are less likely to report high PGSI scores in the HSE compared to the pilot. It also found that HSE respondents reported lower PGSI scores when another household member was present during the interview. Both findings point to social desirability bias in the HSE as a reason for lower problem gambling estimates in this survey. However, these observational analyses rely on assumptions that are difficult to verify and are sensitive to which control variables are included in the models. A better approach to identifying the direction and size of a measurement bias would be to randomly assign respondents to online self-completion or an interview mode, as was recently done to evaluate mode effects on the Crime Survey for England and Wales.

Recommendation 2: the Gambling Commission should undertake additional research to better understand the role of socially desirable responding as the driver of the difference in gambling estimates between in-person and self-completion surveys.

The stage 3 experimental survey found significantly higher PGSI scores than the 2022 pilot. This might have been a result of the use of an updated list of gambling activities on the 2023 survey but it might equally have been due to an increase in gambling harm in the population. In order to assess the impact of the updated gambling activity list, an experimental design is necessary.

Recommendation 3: the Gambling Commission should undertake a randomised experiment to evaluate the effect of the updated list of gambling activities on estimates of gambling prevalence and harm.

The addition of a paper option for questionnaire completion means that the survey does not exclude the offline population and those who find online survey completion challenging. As this sub-group has quite distinct demographic characteristics and patterns of gambling behaviour, their inclusion is essential. However, the inability to efficiently route respondents through a paper questionnaire means that it does not contain the full set of questions that are included on the online version. Some of the questions reported on in the GSGB will therefore exclude the offline population as well as those who choose not to complete the survey online which may lead to biases that are not currently well understood.

Recommendation 4: the Gambling Commission should take steps to assess the extent of potential bias in the subset of questions administered to online respondents only.

An on-going difficulty for push-to-web surveys is the implementation of within household respondent selection. The current approach of asking up to 2 respondents with the most recent birthdays to complete the survey is industry standard but nonetheless less than ideal. There is emerging evidence that appending PAF to external databases with information about the number of people in households can be effective in tailoring the number of invitations across households. This is just one example of how this issue might be mitigated and the Commission should keep abreast of developments in this area.

Recommendation 5: the Gambling Commission should continue to monitor best practice developments in the area of within household selection of adults in push-to-web surveys.

Any survey that uses PAF as its sampling frame will have under-coverage of groups that do not live in private residences. For most variables of interest, the small size of this group renders this generally unproblematic but for gambling it is possible that incidence is considerably higher in the excluded groups.

Recommendation 6: The Gambling Commission should carry out research on the prevalence of gambling and gambling harm in groups that are excluded from the GSGB because they are not included on the sampling frame.

A key piece of evidence regarding the effect of moving to self-completion is a comparison to a contemporaneous survey carried out using random sampling and face-to-face interviewing. This is unlikely to be affordable as a standalone data collection exercise but could be done as part of one of the national Health Surveys in the future.

Recommendation 7: the Gambling Commission should seek opportunities to benchmark the estimates from the GSGB against a contemporaneous face-to-face interview survey in the future.

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