Social
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Editorial

Richard Bartholomew
Editor

Welcome to this tenth issue of Social Research Practice.

In our first article Tim Hanson and his co-authors ask **How should we present 'don't know' options in self-completion surveys?** They examine the often-overlooked issue of the best design approaches towards 'don't know' answers. Questionnaire designers seek to minimise the number of 'don't knows' likely to be received as these are not very useful for analysis purposes nor very meaningful. But not knowing, or not having a definite view, can also be an entirely valid response, indicating a real lack of interest in or knowledge of a topic. It can be just as problematic and misleading to try to force people into giving an opinion when they genuinely don't have one. The increasing dominance of self-completion, online surveys makes the issue even more salient. By experimenting with different answer formats across three separate self-completion surveys, the authors provide valuable evidence on the effects of different designs. But they emphasise that there is no single solution applicable across all surveys.

The relevance and meaningfulness of an issue to the respondent is a key determinant of the volume of 'don't know' answers. But how can we make sure we are asking respondents about issues which are relevant to them? In our second article, **Lessons from engaging young people and peer research in the Health Foundation's young people's future health inquiry**, Matt Jordan and colleagues report on a multi-faceted, sequential approach taken by the Health Foundation to engage young people in research about the 'assets' which they need in order to make a successful transition into adulthood. This involved a rich mixture of in-depth qualitative work with young people alongside analysis of large survey data sets. A key aspect was involving 14- to 24-year-olds as peer researchers to work closely with young people in local areas to gain a better understanding of their experience and perspectives. The authors pose the important question of whether there should be more public engagement in the construction of surveys to ensure that the questions reflect the priorities of young people and other relevant 'publics'.

Our third article by Sophie Payne-Gifford and colleagues, **Advantages and disadvantages of reciprocal peer-to-peer interviewing**, explores further the pros and cons of peer research through an experiment with participants interviewing each other rather than being interviewed by a member of the research team. The topic being studied was whether, and in what ways, healthcare practitioners' own personal experiences of breastfeeding influenced their professional practice. The reciprocal approach can help build greater rapport. It can, therefore, be of value in discussing the most sensitive topics or in exploring the gap between formal attitudes and actual behaviours, but it also comes with some risks. These are outlined in the authors' conclusions.

At the time of writing we are, at last, beginning to glimpse a way out of the nightmare of the Covid-19 pandemic. There has been a vast and rapid expansion of social science studies to understand the personal, social and economic effects of the epidemic. This is involving new methods and processes and much faster turnaround times. In future issues I would like to provide an opportunity to reflect on what we are learning from these innovative approaches. Please get in touch if you think you could offer an article or shorter research note on what is being learned. **admin@the-sra.org.uk**

We welcome proposals for new articles or shorter research notes. If you are interested in offering a research note or a full article you can find more information on the **SRA website**.

How should we present 'don't know' options in self-completion surveys? Lessons from three experiments

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Abstract

This paper reports results from three UK experiments that tested different treatments of 'don't know' (DK) response options for self-completion surveys. This includes examining techniques that attempt to mimic the approach taken on many interviewer-administered surveys, where DK options are available to interviewers but not prompted to respondents. In self-completion surveys, this involves withholding the DK option from the initial question screen and only displaying it if the respondent attempts to move on without selecting an answer. We find evidence that this technique does decrease DK rates, particularly for low-salience questions, but that in part this is due to collection of 'non-attitudes'. As such, we advise against routine use of this approach for future self-completion surveys and instead argue for a more considered and tailored approach based on survey objectives, topics and mode(s).

Background and context

A well-designed questionnaire should include appropriate response options for all respondents, and should motivate respondents to give the most appropriate answer to each question. However, there are cases when some respondents don't know the answer to questions we ask in our surveys. Many surveys include DK options for all or some questions but there have long been debates among survey researchers over whether and how DK codes should be used (for example Young, 2012).

There are two competing theories. One theory posits that if a respondent does not know the answer to a question, we should allow them to say this (without too much effort). The alternative is that they are forced to select another answer option – which can lead to capturing 'non-attitudes' (Converse, 1976) – or decide not to progress further with the survey altogether. But others argue that if we make it too easy for respondents to give a DK response, they will select this rather than giving more thought to the question and providing the optimal response. In this way, DK responses can be seen as a sign of 'satisficing' (Krosnick, 2000) where unmotivated respondents take shortcuts to complete questionnaires more quickly and easily.

The response to these two positions for many interviewer-administered surveys has been to make the DK option available to interviewers but not to prompt it to respondents. This means it can be entered by the interviewer if a respondent offers a 'don't know' spontaneously. But by excluding the DK option from the response list shown or read to respondents, it is expected to be used only as a last resort when another option really cannot be given.

Of course, the above approach relies on an interviewer administering the survey and presents issues with the growth of web-based interviews. With self-completion surveys – on paper or online – the option to include a DK code but to hide it from respondent view cannot be fully replicated. This poses challenges for survey designers, including a risk of inflated DK rates for self-completion surveys (for example Al Baghal and Lynn, 2015); a lack of consistency between modes for mixed-mode surveys; and changing DK levels for trend surveys that have transitioned from interviewer-administered to self-completion approaches.

Various approaches have been used for DK options in self-completion surveys. This includes everything from routinely displaying a DK, to removing the DK option altogether, with a range of variants in between. Some studies have used the interactivity of web surveys to attempt to get as close as possible to replicating the 'unprompted' approach of dealing with DK options in many interviewer-administered surveys. Two approaches have been used for this:

1. Withholding the DK option from the initial question screen and displaying it only if the respondent attempts to move on without selecting an answer

2. Displaying the DK option on the initial question screen but including a reactive probe to check whether another response can be given when a DK response is selected

These approaches may help in producing DK rates that better reflect those found in interviewer surveys. However, they also make it more burdensome for respondents to select a DK option and may risk 'non-attitudes' in cases when respondents genuinely don't know the answer to a question.

This paper seeks to shed more light on these two techniques, alongside other approaches, by drawing on three UK experiments.

Methodology

We report on three experiments conducted by Kantar, Ipsos MORI and NatCen between 2018 and 2019. Each experiment was designed and carried out independently, but all sought to answer the same central research question: **how do different treatments of DK options in self-completion surveys impact on the way people respond?**

Across the three experiments, five different conditions were compared:

1. *Always hidden*: DK not offered as a response option

2. *Reactive*: DK only offered if the respondent attempted to move on without selecting another response

3. *Reactive + explanation*: as 2) but with an upfront explanation of the reactive functionality

4. *Explicit*: DK offered as an option on the initial question screen

5. *Explicit + prompt*: as 4) but with a prompt to check if another response could be given after each DK response

Each experiment compared at least three of these conditions. Respondents were randomly assigned to a condition and received the same condition for all questions included in the experiments.

Table 1 summarises information from each experiment, including the combination of the above conditions included by each organisation.

Table 1: Summary of experiments

Organisation	Survey vehicle	Model(s)	Question topics	Questionnaire length	Devices used	Experimental conditions included	Sample size per condition
Kantar	Wave 11 of Understanding Society Innovation Panel (IP11)	Mix of self-completion in face-to-face survey and online self-completion	Set of self-assessed health questions and experiment included in small set of questions near the end of the questionnaire	Total survey around 40 minutes; experiment included	Any internet-enabled device allowed	2. Reactive 3. Reactive + explanation 4. Explicit	Approx. 850
Ipsos MORI	Ipsos Interactive Services Online Panel	Online self-completion	Range of topics found to elicit high levels of DK responses in earlier pilot study	Approx. 10 minutes	Tablets and smartphones only[1]	1. Always hidden 2. Reactive 4. Explicit	Approx. 1,000
NatCen	NatCen Online Probability Panel	Online self-completion	Range of agree-disagree attitudinal statements	15 minutes; experiment involved 5 questions in the middle of the questionnaire	Any internet-enabled device allowed	2. Reactive 3. Reactive + explanation 4. Explicit 5. Explicit + prompt	Approx. 1,000

[1] The Ipsos MORI experiment sought to examine the tension between the constraints associated with smaller screens and common recommendations for minimising item non-response (for example, prompt messages). However, this focus is peripheral to this paper and is not considered further.

Research questions

Across the three experiments, we seek to answer six research questions:

1. How does the presentation of DK options impact on the level of DK responses? And how does this vary between different types of question?

2. How does the presentation of DK options impact on the 'quality' of DK responses?

3. What is the impact on the distribution of 'substantive' responses?

4. What is the relationship with midpoints?

5. What is the impact of emulating interviewer probing?

6. When DK options are less visible, does this result in more 'non-attitudes'?

In the next section, we present the results for each research question, drawing on all three experiments.

Results

1. How does the presentation of DK options impact on the level of DK responses? And how does this vary between different types of question?

All three experiments investigated how the presentation of DK options impacts on DK response levels across a range of question types. Key findings were:

◗ The presentation of DK options did impact on the level of DK responses

◗ All experiments found that when DK was offered explicitly (*Explicit* condition) the proportion of DK answers for most questions was significantly higher than when DK was hidden (*Reactive and Reactive + explanation* conditions)

◗ Differences between the *Reactive* and the *Reactive + explanation* conditions were less marked, suggesting the addition of an explanation about what to do if they did not know an answer made less difference in whether respondents gave a DK response. This explanation had a greater effect on the DK rates in the Kantar experiment than in the NatCen one, probably due to the explanation being offered at every relevant question in the Kantar experiment as opposed to only offered once at the start of the questionnaire in the NatCen experiment

◗ The proportion of DK answers was lower in the *Explicit + prompt* condition than the Explicit condition for all questions, indicating the prompt was effective in encouraging respondents to select an alternative 'substantive' answer (that is, an answer other than DK or 'prefer not to say')[2]

There was also variation based on type of question:

◗ When low-salience attitudinal questions or those about general knowledge were compared with 'factual' questions (for example self-reported measures of health or questions about personal information such as income before and after tax), DK rates were substantially higher for the attitudinal questions across all treatment groups

◗ The difference in DK rates between treatments was also larger for the attitudinal questions compared with knowledge questions. This is demonstrated by the differences in DK rates between both conditions and the types of questions included in the Kantar experiment (see Figure 1)

◗ Focusing purely on the Explicit treatment group, even within the attitudinal questions in the Ipsos MORI experiment, DK rates varied widely depending on the saliency and difficulty of the questions. Examples of such differences are illustrated in Figure 3 in the later section on how the presentation of DK options impacts on the distribution of 'substantive' responses

[2] In the NatCen experiment, an average of 58% of DK answers per question were changed to a different response option in the Explicit + prompt condition.

The results in this section show that the way DK options were presented had a clear impact on the level of DK responses and that this varied depending on the question type and subject matter. For a more detailed breakdown of findings and the questions included in each of the three experiments, see Table A.1 in Appendix A.

Figure 1: Proportions selecting DK by treatment condition and question type (Kantar)

*Bases: Reactive (887), Reactive + explanation (860), Explicit (858)*
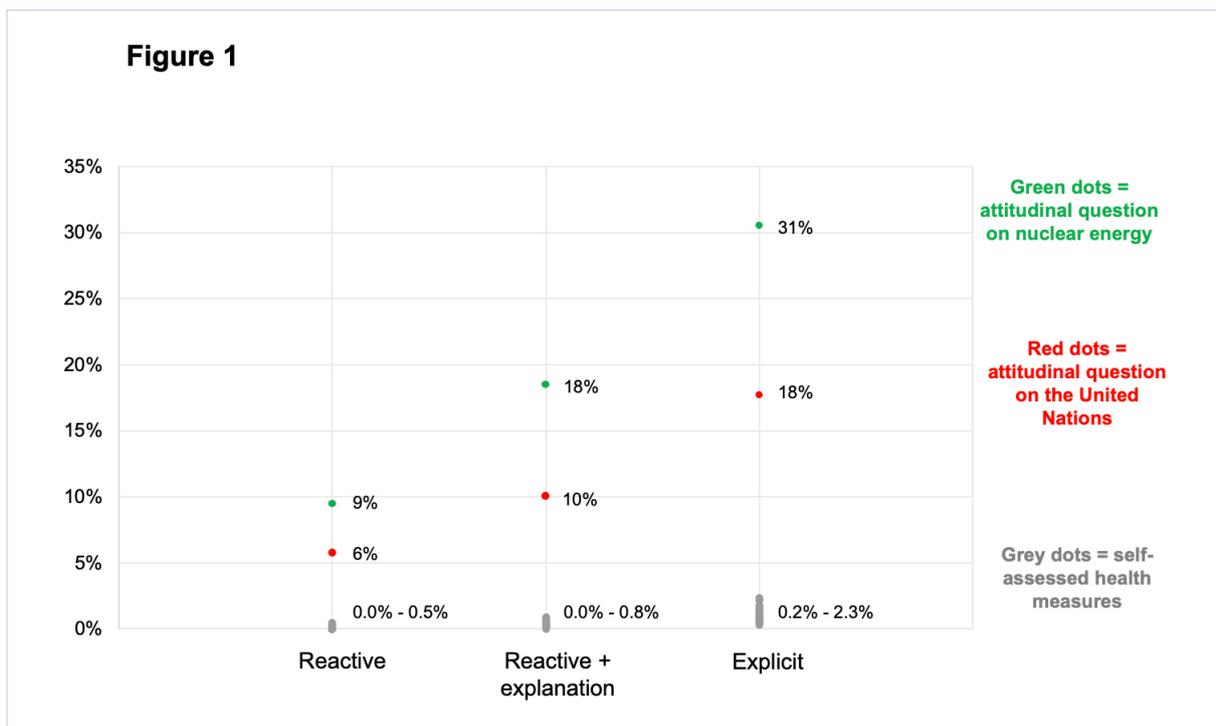
2. How does the presentation of DK options impact on the 'quality' of DK responses?

We have seen that how we present DK options can affect how likely respondents are to select them, but what isn't immediately clear is the 'quality' of DK responses under the different conditions. One way to get at this is to ask respondents who selected DK why they did so, to see how many of them really didn't know. The NatCen experiment did exactly this and found evidence of DK being both over- and under-reported (see Figure 2). On the one hand, for each of the five questions (labelled A-E in Figure 2), at least some respondents in the Explicit condition said they had selected DK for a reason other than a lack of knowledge. On the other hand, more respondents in the Explicit condition selected DK due to a lack of knowledge than selected DK for any reason at all in the Reactive + Explanation condition, suggesting that genuine DKs may have been systematically under-reported in the latter condition.

Figure 2: Proportions selecting DK due to lack of knowledge (NatCen)

Bases: Reactive + Explanation (1,025), Explicit (1,070)
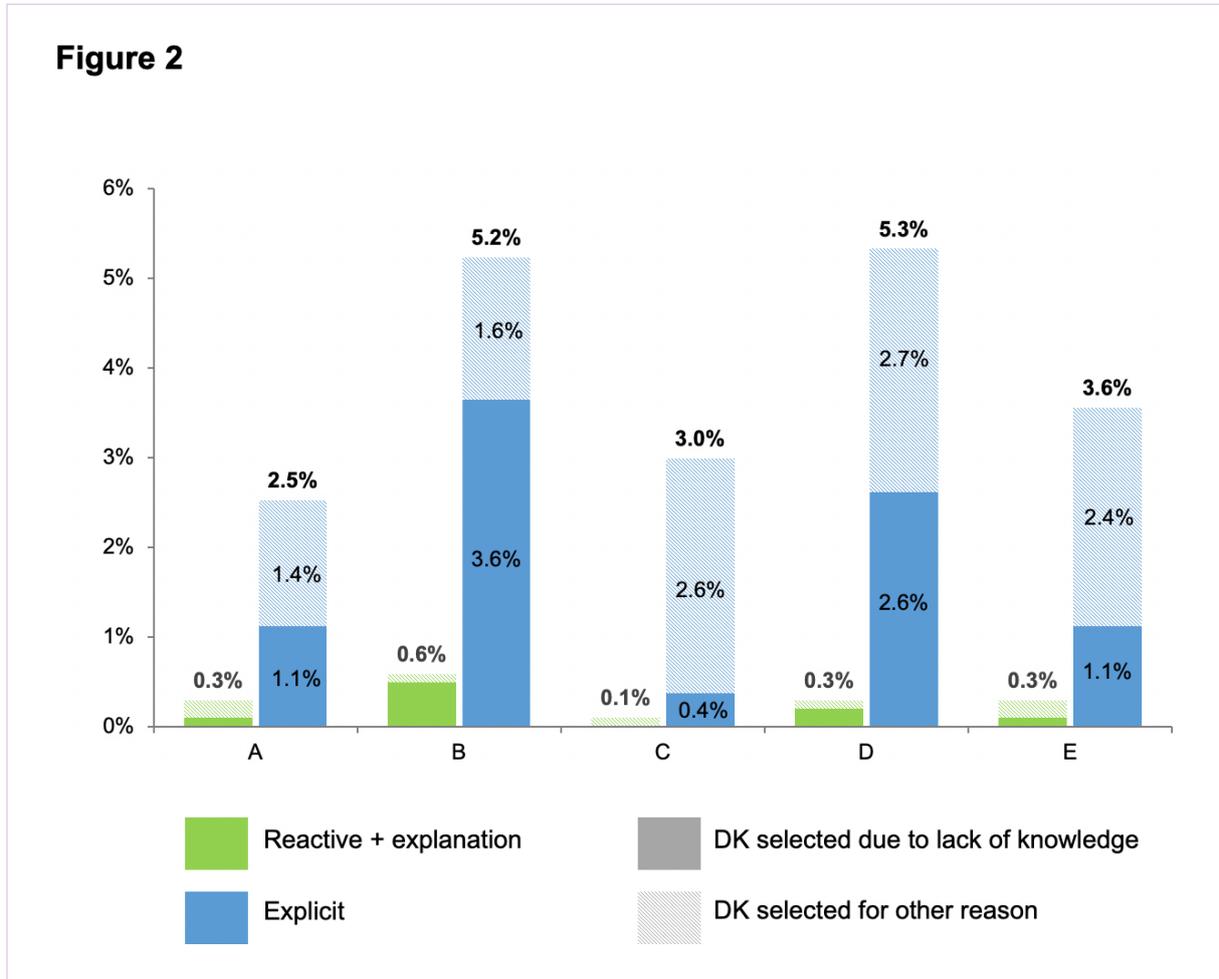
The NatCen results show how survey design can impact on what kinds of uncertainty make up DK responses, but there is a related problem of degree: how much uncertainty justifies a DK answer, and does this change with different ways of presenting DK options? Results from the Ipsos MORI experiment suggest it does. For each substantive answer the respondent gave to 19 questions, they were asked how confident they were in the answer they had given. Those who had been offered DK as an option when they first encountered the questions (the *Explicit* condition) were significantly more confident than those who hadn't (the *Reactive* and *Always Hidden* conditions).

Our results make it clear that the higher DK rates seen when DK is offered as an explicit option reflect an increase both in genuine DKs and in DKs from respondents who perhaps ought to have answered otherwise. In the following sections we consider how this affects the pattern of choosing other options, once DKs are removed.

3. What is the impact on the distribution of 'substantive' responses?

Where different treatments of DK impact on the prevalence of DK answers, we need to consider how this affects substantive answers. Previous work suggests that respondents who select explicit DK options would choose at random if pressed to answer otherwise (Sturgis et al., 2008), which may distort the distribution of 'substantive' answers. In other words, making it more difficult for respondents to say they don't know may drive down DK rates, but at the cost of polluting results with non-attitudes.

The Ipsos MORI experiment explored how substantive response distributions in a series of questions varied with different ways of presenting DK (Figure 3). The questions covered general knowledge and political attitudes and were intended to elicit high DK rates. Each question offered only two substantive options (yes/no and favour/oppose), so random choosing would mean (on average) half of the respondents choosing one, and the other half the other. If only some respondents chose at random, this would distort the prevalence estimate for each 'substantive' answer (that is, excluding DK and 'prefer not to answer') towards 50%. As expected, those estimates were always furthest from 50% where DK was offered as an option when the respondent first encountered the question (the *Explicit* condition) than when it wasn't (the *Reactive* and *Always Hidden* conditions). This is consistent with respondents who couldn't, or believed they couldn't, select DK choosing from the two substantive options at random.

As a further test of this hypothesis, Ipsos MORI considered what the distribution of substantive responses would have looked like if those in the *Explicit* condition who did choose DK had instead chosen a substantive answer at random – half choosing one option, and the other half the other. In all of the knowledge questions and some of the attitudinal ones, the result of this transformation (the *Adjusted explicit* 'condition') very closely resembled those from the *Reactive* and *Always Hidden* conditions. This gives further credence to the idea that the respondents in those conditions who wanted to select DK instead answered at random.

The picture was slightly more complicated when the attitudinal questions covered a salient topic (Figure 3: h-k). As before, the difference between the conditions suggests that some respondents chose randomly when DK was not made available upfront. However, this difference was noticeably smaller than we would expect if the explicit DK code was used *only* by those who genuinely had no opinion. This finding, along with those of NatCen in the previous section, underline the key problem of DKs in surveys: satisficing and expression of non-attitudes can happen in the same question.

Taken together, the results presented in this section highlight the risk that removing or hiding DKs can distort headline estimates by prompting respondents to choose at random. The relationship between the presentation of DKs and substantive answer options becomes more complicated when we look at midpoints. This is discussed in the following section.

Figure 3: Substantive response distributions by condition (Ipsos MORI)

Bases: Explicit/Explicit adjusted (999); Reactive (962); Always hidden (1,029)
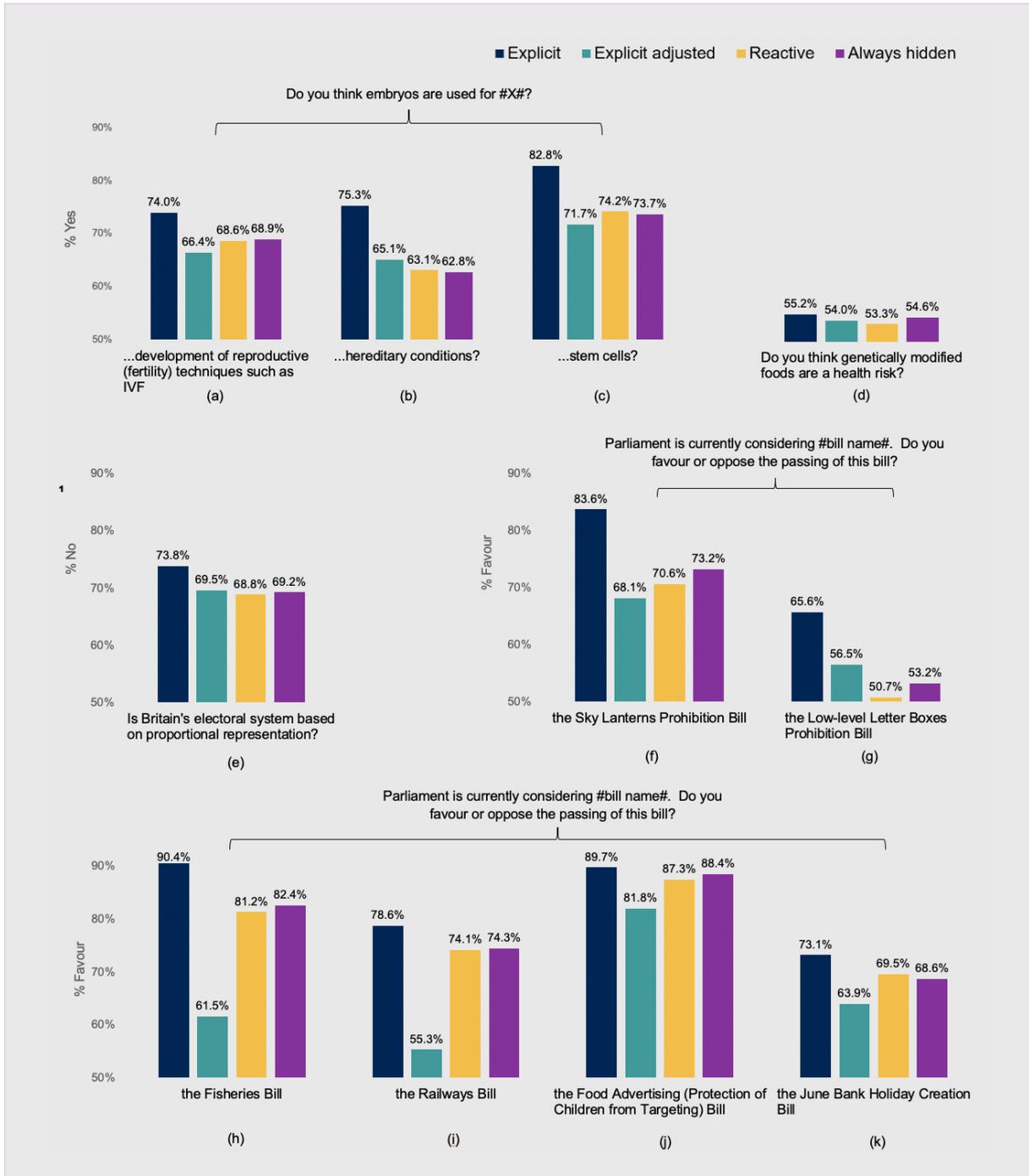
4. What is the relationship with midpoints?

Attitudes are commonly conceptualised as a bipolar continuum with a neutral 'midpoint', and attitudinal questions often include an odd number of response options to reflect this. However, respondents may use the midpoint due to a lack of opinion or knowledge when an explicit DK option is unavailable (Sturgis et al., 2012). This is problematic for at least two reasons: (1) it may lead to over-estimates of the degree that opinions exist on a topic in the population, and (2) it violates the assumption of ordinality that is typically made in analysis of bipolar response scales.

Both the NatCen and Kantar experiments investigated whether the presentation of DK options can improve the use of midpoints. Three types of questions with midpoints were tested:

Table 2: Summary of questions tested with midpoints

Experiment	Scale type	Answer codes	No. of questions tested
NatCen	Agree/disagree	Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree	5
Kantar	Item-specific	Benefits far outweigh risks, benefits slightly outweigh risks, about the same, risks slightly outweigh benefits, risks far outweigh benefits	1
Kantar	Numeric	0 'Don't trust at all' to 10 'Complete trust'	1

For all three types of question, the experiments provide evidence that the proportion of midpoint answers is lower when DK is explicit (see Figure 4). However, it does not necessarily follow that the use of the midpoint option improves when DK is explicit: it may simply be that a proportion of those who select the midpoint as a means of satisficing instead select DK for the same reason when it is available. The NatCen experiment asked respondents who selected the midpoint why they did so, and found no reduction in the proportion who selected the midpoint option due to a lack of knowledge in the *Explicit* condition.

Figure 4: Midpoints and DKs by scale type (NatCen, Kantar)

Bases: NatCen: Reactive (1,038), Explicit (1,070); Kantar: Reactive (887), Explicit (858)

Figure 4
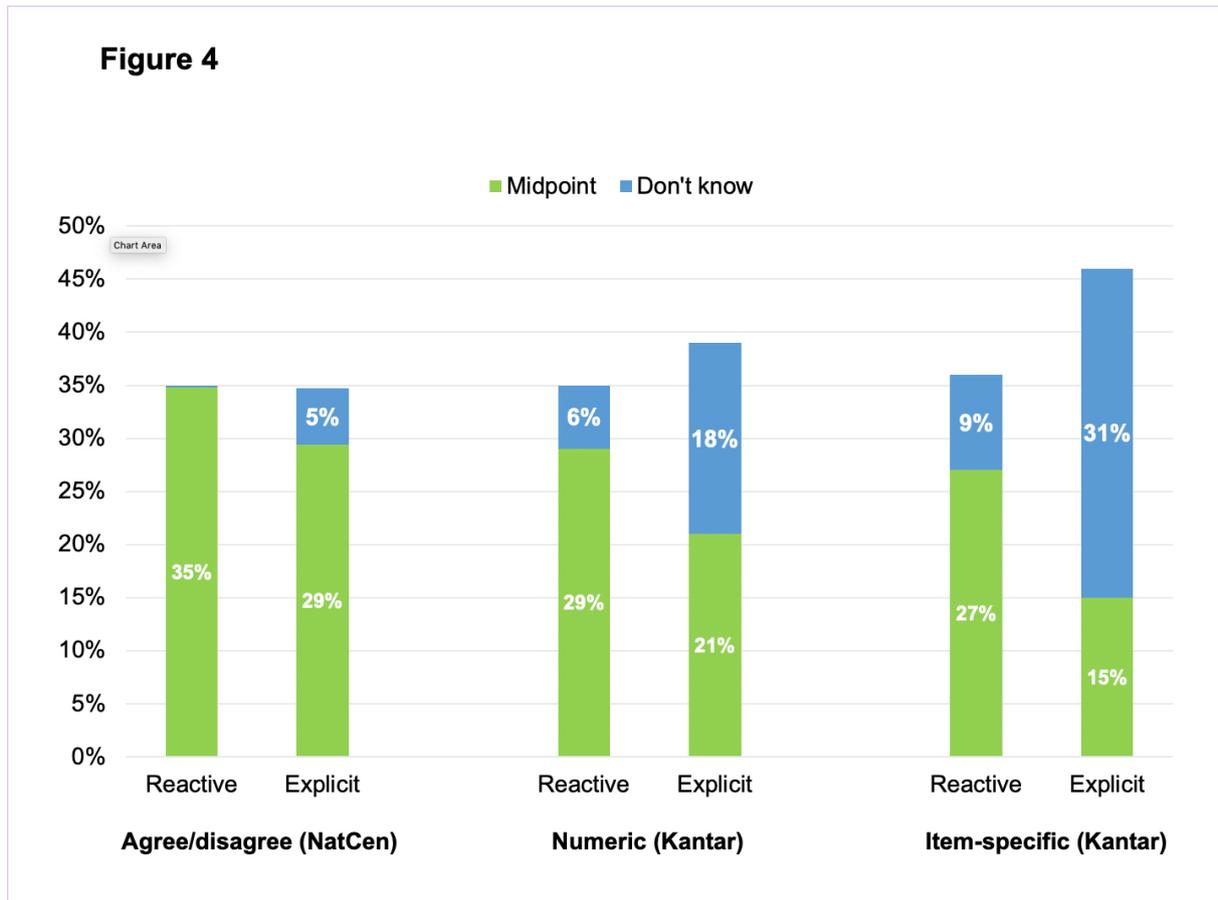
Does this mean that the presentation of DK options makes no difference to the data quality of attitudinal questions with midpoints? A closer comparison of the results of the two experiments suggests otherwise. Interestingly, the effect of making DK explicit on the proportion of midpoint answers was greatest for the item-specific scale (a 26% drop from the *Reactive* to the *Explicit* condition), and smallest for the agree/disagree scale (a 10% drop on average across the five questions). One intuitive explanation for this discrepancy is that for a respondent who doesn't know, it is *true* to say that they neither agree nor disagree. That is, by defining the midpoint negatively, it becomes a repository for all attitudes that are not accurately described by one of the directional options. When respondents in the NatCen experiment who selected DK were prompted to reconsider their answer (see the next section), 30% of them switched their answer to 'neither agree nor disagree'.

A tentative conclusion from these findings is that the presentation of DK options can improve the use of midpoint options, but only when the midpoint option is defined in a way that does not overlap with the meaning of the DK option.

5. What is the impact of emulating interviewer probing?

In interviewer-administered surveys, a good interviewer will follow-up a DK answer with a polite prompt to encourage a substantive response, when appropriate. Similar behaviour can be emulated in web surveys: DK is made available to respondents upfront, and those who select it are routed to a follow-up question which politely prompts them to reconsider whether any of the substantive options may be more appropriate. De Leeuw et al. (2015) report a marked reduction in the number of DK answers when using this approach. The results from the NatCen experiment confirm this: the number of DK answers in the *Explicit + Prompt* condition was roughly half the number in the *Explicit* condition across the five questions.

However, there are at least two outstanding questions. Firstly, are respondents simply being put off selecting DK once they realise the added burden involved in selecting it? The NatCen experiment found no evidence of this – after having seen the probe, respondents were no less likely to select DK at subsequent questions, although it should be noted that this was only tested over five questions, and results may differ if the approach were implemented across a longer questionnaire. Instead, it appears that the lower rate of DK answers is driven by respondents changing their answers: on average over the five questions, 58% of DK answers were changed by respondents following a prompt.

Secondly, does prompting in this way simply encourage respondents who genuinely don't know the answer to a question to select a substantive answer instead, thus increasing the risk of non-attitudes? Respondents were asked why they selected DK, which enables us to determine whether the prompt had the desired effect of allowing those who genuinely don't know to say so while encouraging substantive answers from those who do really have an opinion. The proportion of respondents who said they selected DK because they 'don't know enough about the topic' was higher after prompting for four of the five questions, but none of these differences were significant due to small base sizes[3]. Respondents also gave open text explanations of their reasons for selecting DK, and coding of these responses shows the same trend. The results are, therefore, consistent with the hypothesis that emulating interviewing prompting improves the quality of DK answers, although further research is needed to confirm this.

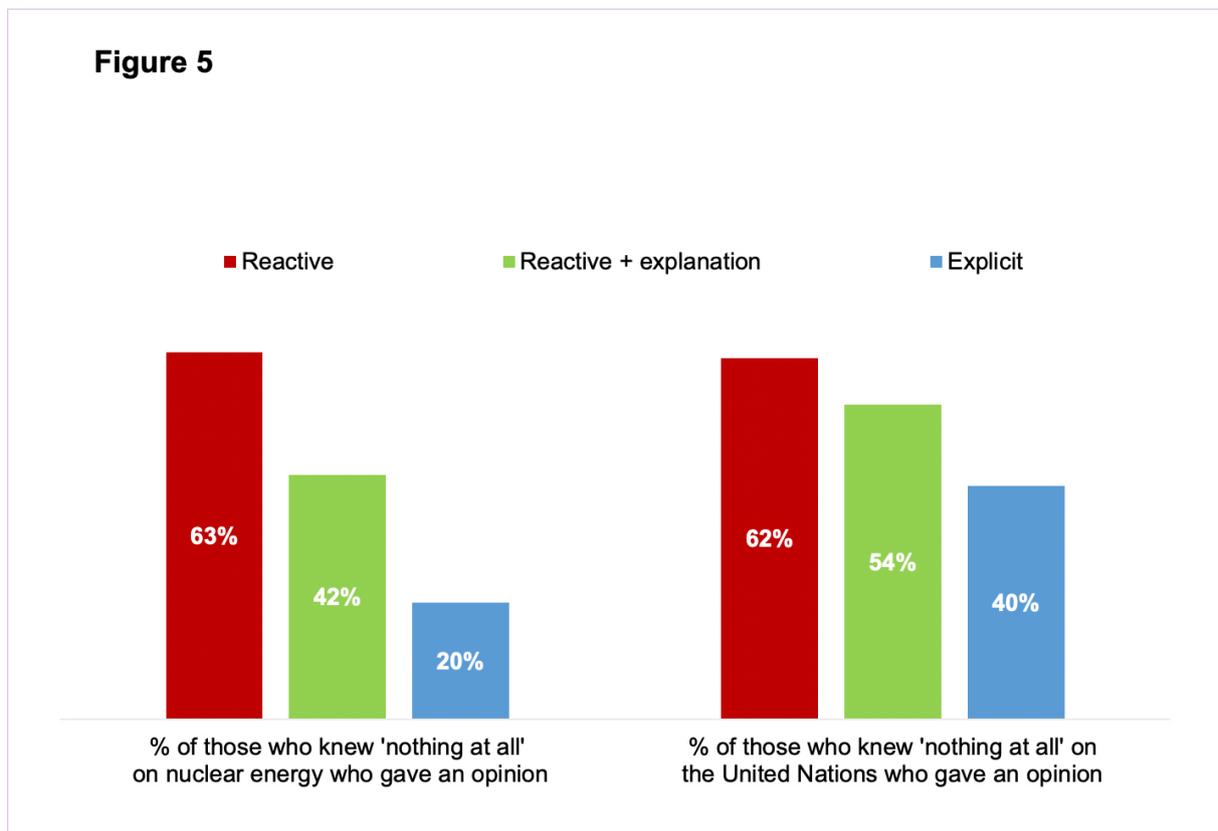## 6. When DK options are less visible, does this result in more 'non-attitudes'?

Our final research question explores whether making DK options less visible or more difficult to code results in the collection of 'non-attitudes' – when respondents select an option from the original response scale rather than providing a DK, in cases when 'don't know' is their 'true' answer.

In the Kantar experiment, following the attitudinal questions about nuclear energy and the United Nations, respondents were asked to rate their level of knowledge on these topics (choosing from: a lot, a fair amount, not very much, or nothing at all). Respondents who stated that they knew 'nothing at all' and had given a response other than DK at the attitudinal question were asked an open follow-up question to ascertain the reason for this. As Figure 5 shows, respondents in the *Reactive* treatment group were far more likely to give an attitudinal response and then say they knew 'nothing' about the topic compared with those in the *Explicit* treatment group. The difference is particularly marked for the nuclear energy question (63% compared with 20%).

[3] That is, the proportion who said they selected DK because they 'don't know enough the topic' was higher in the *Explicit + Prompt* condition than the *Explicit* condition, for four of the five attitudinal questions.

Figure 5: Those who know 'nothing at all' about the topic but gave an opinion by treatment group (Kantar)

Bases: Nuclear energy question: Reactive (155)/Reactive + explanation (139)/Explicit (140); United Nations question: Reactive (85)/Reactive + explanation (90)/Explicit (91)

Figure 5

Legend: ■ Reactive ■ Reactive + explanation ■ Explicit

% of those who knew 'nothing at all' on nuclear energy who gave an opinion:
- Reactive: 63%
- Reactive + explanation: 42%
- Explicit: 20%

% of those who knew 'nothing at all' on the United Nations who gave an opinion:
- Reactive: 62%
- Reactive + explanation: 54%
- Explicit: 40%

Analysis of the verbatim answers offered some context for these findings. Respondents were asked:

> 'You said that you knew nothing about [nuclear energy/the United Nations] but earlier gave a view on whether the benefits of [nuclear energy/the United Nations] outweigh the risks. Please can you say why you did not respond 'don't know' to this question?'

A sizeable proportion of respondents in the *Reactive* treatment group said they had not seen any way to select DK (between 15-20%) compared with 12% in the *Reactive + explanation* group and 0% in the *Explicit* group (figures the same for both questions). The findings support the argument put forward by Converse (1976) that respondents are more likely to report 'non-attitudes' when DK options are not (explicitly) offered.

Conclusions and recommendations

In this article we have sought to shed light on some important issues associated with 'don't know' options in self-completion surveys by considering six research questions across three experiments. Table 3 summarises the evidence for each research question.

Table 3: Evidence summaries by research question

Research question	Summary of evidence
How does the presentation of DK options impact on the level of DK responses? And how does this vary between different types of question?	There was clear evidence that the presentation of DK options impacts on the level of DK response: where DK options are made less visible, the level of DK response typically reduces. There was also substantial variation in effects between different question types. Questions on topics where knowledge was expected to be lower showed very large differences in DK rates based on the DK condition. There were fewer differences for 'factual' questions where DK levels remained low across conditions.
How does the presentation of DK options impact on the 'quality' of DK responses?	Evidence was mixed. The higher DK rates observed when DK is offered as an explicit option reflected an increase both in genuine DKs and in DKs from respondents who perhaps ought to have answered otherwise.
What is the impact on the distribution of 'substantive' responses?	The results demonstrate clearly that how DK options are presented can affect the relative prevalence of 'substantive' answers. Specifically, when no explicit DK was included, the distribution of substantive responses changed in a way that is consistent with respondents choosing at random when they genuinely don't know how to answer.
What is the relationship with midpoints?	There was clear evidence that the level of midpoint response is lower when an explicit DK option is included, suggesting a degree of interchangeability between DK and midpoint options in some cases.
What is the impact of emulating interviewer probing?	Results showed that emulating interviewer probing in an interviewer survey can reduce the level of DK response. However, further research is needed – including adopting this approach over a larger number of questions.
When DK options are less visible, does this result in more 'non-attitudes'?	There was clear evidence that making DK options less visible can result in more 'non-attitudes' for some topics.

Based on our results, we draw three main conclusions for researchers designing surveys that include self-completion components:

1. As noted above, the presentation of DK options has been shown to impact on levels of DK (and in some cases substantive) response. This suggests that it is not a trivial issue. Rather, the presentation of DK options holds more importance than current practice might sometimes suggest.

2. DK rates differ widely for different types of question. For some questions, DK rates may be low regardless of the presentation and for these this decision is less important. Our experiments show that DK rates are higher – and more sensitive to differences in presentation – for attitudinal questions, particularly on low-salience topics. Decisions on how to display DK options are, therefore, particularly important for surveys that include such questions.

3. DK rates in self-completion surveys can be reduced by adopting techniques that attempt to mimic those used in interviewer-administered surveys, such as replicating the 'unprompted' approach by displaying DK options where respondents attempt to move past the screen without answering (the *Reactive* condition in our experiments). These techniques, which are now used across many self-completion surveys, *can* reduce DK rates. A low DK rate is often seen as a 'good thing' by survey designers but this should be achieved by designing questions that respondents are able and willing to answer rather than simply by making it much harder to say they don't know.

Our experiments provide strong evidence that the *Reactive* design can risk the collection of 'non-attitudes'. Based on these results, we would advise survey designers to move away from routinely attempting to mimic the 'unprompted' approach via this *Reactive* design.

Building on these findings, we put forward three areas in which further research would be fruitful to provide additional insight on this topic:

◗ Our experiments found that **midpoint** response levels were particularly likely to increase when DK options were less visible. For a future experiment, it would be interesting to assess how substantive response distributions would be impacted for scale questions *without* a midpoint between different DK treatments.

◗ What would be the effect of **excluding the DK option altogether** but allowing respondents to move on to the next question if they don't know (or don't want to answer)? Would this risk some questions that could be answered being mistakenly missed by respondents? Would respondents retain awareness of the option to skip questions – and if not, would this also risk collecting non-attitudes? And is there a risk that respondents deliberately bypass large sections of surveys with this option?

◗ How would the approach of **emulating interviewer probing** (our *Explicit + prompt* condition) work if applied across a full questionnaire or a larger set of questions? Would respondents start to deliberately avoid a DK response to avoid the extra time and inconvenience of this prompt?

To conclude, we cannot provide a single recommendation for uniform treatment of DK options across all surveys based on our experiments. Treatment of DK options should depend on the objectives of the survey, the topics included, and the mix of modes present. In some cases, it may be beneficial to vary treatment between questions in a single survey: for example, removing the DK option for questions we would expect all respondents to be able to answer.

Careful consideration of the mix of modes is especially important since all three of our experiments were based on self-completion formats and mostly focused on online interviews. But we should acknowledge that many surveys now adopt mixed-mode designs, which may comprise a mix of self-completion methods (for example, web and paper) or combine self-completion and interviewer administration. Any decisions on treatment of DK options, therefore, need to fully reflect the mix of modes included for a survey and, ideally, adopt an approach that can be applied consistently across current modes while also considering the impact of any future mode switches where measuring change over time is important.

In general, however, we would argue that more attention should be placed on considering the impact of treatment of DK options from the outset of the design phase and we, as survey researchers, should accept and acknowledge how these decisions can impact on results.

Appendix A

Table A.1: % answering DK at questions of interest by treatment condition

	Question(s)	(mean) % answering DK for each treatment condition				
	Treatment	1	2	3	4	5
		Always hidden	Reactive	Reactive + explanation	Explicit	Explicit + prompt
Kantar	**Set of self-assessed health measures**					
	Self-assessed questions about health (24 questions)		0.1%	0.3%	1.1%	
	Attitudinal low-salience questions					
	On a scale from 0-10, how much do you personally trust the United Nations?		5.7%	10.0%	17.7%	
	From what you know, or have heard about using nuclear energy for generating electricity in the UK which, if any, of these statements reflects your own opinion?		9.5%	18.5%	30.5%	
	Bases (N=2605)		*887*	*860*	*858*	
NatCen	**Set of five attitude statements on low-salience issues**					
	A: Immigrants are generally good for Britain's economy		0.0%	0.3%	2.5%	1.2%
	B: Large international companies are doing more and more damage to local businesses in Britain		0.2%	0.6%	5.2%	2.9%
	C: The law should always be obeyed, even if a particular law is wrong		0.0%	0.1%	3.0%	0.6%
	D: The welfare state encourages people to stop helping each other		0.2%	0.3%	5.3%	2.6%
	E: People should be able to travel by plane as much as they like, even if this harms the environment		0.0%	0.3%	3.6%	1.0%
	Bases (N=4147)		*1038*	*1025*	*1070*	*1014*

	Question(s)	(mean) % answering DK for each treatment condition				
	Treatment	1	2	3	4	5
		Always hidden	Reactive	Reactive + explanation	Explicit	Explicit + prompt
Ipsos MORI	**Personal finance questions**					
	Personal and household income before and after tax (4 questions)	0.0%	0-5%		3.7%	
	Which of the following groups represents your current total personal retirement savings?	0.0%	0.9%		15.0%	
	General knowledge questions on health/science					
	How long do you think it takes to develop the average medical treatment, from investment in early research to the treatment being available to patients?	0.0%	0.1%		14.1%	
	Do you think genetically modified foods are a health risk?	0.0%	0.0%		23.8%	
	Use of embryos in research (3 questions)	0.0%	0.0%		35.2%	
	General knowledge questions on finances					
	Cost of raising children and saving for retirement (2 questions)	0.0%	0.6%		24.0%	
	General knowledge questions on politics					
	What is the name of the current Home Secretary? Is it…	0.0%	0.9%		15.1%	
	Is Britain's electoral system based on proportional representation?	0.0%	1.2%		18.2%	
	Political party spending and finances in Great Britain (4 questions)	0.0%	1.0%		40.5%	
	Political opinion questions on bills being considered by Parliament					
	Clear, salient (2 questions)	0.0%	1.5%		29.3%	
	Clear, non-salient (2 questions)	0.0%	4.0%		51.3%	
	Ambiguous, salient (2 questions)	0.0%	8.1%		75.4%	
	Bases (N=2990)	*1029*	*962*		*999*	

References

Al Baghal, T., and Lynn, P. (2015). 'Using motivational statements in web-instrument design to reduce item-missing rates in a mixed-mode context'. Public Opinion Quarterly 79(2): 568-579.

Converse, J. M. (1976). 'Predicting no opinion in the polls'. Public Opinion Quarterly, 40(4): 515-530.

De Leeuw, E., Hox, J., and Boevé, A. (2015). 'Handling do-not-know answers: exploring new approaches in online and mixed-mode surveys'. Social Science Computer Review. 34(1): 116-132.

Krosnick, J. (2000). 'The threat of satisficing in surveys: The shortcuts respondents take in answering questions'. Survey Methods Newsletter. 20: 4-8.

Sturgis, P., Allum, N. and Smith, P. (2008). 'An experiment on the measurement of political knowledge in surveys'. Public Opinion Quarterly. 72(1): 90-102.

Sturgis, P., Roberts, C., and Smith, P. (2012). 'Middle alternatives revisited: how the neither/nor response acts as a way of saying 'I don't know''. Sociological Methods & Research. 43(1). 15-38.

Young, R. (2012). 'Don't know responses in survey research'. Doctor of Philosophy Dissertation. Pennsylvania State University.

Lessons from engaging young people and peer research in the Health Foundation's young people's future health inquiry

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Abstract

A key principle of the Health Foundation's young people's future health inquiry was the importance of engaging young people themselves. This led to an initial engagement exercise which identified the assets young people think are needed to make a successful transition to adulthood. Using these assets to frame the research illustrated the value of engaging young people at all stages of the inquiry, guided a series of site visits involving young people as peer researchers, and highlighted the challenge of using this framing to analyse data that reflect the priorities of decision-makers, rather than the concerns of young people themselves.

Funding acknowledgement

Introduction

Context

While much has been done to understand and improve the support needed during the early years (for example, through the work of the Early Intervention Foundation), less is known about the support needed for young people as they transition to adulthood to enable them to reach 'positive destinations' (having 'a home, a job and a friend' (Selbie, 2013)).

The Health Foundation's young people's future health inquiry began in 2017 and focused on young people aged 12-24. The inquiry was premised on the role of social and other factors, such as employment and housing, in determining long-term health outcomes across the life-course (Marmot et al, 2010). It set out to discover:

◗ Whether young people currently have the building blocks for a healthy future

◗ What support and opportunities young people need to secure these building blocks

◗ The main issues that young people face as they become adults

◗ What this means for their future health and for society more generally

To address these questions, the work of the inquiry was structured around a mixture of research and engagement, site visits and policy work. A key principle of the inquiry was the importance of engaging young people themselves, and using the results of that engagement to frame the research. Throughout, it was led by the views and experiences of young people around the UK, with engagement activities informing the literature review and quantitative research, and peer researchers presenting their findings at site visits.

Over the last 20 years, organisations such as the James Lind Alliance and NIHR Involve have done much to promote the involvement of the public and patients in priority setting and healthcare research, working with the research community to develop UK standards for better public involvement in health and social care research (NIHR, 2019). There has also been a growing recognition of the importance of giving young people an active voice in research that affects them (Kirby, 2004; Tisdall et al, 2009; Brady and Graham, 2018), informed by Article 12 of the UN Convention on the Rights of the Child (UNCRC, 1989), which asserts that children and young people should be involved in all decisions affecting their lives.

While public and patient involvement and engagement is no longer unusual in social research, we found that engaging young people in identifying the assets which they considered necessary to have a healthy life provided a novel and useful framework for the analysis of longitudinal research. Engaging young people also highlighted some gaps in the available data, and shaped other elements of the inquiry. This gave the findings of the inquiry added value and validity.

The approach

The multi-faceted approach taken by the inquiry is illustrated in Figure 1. In this article, we focus on the engagement exercise and how we used the insights from this stage to inform and frame the academic research. We also provide a brief outline of the site visits, a second participative element of the inquiry which ran in parallel with the research activity.

Figure 1: Components of the young people's future health inquiry
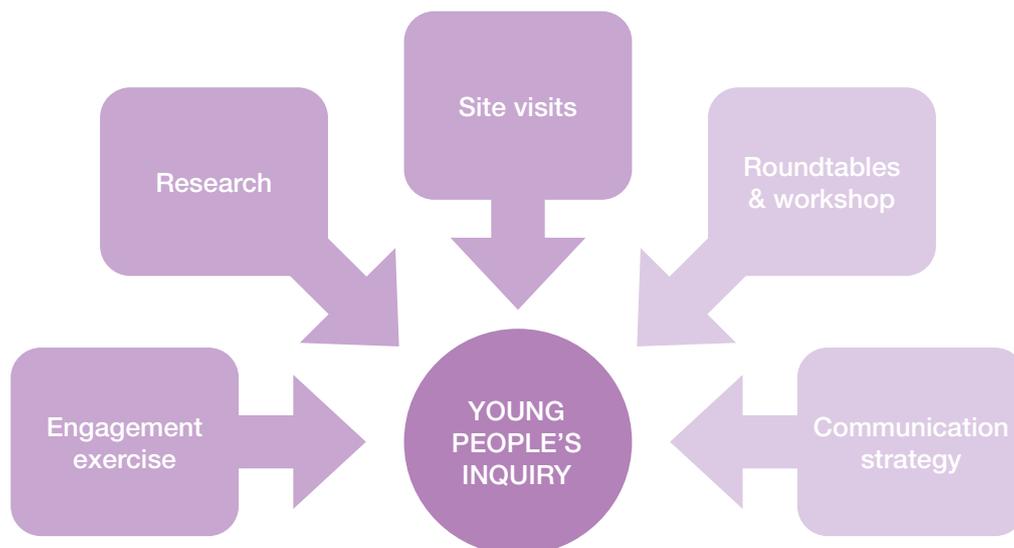
Engagement exercise

We commissioned Kantar Public and Livity to carry out an initial engagement exercise. The aim was to hear from a cross-section of young people (aged 22 to 26) in their own words about:

◗ Their experience of transitions into adulthood

◗ The factors that led them to where they are

◗ The factors that could help or hinder them in changing their trajectory

◗ Their thoughts on what the future holds, in terms of the factors likely to influence their long-term health prospects

◗ Where their paths have not followed the trajectories that might be expected from some of the structural factors they experience while growing up

◗ Young people's motivations to achieve the various dimensions of a healthy life

We asked Kantar Public and Livity to use this perspective to develop a description of broad groups or 'archetypes' with a range of shared characteristics that captured and conveyed young people's sense of their life prospects, and to explore the inter-dependencies between the four foundations of a healthy life[4] (Kane and Bibby, 2018).

The engagement exercise was mixed method and iterative, drawing on qualitative and quantitative data from Next Steps. Phase 1 included virtual discussions with a reference panel. Phase 2 comprised a mobile app diary followed by half-day qualitative workshops (including 80 young people in total). Both Livity and Kantar abide by the MRS guidelines, and have strict safeguarding policies in place for youth engagement activities. This included consent forms being completed ahead of participation.

Reference panel

The aim of the reference panel was to hear directly from young people about their experiences. A group of ten young people were recruited from across England, Wales, Northern Ireland and Scotland to create the reference panel. Broad selection criteria were used to ensure that the sample accounted for people from different backgrounds in terms of gender, ethnicity, social class and region; and numbers assigned based on the latest ONS data available. The small sample was designed in this scoping phase to provide a strong youth voice that could help direct the rest of the engagement work. It was not designed to be generalisable to the population of young people at large.

The first stage of the reference panel involved four weeks of regular questioning of panel members via WhatsApp. Depending on the subject matter being explored, a mixture of both group and one-to-one questions were asked. The panel was also set weekly tasks centred on work, housing, relationships and habits. Panellists were expected to ask their peers relevant questions through their own social channels (Facebook, WhatsApp, Twitter and so on) for additional insights from a wider pool of young people.

Following the concentrated period of research with the panel, light-touch consultation continued for an additional four-week period. Ad-hoc questions were posed, based on specific areas of interest that required deeper exploration following the first stage. Panellists then had 24 hours to respond. A mix of both group and individual conversations were conducted.

The reference panel conversations were analysed each week to build a robust understanding of the young people and their experiences, and to ensure that the following week's conversations asked relevant questions. Once all conversations with the panel were completed, they were reviewed in order to connect them back to the core research objectives and to help identify emerging themes, which would help shape

4 The four foundations were defined as: (1) the potential to engage in good quality work; (2) access to secure, affordable housing; (3) a network of stable relationships and good self-esteem; and (4) established habits that promote and maintain good health.

subsequent phases of research. To find relevant discussions, data were searched using keywords relating to work, housing, relationships and habits; these were cross-referenced amongst all participants in order to identify common themes.

A formal analysis session was also held by the Kantar and Livity team to unpick the findings in more detail, and to explore inter-relationships.

Qualitative workshops and mobile app

Following the reference panel conversations, five workshops were conducted with 16 young people (aged 22 to 26) in each group. The aim of the mobile app and qualitative workshops was to hear young people's voices about their experiences of transitions to adulthood, and what they think makes the greatest difference in their journey, as well as their aspirations and expectations for the future.

Before attending the workshops, participants were given a 'pre-task' on a mobile app to collect individual data. This asked them to reflect on their current life experiences of work, housing, relationships and habits, building on the findings from the reference panel, as well as their expectations for the future.

The half-day workshops were held over a three-week period in five locations: London, Leeds, Cardiff, Newtownabbey and Glasgow. The workshops used a range of stimulus materials to enable group discussion and to collect individual-level data to facilitate reflection on the structural, social and personal influences on participants' life trajectories. For example, the moderator asked participants to complete a journey map to show their journey to adulthood from age 12 to the present along a timeline. Participants were asked to add key moments to the timeline, and discussed what had been the most positive things on their journey, and what had been more difficult than expected.

Participants were recruited to reflect segmentation developed through an analysis of Next Steps 2017 (data on about 7,700 young people aged 25). The sample was deliberately skewed to include more people from lower socio-economic backgrounds (C2DE) than higher (ABC1). Participants were screened to ensure that a broad cross-section of young people were represented by gender, age, ethnicity, housing tenure, employment status, educational qualifications, religion, and financial support young people received from, or provided to, their parents. Participants were paid for their time attending the workshops.

Findings from the engagement exercise

The extent to which young people had been able to secure good-quality work, housing and relationships was found to be shaped by whether or not they had four specific 'assets' to make a successful transition to adulthood. These were:

◗ Right skills and qualifications: whether they had gained the academic or technical qualifications needed to pursue their preferred career

◗ Personal connections: whether they had confidence in themselves and access to social networks or mentors able to offer them appropriate advice and guidance on navigating the adult world

◗ Financial and practical support: direct financial support from their parents or carers, such as being able to live at home at no cost as well as practical assistance, including help with childcare

◗ Emotional support: having someone to talk to, be open and honest with and who supports their goals in life. This could include parents or carers, partners and friends, as well as mentors

Although each asset was identified as being important, different young people had different levels of each. Nevertheless, it was apparent that having a combination of even some of the assets made it easier for young people to make a smooth transition into adulthood. Whether or not a young person possessed the four assets was largely determined by their family and community circumstances, as well as structural factors, such as the local housing and labour markets. While the young people had some understanding of this, they mainly ascribed their successes and failures to personal responsibility – working hard as a way of overcoming challenges. When adversity could not be tackled, they explained this in terms of a lack of self-motivation or laziness (Kane and Bibby, 2018).

Research

Taking the four assets identified by young people in the engagement work as the starting point, we commissioned the Association for Young People's Health and the Institute of Child Health at University College London to undertake a literature review to explore the extent to which the existing research literature addressed each of the four assets, and if so, what it showed about each asset's role in the transition to adulthood (Hagell et al 2019a). Although the review found a certain amount of research related to all four assets in terms of their role in helping young people to navigate their early 20s, the evidence was not definitive, and the team concluded that previous research had not been as nuanced or as holistic as the model that young people had proposed themselves.

Using the asset model based on young people's own voices as a framework to review existing research was novel and challenging. Using the same framing to analyse the quantitative data was another innovative aspect of the inquiry. In order to draw some conclusions about the future health of young people, the initial task for the research team was to:

◗ Measure the presence of the four assets among the young people across the 12 to 24 age range

◗ Examine the combination of these assets and their trajectories at three periods within that age group

◗ Explore the relationship between the assets and asset trajectories to the foundations for a healthy life at age 24

The team used data from Next Steps (formerly, the Longitudinal Study of Young People in England) which follows the lives of young people born in 1989/90. Next Steps covers: young person's family background; school(s) the young person attends/has attended; parental socio-economic status; parental employment; income and family environment as well as local deprivation; personal characteristics; attitudes, experiences and behaviours; attainment in education; and outcomes. The variables did not map neatly onto the assets identified through the engagement exercise, so the team developed an approach to overcome this.

The data were grouped to measure the presence of the assets at three time-points (ages 13 to 15, 16 to 17, and 18 to 20). Available relevant variables from when the young people were aged 13 to when they were aged 20 were grouped under a particular asset, after team discussions about which variables reflected a particular asset. For each variable the researchers assigned either a 1 or a 0 to reflect whether there was positive evidence of the asset or not. Combining the scores for each variable provided an overall measure of whether an asset could be said to be present or absent for a particular young person. This was done for each of the three time-points.

The same variables were not necessarily available at each time-point due to different questions being asked across the rounds of surveys. However, relevant variables were available at all three time-points for each of the assets with the exception of emotional support between ages 16 and 17. Alongside being able to say whether a particular asset was present at each of the three time-points, the pattern in how the presence of a particular asset changed over time was explored – the asset trajectory – how this was associated with outcomes in terms of the building blocks for a healthy life of a home, a secure and rewarding job, and supportive relationships.

Findings from the secondary analysis

The data indicate that the associations of skills, qualifications and personal connections with positive outcomes at age 25 are stronger than the association of financial support with positive outcomes. Having assets consistently between the ages of 13 and 20 is associated with positive outcomes at age 25. Compared with a young person who does not have assets at any time, having them at all three time-points shows the largest association with outcomes at age 25. However, achieving positive outcomes does not necessarily rely on having assets at all time-points. Some young people were able to achieve positive outcomes with a late start in terms of skills and qualifications (Hagell et al, 2019b).

Site visits and peer researchers

Having established the factors critical to supporting young people's transition into adulthood during the engagement work, a parallel stage of the inquiry was to understand how these factors were experienced by young people in their day-to-day life, in order to inform the areas for further policy analysis. We wanted to understand:

◗ Are young people across the UK able to access the four assets?

◗ If so, what are the opportunities and conditions that enable access to them?

◗ If not, what is getting in the way?

Alongside social enterprise Leaders Unlocked, which specialises in giving young people and under-represented groups a stronger voice, we designed a programme to explore these questions through site visits in five places across the UK.

Gaining an accurate picture of what it is like growing up in these places involved preparatory work by the Health Foundation inquiry team and young people in each of the areas. Leaders Unlocked recruited between 10 and 15 peer researchers aged 14 to 24 in each area by promoting the work through local relevant organisations and preparing a recruitment pack that included a flyer, application form, guidance notes and (parental) consent form. Peer researchers were paid for their travel and other expenses. An extensive research training package was offered to the peer researchers, along with bespoke development support to lead peer research workshops in schools and youth services, involving around 120 young people to gather their experiences of developing the four assets. This involved working with other young people in each area to understand their views on how they felt their area was as a place to grow up and live in.

Alongside this, the Health Foundation identified members of the community working with or for young people, usually local leaders or service providers who shape the experience of young people in that place. We conducted eight to 15 telephone interviews in each place to understand how they thought the area was serving its young population. This ensured that, by the time of the site visit, a range of people in the local population – from teachers, to council workers, and young people – had already engaged with the themes of the inquiry, and had a chance to explore how the local context was providing opportunities or barriers to enable young people to build the four assets. It meant that we not only had the views of young people, but could also triangulate these with the views of others with a different perspective of the system.

Each site visit took place over two days and began with a youth-led tour of the local area, followed by a visit to a youth-focused service. The visit concluded with a four-hour meeting (facilitated by Leaders Unlocked) with the young people who had been involved in the research process, and members of the local community who had taken part in the telephone interviews. This meeting provided an opportunity for the young people to present their research findings to local leaders. The young people shared their experiences and ideas for working together to begin to explore how things could be improved for young people in the local area.

Using ONS area classification, we chose five sites which were all different from one another. The sites were chosen to explore urban and rural experiences, and to hear from young people growing up in an ethnically diverse area. One site was chosen in each of northern England, southern England, Scotland, Wales and Northern Ireland. The sites were not intended to be fully representative of the UK. Instead, the aim was to generate qualitative information about how places shaped young people's lives and their transition to adulthood from a sufficiently diverse range of perspectives.

Site visit findings

The site visits generated rich qualitative data, and a number of common themes emerged relating to young people's capacity to build the four assets and translate them into the building blocks on transition to adulthood. Some themes emerged repeatedly and consistently across the five locations, indicating that they were evidence of a wider problem, or issues likely to be felt by young people in many more areas of the UK. They were the power of place, a changing support system, education and employment, youth services, and transport.

The young people we met were proud of their home towns and strongly identified with them. This echoes other research with children and young people which has shown that place, identity and wellbeing are often closely connected (Jack, 2008). Yet, they were all too aware that their life chances were determined by both the community and economy of these places.

Discussion

There is a growing literature of involving young people in health research. However, it is still relatively unusual to start with the views of young people to frame the research, and to maintain their involvement as peer researchers, through to the policy stage. In involving young people in the inquiry, we found that our approach enabled us to achieve meaningful engagement with young people and gave confidence about the validity of the findings and recommendations.

In the engagement work, we found using WhatsApp for the reference panel worked well as a platform that young people felt comfortable with using to talk among their peers. The half-day workshops generated useful data. Together, these two phases led to the identification of the four assets which young people felt necessary for a successful transition to adulthood.

Using these assets as the basis for reviewing the literature highlighted how much academic research uses frameworks that do not reflect the actual experience and perspectives of young people. For example, promoting resilience in young people has been discussed as a public health approach, but the assets did not map neatly onto the concept (Institute of Health Equity, 2014). The analysis of Next Steps data illustrated the challenge of finding a way to apply a model generated through young people's engagement to a pre-existing dataset which has tended to focus more narrowly on questions about education and employment. In the longitudinal data and elsewhere, we found there was relatively little information about other aspects of young people's lives, particularly emotional and financial support. Finding variables that reflected the assets developed through the engagement of young people and then reducing them to a single, composite, binary variable for each asset involved much discussion, and sometimes felt awkward. Concepts such as 'the right skills and qualifications' were difficult to operationalise – much existing research looks at levels of qualification, not whether they are right for a young person in a particular situation or context.

In the site visits, young people engaged with their peers in spaces they felt at ease in, such as youth centres, and felt supported to present their findings with confidence to system leaders in their local areas. Young people were able to articulate their experiences and engage with the themes of the inquiry.

The themes which emerged from the engagement work and the site visits informed the policy phase of the inquiry. The young people we engaged with during the site visits as peer researchers are now members of a young person's reference group. Three to four attended each of the policy stakeholder roundtables, and there have also been three young people's workshops on a selection of topics, alongside engaging with the topics virtually. We have continued involving the young person's reference group in later phases of the inquiry which developed recommendations for action.

Not only did this approach add value and quality to the inquiry but when young peer researchers were asked to reflect on their experiences, they responded enthusiastically:

> 'The young people's inquiry seemed a little surreal when I first became involved. A project that might be able to help my community to address the dire circumstances and obtain the help it desperately needs. I could potentially help to change my community for the better, so that I would be proud of an environment in which to raise my children. The impact of young people's opinions was valuable information that I am pleased The Health Foundation was able to recognise. All these influential people taking time to come and see our area was fantastic. The response was that as a peer researcher, I felt what I was doing was important and I felt hopeful that maybe in the future my own hardship may change for the better.' (peer researcher)

Young people felt empowered and that their work would make a difference to other young people in the places they lived (in the site visits). From our point of view, having young people in the room always made for a richer discussion and gave weight and value to the inquiry's conclusions, highlighting the importance of place, youth services and affordable transport in providing opportunities for young people to live healthy lives.

There was always a challenge in getting a good cross-section of young people together. Young people took part in the inquiry for different reasons, but their enthusiasm and commitment indicate that the themes resonated with them personally.

Conclusion and recommendations to others using a similar approach

The work of the inquiry was important because it showed that young people (or any of the 'public' in the patient and public involvement and engagement model) do not think in the boxes that researchers think in. Young people's lived experience did not map neatly onto existing literature and data sets. The method needs to be open enough to capture their perspective, and nimble enough to be able to operationalise it. Using this approach will raise many challenges and questions, but it gave us greater confidence about the validity of findings and recommendations.

The absence of variables in the Next Steps survey data which map adequately to the asset categories identified in the engagement exercise indicates that the questions tend to be focused on the topics of interest to decision-makers, and may miss the questions that young people themselves consider important. This raises questions about whether there should be more public engagement in the construction of surveys to ensure that there are questions reflecting the priorities of young people, or other relevant 'publics'.

For others considering these methods, we would highlight the importance of place as a significant determinant of health, as a locus of action on health, and the value of building it in to your project. It provides a very helpful way in which to triangulate and test ideas and emerging themes, as well providing useful local contextual information. As well as getting young people's perspectives on their local context, it is also helpful to get a view from the people working in those contexts. For example, young people may know that a youth service has closed down, but they may not know why this has happened.

We are conscious that this kind of approach takes time and resources, staff and financial, which are often limited. The Health Foundation is fortunate to have had both in order to undertake the inquiry.

References

Brady, L-M. and Graham B. (2018). Social research with children and young people: a practical guide. Social Research Association Shorts. Policy Press: Bristol.

Centre for Longitudinal Studies. (ongoing). Next Steps. Available at: https://cls.ucl.ac.uk/cls-studies/next-steps/ [Accessed 12 September 2020].

Hagell, A., Shah, R., Viner, R., McGowan, J., Hargreaves, D. and Heys, M. (2019b). How many young people are accruing the assets they need for a healthy transition into adulthood? Young people's future health inquiry quantitative analyses. Health Foundation and Association for Young People's Health. Available at: https://www.health.org.uk/publications/how-many-young-people-are-accruing-the-assets-they-need-for-a-healthy-transition-into [Accessed 13 April 2020].

Hagell, A., Shah, R., Viner, R., Hargreaves, D., Heys, M. and McGowan, J. (2019a). Young people's suggestions for the assets needed in the transition to adulthood: mapping the research evidence. Health Foundation and Association for Young People's Health. Available at: https://www.health.org.uk/publications/young-peoples-suggestions-for-the-assets-needed-in-the-transition-to-adulthood [Accessed 12 September 2020].

Institute of Health Equity. (2014). Local action on inequalities: building young people's resilience in schools. London: University College London. Available at: http://www.instituteofhealthequity.org/resources-reports/building-children-and-young-peoples-resilience-in-schools/evidence-review-2-building-childrens-and-young-peoples-resilience-in-schools.pdf [Accessed 12 September 2020].

Jack, G. (2008). The significance of place attachments for children's well-being. British Journal of Social Work. Oxford: Oxford University Press.

Kane, M. and Bibby, J. (2018). Listening to our future: early findings from the Health Foundation's young people's future health inquiry. Health Foundation. Available at: www.health.org.uk/publications/listening-to-our-future [Accessed 13 April 2020].

Kirby, P. (2004). A guide to actively involving young people in research: for researchers, research commissioners, and managers. INVOLVE. Available at: https://www.invo.org.uk/wp-content/uploads/2012/01/InvolvingYoungPeople2004.pdf [Accessed 12 September 2020].

Marmot, M., Allen, J., Goldblatt, P., Boyce, T., McNeish, D. and Grady, M. (2010). Fair Society, Healthy Lives: The Marmot Review. London.

NIHR. (2019). National standards for public involvement. NIHR. Available at: https://www.invo.org.uk/wp-content/uploads/2019/11/UK-standards-for-public-involvement-v6.pdf [Accessed 12 September 2020].

Selbie, D, (2013). Quoted in the Lancet April 06, 2013. Available at: https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)60787-4/fulltext [Accessed 13 April 2020].

Tisdall, K., Davis, J.M. and Gallagher, M. (2008). Researching with children and young people: research design, methods and analysis. Sage: London.

UN Convention on the Rights of the Child (UNCRC). (1989). Convention on the Rights of the Child. Office of the United Nations High Commissioner for Human Rights. Geneva: United Nations. Available at: https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx [Accessed 12 September 2020].

Advantages and disadvantages of reciprocal peer-to-peer interviewing

Sophie Payne-Gifford, University of Hertfordshire; Rebecca Brueton, ex-Parenting Science Gang; Gemma Hamilton, Breastfeeding Network; Tessa Clark, self-employed nurse and IBCLC; Yan-Shing Chang, King's College London: The Parenting Science Gang Collective

Trigger warning

Sudden Infant Death Syndrome, although general discussion rather than a specific case.

Acknowledgements

Abstract

The advantages and disadvantages of reciprocal peer-to-peer interviewing as a data collection approach are presented in this paper. Reciprocal peer-to-peer interviewing is a research technique where participants interview each other rather than a member of a research team. Reciprocal peer-to-peer interviewing was undertaken in a small qualitative study between healthcare practitioners to reflect on whether, and how, their breastfeeding experiences had influenced their professional practice. Four pairs of healthcare practitioners were recruited from an online Parenting Science Gang group. They interviewed each other via online teleconferencing which also recorded the interviews. The interviews were analysed by volunteers from the same sub-group. Benefits of the technique included: ease of building rapport and finding common ground; open discussion of difficult topics; and freeing up research organiser time. Disadvantages were: difficulties clarifying unclear interview content; an inability to redirect the interview if it goes off-topic; and unawareness of technology failure. Social researchers are advised to weigh up the benefits of the technique against the risks, and possibly adapt the method.

Introduction

Parenting Science Gang (PSG), a largely Facebook-based, parent-led citizen science project funded by Wellcome was set up in 2017 for parents to pose research questions, design research studies in conjunction with established academics and act as volunteer analysts (Collins et al, 2020; PSG, 2019). A PSG 'Breastfeeding and Healthcare Experiences' sub-group (PSG BF HCE) was convened by the core-funded PSG team to address the group members' perception of a lack of breastfeeding knowledge amongst healthcare practitioners, an issue confirmed by the World Breastfeeding Trends Initiative (WBTI, 2016) and in the academic literature (see for example (Radzyminski and Callister, 2015).

There were 430 members across the UK in the PSG BF HCE sub-group which included healthcare practitioners, breastfeeding mothers who felt they had received subpar advice from a healthcare practitioner, as well as generally science-literate breastfeeding mothers. The group designed a small qualitative study to investigate healthcare practitioners' own experiences of breastfeeding and whether this influenced their professional practice. This paper presents the advantages and disadvantages of using the method of reciprocal peer-to-peer semi-structured interviews as recommended by Porter et al (2009).

Methods

Reciprocal peer-to-peer interviews involve research participants being interviewed by each other, rather than by a researcher. This method was used because of a desire to involve PSG members in the research process. In this study, it also allowed volunteers of the PSG HCE group to experience being interviewer **and** interviewee, and enabled research participants to freely share experiences as healthcare professionals and mothers. Eight healthcare practitioners were recruited from the Parenting Science Gang sub-group to reflect on their healthcare practice prior to having breastfed children, and any change they noticed afterwards. The range of healthcare practitioners included in the study is in Table 1.

Table 1: Peer-to-peer interview pairs

Healthcare Practitioner	Pseudonym		Healthcare practitioner	Pseudonym
A&E nurse	Jo		Urgent care nurse	Lisa
Paediatric nurse	Martha	Interviewed	Midwife	Sarah
Paediatrician	Erica		Health visitor	Hannah
Dentist	Patricia		General practitioner	Julie

Each pair was matched based on similarity of their healthcare experiences: Jo and Lisa had nursing experience; Martha and Sarah had neonatal experience; Erica and Hannah had paediatric experience; and Patricia and Julie both had experience in NHS dental and medical practice. They interviewed each other one at a time rather than taking turns for each question. They used an interview guide developed by the PSG group. Each participant had been sent an interview guide by email by the core PSG member, RB[5]. The topics included in the interview guide were: introductions, career in the healthcare sector, breastfeeding experiences, the extent to which healthcare training prepared participants for breastfeeding; and whether/how breastfeeding had influenced their professional practice. Participants mostly discussed the topics of breastfeeding, healthcare practice and infant parenting. Each interview lasted between 20 and 45 minutes with each dyad spending between 45 and 90 minutes total in conversation.

Peer participants were healthcare practitioners, and had received some research methods and communication training as part of their healthcare practitioner training. They did not know each other prior to the interview, although may have 'met' each other online in the PSG groups. All participants were interested in healthcare, breastfeeding, Facebook and citizen science, as evidenced by their membership of the PSG group.

[5] RB refers to co-author Rebecca Brueton.

The project received ethical approval from the University of York, which collaborated on the wider PSG project. To maintain the anonymity of participants from the analysts, RB, the core member of the PSG team, arranged the interviews and their transcription and provided anonymised transcripts to the analysts who were members of the PSG sub-group. Interviews were conducted remotely over the internet using teleconferencing software and recorded using the same program. The use of technology enabled interviews to overcome the barrier of physical distance between participants. RB 'called' the paired participants over the teleconferencing software; established that both participants were ready to start their interview; and left the two participants to interview each other. A researcher did not listen in or participate in the interview.

Recorded interviews were transcribed by an agency which signed a confidentiality and anonymity agreement. The transcripts were shared electronically with three volunteer analysts from the PSG BF HE sub-group: TC[6], a lactation consultant and formerly a nurse; GH[7], a breastfeeding peer support coordinator; and SPG[8], an early career social scientist (although not in healthcare). RB, the core PSG member, acted as a fourth analyst. After receipt of the transcripts, the volunteer analysts were trained by Y-SC[9] on conducting qualitative analysis using Braun and Clarke's (2006) approach to thematic analysis – or what stories were shared across the interviews – by identifying 'codes'. Codes are single words or short phrases applied to a longer stretch of text (or images if doing visual analysis) to capture the essence of the data (Saldaña, 2013).

The four analysts coded the same first transcript independently, and discussed it to develop a draft coding scheme, or code book (Saldaña, 2013), to guide coding the other transcripts. The codes, with examples of each code, were logged on to a Google spreadsheet accessible by the four analysts. Two analysts, SPG and GH, applied the coding scheme independently of each other to all eight interviews. One analyst, SPG, integrated and refined the codes applied to all eight transcripts, and conducted a secondary stage of analysis to ensure codes were being applied consistently across the interviews. Codes were then grouped into themes, discussed and agreed by all analysts, with Y-SC's guidance throughout the process (see Table 2).

Table 2: Project responsibilities

Designing interviews	Ethical approval	Arranging interviews	Transcribing interviews	Analysis training	Developing code book	Full coding	Themes	First draft	Final paper
PSG group	RB University of York	RB	Professional transcriber	Y-SC	SPG RB GH TC	SPG GH	SPG RB GH TC Y-SC	SPG	SPG RB GH TC Y-SC

Data analysis was conducted manually: printing out the interviews, marking them up with codes, entering codes and excerpts into the Google spreadsheet, printing out the spreadsheet, cutting it up and rearranging it so that codes with similarities were grouped together under themes. For example, individual mentions of baby sleep (or lack of) and bed-sharing (where the infant and mother sleep in the same bed) were grouped together to form a theme on infant sleep.

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[6] TC refers to co-author Tessa Clark.

[7] GH refers to co-author Gemma Hamilton.

[8] SPG refers to co-author Sophie Payne-Gifford.

[9] Y-SC refers to co-author Yan-Shin Chang.

As this paper seeks to discuss the advantages and disadvantages of reciprocal peer-to-peer interviewing, analysis of the interview data is not discussed further in this paper. However, it was through the process of analysing the interview transcripts that advantages and disadvantages of the technique became apparent. Benefits of peer-to-peer interviewing included: rapport and common ground; open discussion of difficult topics; and freeing up research organiser time. Disadvantages included: difficulties clarifying unclear interview content; difficulty redirecting the interview; and unawareness of technology failure.

Advantages

Rapport and common ground

The method of reciprocal peer-to-peer interviewing was suggested as a way for participants to be comfortable and forthcoming, or, in other words, to make it easy to develop rapport, a key skill a social researcher needs. Where rapport ends and common ground begins is difficult to ascertain as the latter breeds the former. In the following excerpt, Lisa, the Urgent Care nurse, recounted a brief spell of training and working as a health visitor,[10] which she hadn't enjoyed. Jo, the A&E nurse, verbally confirmed she understood Lisa's experience:

> **Lisa**: '...[T]hen I had a sort of blip in between [nursing jobs] where I went to do my health visitor training. (Laughter). Yeah. Thinking that would be good because it wasn't shift work and I could like get to see babies and talk about breastfeeding.'
>
> **Jo**: 'Yay!'
>
> **Lisa**: 'But I, but, actually, I ended up really hating it, so I did that for (laughter) five months and then I took my Urgent Care job which is the same: no nights and just long days. So, yeah. The same. Much better...'
>
> **Jo**: 'That does sound really similar because I had a leaflet through years ago about being a health visitor, I think after my first, and I was like, Ooh, I could be a health visitor and just talk to "crunchy" mums like me about breastfeeding and it would be awesome and then I thought, No, because I might be really judgemental about people that are completely different to me.' (Laughs)"
>
> **Lisa**: 'Yeah. Anyway. Shall we get on to your interview start?'
>
> **Jo**: 'Yeah.'
>
> [A&E nurse and Urgent Care nurse, quoted with permission]

The above interaction, recounting a difficult period in Lisa's healthcare career, occurred about three to five minutes in, based on the transcribers' time signatures. In it, we can see Jo recounting when she briefly considered working as health visitor, and concluding that she would not enjoy it because it would **not** involve discussing breastfeeding which Lisa confirmed was the case.

This exchange occurred before the more formal interview started. The other interviews showed rapport and common ground developing early and did not suggest uncomfortable silences or short, terse responses. The text of the transcripts shows long, flowing answers from all participants with none indicating a reluctance to answer. One of the participants, feeding back on the interview process, commented that they found this style of interviewing 'easy' and a relief not to have to explain breastfeeding culture or healthcare employment norms to the other person. She had also previously participated in traditional researcher-led interviews which she described as 'jolty'.

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[10]Health visitors specialise in 'well child' assessment of infants (and children up to five years). They are usually based in the community and at community centres and are involved in baby weigh-ins and advising on infant feeding.

Open discussion of difficult topics

The 'baby sleep' theme mentioned above is an example of participants discussing a topic they might not have otherwise discussed as comfortably without establishing rapport and common ground. The fact that baby sleep schedules do not meet modern expectations is not the difficult topic: it is bed-sharing that may be difficult for interviewees to discuss.

Bed-sharing is not formally recommended by the NHS because there is a link to Sudden Infant Death Syndrome (NHS, 2018) although the risk has recently been downgraded by the National Institute for Health and Care Excellence (NICE, 2014). However, the statistics and recommendations on bed-sharing gloss over the difficulty of staying awake in the middle of the night while breastfeeding, and ignore the high prevalence of parents who report sleeping with their infants (Blair and Ball, 2004) as well as including infant deaths when sleeping occurred on a sofa or an armchair. UNICEF and breastfeeding advocacy groups such as La Leche League provide guidelines for breastfeeding families on how to safely bed-share (LLL GB, 2017; UNICEF, 2019).

With this background, when the focus of the interviews was about breastfeeding, four of the eight participants discussed bed-sharing. Jo and Lisa discussed bed-sharing, and the fact that they had hidden this from their non-breastfeeding healthcare colleagues. Although comfortable in their decision to bed-share, they worried that it would undermine their credibility as healthcare practitioners because their colleagues might think, 'She's not a safe health visitor, she can't see people because she co-sleeps' [interview excerpt, Jo, A&E nurse, quoted with permission].

Patricia, a dentist, discussed with Julie, a GP, accidentally falling asleep while breastfeeding and later choosing to purposefully bed-share as a solution:

> **Patricia**: '[At] about seven months, after I'd been back to work for about a month – the exhaustion, the sheer exhaustion.…I reached breaking point and brought [my daughter] into bed with me, because I'd fallen asleep nursing her far too many times, sitting up, and I was worried about suffocating her. And I researched co-sleeping, and I've never looked back. And then, with my son, I think it was about day four, and I just thought, Oh, frigg this, I need sleep.'
>
> **Julie**: 'That sounds very, very similar to my experiences, first and second child…[A]s a breastfeeding mum, I – I sort of feel that, bed-sharing really is the only thing that's survived [sic] me from severe exhaustion, both times through. So, [in a] way I think I feel I would discuss more with patients now, having been a breastfeeding mum, about safe sleeping and the UNICEF guidelines that came out last year.'
>
> [Dentist in conversation with GP, quoted with permission]

It is possible they would not have discussed this topic with an interviewer who was not a healthcare practitioner with similar parenting experiences and who they did not trust.

Freeing up research organiser time

As mentioned in methods above, the core member of the PSG team 'called' the two paired participants in a teleconferencing call: put themselves on mute; and left the participants to talk. In other words, a researcher did not participate in the interview. This freed up the research organiser to do other tasks. However, freeing up research organiser time is also a risk, as discussed in the next section.

Disadvantages

The approach of keeping the analysts separate from the participants and the research organiser resulted in some disadvantages with using reciprocal peer-to-peer interviews.

Difficulties in clarifying interview content

In a standard interview with a researcher and interviewee, the researcher may spend most of their time actively listening to the interviewee, but they will find an opportunity to clarify what they do not understand. However, as the interview pairs were healthcare practitioners, they understood the healthcare context, policy and guidelines, and talked in a way that was understandable to each other. This resulted in some conversations that might not be easily understood by someone who does not share the same healthcare background, particularly analyst SPG. In the following excerpt, Martha, a paediatric nurse, recounts breaking hospital policy. Martha did not specify which policy, and Sarah, a midwife, did not need this clarified as she was familiar with treatment protocols in neonatal units:

> **Martha**: '...I struggled, I struggled a bit with um ... the emotional side, a bit, and seeing [babies] under lights, and, oh, and when the baby's screaming and the mum's sitting in the bed crying, and I'm like, woah... I would, you know, I, I broke, I broke policies quite a few times... you know I'd scoop the baby up and put it on mum's chest and then put the billi blanket on top of the baby, and then be like, "You just have a cuddle." (laughs) You know, you can put him back in five minutes. Because, it feels like the place is very anti-breastfeeding. A breastfed baby can't lie there for three hours, between feeds, it's just not going to happen. It's ridiculous.'
>
> **Sarah**: (laughs)
>
> Martha: 'Like the policies in the unit, and this was a new unit as well, it was a transitional care unit, they just really didn't seem to work. So, I really struggled…'
>
> **Sarah**: 'I think I would have too.'
>
> [Paediatric nurse in conversation with midwife, quoted with permission]

Martha made it clear that she had broken hospital policy because it was not compatible with breastfeeding. But if you are not a healthcare practitioner, it is not clear what policy she broke. What's more, Sarah, the midwife, did not ask a follow-up question to clarify what policy had been broken, suggesting she understood the situation to which Martha referred.

Due to the interdisciplinary nature of the team of analysts, SPG was able to ask TC, a healthcare practitioner, to explain what policy this excerpt referred to. It refers to the neonatal treatment protocol for babies developing jaundice shortly after birth. The treatment is to put the jaundiced baby under UV lights to break down the birubilin in their blood and to pick them up only every three hours to feed them, even if the baby cries before the three hours is over. A 'billi blanket' gives a lower dose of UV light but can be used on a baby being held by a care-giver. So Martha told Sarah she found it too upsetting to watch babies and mothers cry, and that developing a bond and nursing regularly to establish breastfeeding was also beneficial for a baby **in addition to** UV treatment. This is also an example of a difficult topic that the interviewee might not have discussed with an interviewer who was not a sympathetic, breastfeeding-supportive researcher.

There are a number of ways to mitigate not being able to immediately clarify the interview content: the first is to train participants in interview technique and briefing them to be aware of jargon and technical terms. However, peers interviewing peers might not be aware that they are discussing insider knowledge. Secondly, having healthcare professionals as advisers in the data analysis process ensures that support is available to clarify terms/topics for analysts who are not healthcare professionals. Thirdly, 'fact-checking' with participants after interviews can also clarify interview content.

Redirecting the interview

More serious than not being able to clarify a point, is that the peer interviewer might not redirect the interview if it goes off-topic which can happen in a semi-structured interview. Indeed, Jo and Lisa, above, did go off on a tangent about using the correct names for genitals, including reference to octogenarian actress Betty White's infamous quote about male and female genitalia. They also discussed a humorous incident trying to explain to French authorities what breast pump equipment is for.

Luckily, these were the only examples of interviewees going substantially off-topic. Although the other interviewees did discuss infant behaviour, this was roughly related to being a healthcare practitioner treating breastfeeding mothers, as this topic often came up.

Unawareness of technology failure

A section of one audio recording failed but this was not noticed at the time. It was evident to the analysts only when they received the transcript of 11 pages instead of 20/30. If one of the project team had been listening in on the peer-to-peer interview, they would have taken notes on the content of the conversation. This can happen if an interviewee consents to the interview but declines audio recording (Payne-Gifford, 2016). Of course, having one of the research team on the call, might defeat the purpose of the method.

Lessons for social researchers

Although the above discussion identified some limitations of this approach to interviewing, it is still a useful technique when interviewees might be uncomfortable with, or suspicious of, researchers. Even though the interview is recorded, not having a person perceived as an authority figure present might be a benefit to research with teenagers or prisoners or wherever the presence of the interviewer might inhibit the interaction. Peer-to-peer interviewing might also be beneficial if you do not want age, socio-economic status or gender influencing the interview dynamic.

Reciprocal peer-to-peer interviewing might also be useful for research with those who do not engage well with research or who are otherwise sceptical of scientists, for example, people opposed to vaccination programmes. Parents opposed to vaccination might be more willing to discuss their decisions or their worries about the science of vaccination with a sympathetic parent rather than a researcher whose beliefs they have not identified. Of course, this raises the issue about the interviewer being **too** close to the interviewee. Apart from not clarifying interview content, interviewers who identify and resonate with interviewees' views and experiences may find it more difficult to ask challenging questions. In the example of vaccination, if peer interviewers agree with not having their children vaccinated, it may be difficult to challenge their decisions as being against Public Health England's advice and putting their child at risk in the longer term.

This risk, of being too close to the interviewee, can be managed by using peer-to-peer interviewing in conjunction with multiple stages of data collection or other methods. Anonymised interview data could inform subsequent interviews not led by peers as well as focus group discussions. Focus group discussions, which can be facilitated by peers and/or researchers, could be compared with findings from reciprocal peer-to-peer interviews to identify similarities and differences in findings. Peer-to-peer interviewing can also be used in conjunction with surveys to complement and enrich quantitative survey data.

Conclusions

Advantages and disadvantages of reciprocal peer-to-peer interviewing have been highlighted and illustrated from a citizen science project in this paper. Benefits of reciprocal peer-to-peer interviewing included developing rapport through common ground, discussing difficult topics, and freeing up researcher time. Disadvantages of reciprocal peer-to-peer interviewing included difficulty in clarifying vague interview content, an inability to redirect the interview if it goes off-topic, and not being able to reconstruct an interview if the recording fails. It might be possible to reduce the risks of this approach by having a researcher participate discretely in the interview, either by listening in/taking notes on a conference call and occasionally interjecting or by sitting in on face-to-face interviews. However, this may negate the benefits of the method.

Social researchers are advised to train peer interviewers, mitigate against the risks outlined above and make the most of the benefits from the approach. Project analysts, if not interviewers themselves, should ensure interview content can be understood by all readers of the subsequent report regardless of their backgrounds by reading through the transcripts thoroughly and seeking clarification from participants. 'Respondent checking' following analysis can also be used to ensure that interpretations by analysts reflect participants' experiences.

References

Blair, P. S. and Ball, H. L. (2004). 'The prevalence and characteristics associated with parent-infant bed-sharing in England'. Archives of Disease in Childhood, 89(12): 1106–1110.

Braun, V. and Clarke, V. (2006). 'Using thematic analysis in psychology'. Qualitative Research in Psychology. Routledge, 3(2): 77–101.

Collins, S., Brueton, R., Graham, T.G., Organ, S., Strother, A., West, S.E. and Mckendree, J. (2020). 'Parenting Science Gang: radical co-creation of research projects led by parents of young children'. Research Involvement and Engagement, 6(9).

La Leche League GB (LLL). (2017). Safer sleep & the breastfed baby. Available at: **https://www.laleche.org.uk/safe-sleep-the-breastfed-baby/#safe%0D** [Accessed 18 February 2020].

National Institute for Health and Care Excellence (NICE). (2014). Addendum to clinical guideline 37, postnatal care. Routine postnatal care of women and their babies. Available at: **http://www.nice.org.uk/guidance/cg37/evidence/cg37-postnatal-care-full-guideline-addendum2** [Accessed 18 February 2020].

NHS. (2018). Reduce the risk of sudden infant death syndrome (SIDS): Your pregnancy and baby guide. Available at: **https://www.nhs.uk/conditions/pregnancy-and-baby/reducing-risk-cot-death/** [Accessed 18 February 2020].

Parenting Science Gang (PSG). (2019). PSG evaluation report. Available at: **http://parentingsciencegang.org.uk/wp-content/uploads/2019/05/Parenting-Science-Gang-Evaluation-Report.pdf** [Accessed 16 March 2020].

Payne-Gifford, S. (2016). Making space for change? Following EC regulation 1107/2009 'Placing plant protection products on the market' into a system of agricultural innovation. PhD thesis. University of Reading.

Porter, E., Neysmith, S.M., Reitsma-Street, M. and Collins, S.B. (2009). 'Reciprocal peer interviewing'. International Review of Qualitative Research, 2(2): 291-312. Available at: **https://journals.sagepub.com/doi/abs/10.1525/irqr.2009.2.2.291** [Accessed 30 November 2020].

Radzyminski, S. and Callister, L. C. (2015). 'Health professionals' attitudes and beliefs about breastfeeding'. The Journal of Perinatal Education, 24(2): 102–109.

Saldaña, J. (2013). The coding manual for qualitative researchers. 2nd edition. Sage: London.

UNICEF. (2019). Caring for your baby at night: a guide for parents. pp. 1–11. Available at: **https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2018/08/Caring-for-your-baby-at-night-web.pdf** [Accessed 30 November 2020].

World Breastfeeding Trends Initiative (WBTI) (2016). UK report. Available at: **https://ukbreastfeeding.org/wbtiuk2016/** [Accessed 18 February 2020].