

Social Research Practice

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Editorial

Richard Bartholomew Editor

Among the many uncertainties surrounding Brexit is the question of how international collaborative research in the social sciences will prosper in the new environment. In a timely article, 'Towards closer disciplinary integration of international social research beyond Brexit', Linda Hantrais examines what can be learnt about the success factors for cross-national and cross-disciplinary research from over 20 years of participation by UK social scientists in EU-sponsored research programmes. She points out that many of the skills and conditions essential for international collaborative research are also those required for working between different disciplines and research cultures. Professor Hantrais provides a valuable checklist of the factors which have been crucial for the success of multi-disciplinary research collaborations.

The UK Prime Minister's Challenge on Dementia 2020 (published in 2015) argued for 'more research being conducted in, and disseminated through, care homes'. But research involving people with dementia poses many challenges. In a previous article in Issue 3 in 2017 ('Removing the "gag": involving people with dementia in research as advisors and participants') Jenni Brooks et al explored how people with dementia can be actively involved in research both as participants and advisers. In this issue Jenni and her colleagues discuss the lessons they have learnt about the institutional context for conducting research in care homes: 'Doing research in care homes: the experiences of researchers and participants'. They highlight the importance of developing, at a very early stage, a reciprocal relationship with each care home, and building the research process into the home's regular activities.

In policy circles there is invariably much pressure on analysts and researchers to try to quantify the extent of issues or the size of population groups of concern, even when the available data is very sparse. This can especially be the case for local estimates. In such circumstances should researchers simply refuse to make estimates or should they instead use systematic approaches to at least provide plausible 'ball-park' figures whilst making clear the uncertainties surrounding the numbers? Views will differ on this. The Delphi method, using a systematic and iterative process with a panel of informed experts, offers one possible approach for trying to quantify the otherwise unquantifiable. In 'Consulting the oracle: using the Delphi method in research with undocumented migrant children', Andrew Jolly dicusses how this method was used to provide a more refined local estimate of the numbers of undocumented migrant children in Birmingham.

Longitudinal cohort studies are a powerful tool for understanding social change at the level of the individual but suffer problems of attrition over time, particularly if there are long gaps between each sweep of the survey. On the other hand, very frequent sweeps of the same individuals are expensive and can exhaust the patience of respondents. In his research note: 'How often should we collect data for longitudinal studies?', Joel Williams describes a 'natural' experiment using the British Household Panel Study/Understanding Society to estimate how rates of attrition are affected by the length of interval between survey sweeps.

We welcome proposals for new articles or shorter research notes. Our next issue will be published in January 2020. If you are interested in offering a research note or a full article please check the submission details.



Towards closer disciplinary integration of international social research beyond Brexit

Linda Hantrais, LSE and Loughborough University

Abstract

Compared to researchers in other disciplines and to social scientists in other member states, UK social researchers have benefited to a greater extent from European Union (EU) funding and from opportunities to play lead roles in developing and coordinating international collaborations and research networks. Whatever the outcome of the Brexit withdrawal negotiations, the expectation is that the future achievements of UK social scientists in the international arena will depend not only on their proven capacity to work crossnationally but also on their ability to collaborate effectively with researchers in other disciplines. They will need to adopt an integrated approach to the design and delivery of high-quality, high-value research across disciplines and sectors. Drawing on examples of successful multi-disciplinary research collaborations, this paper shows how research that bridges different disciplines creates similar challenges to those faced in projects across national and cultural boundaries, requiring many of the same strategies to overcome them.

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Introduction

Evidence assembled in a study carried out when the UK public voted by a narrow majority in the 2016 referendum to leave the EU suggested that UK social scientists had benefited more from the EU funding and capacity building opportunities provided by EU framework programmes than UK researchers in other disciplines and social scientists in other EU member states (Hantrais and Thomas Lenihan, 2016).

This article reviews the contribution of UK social scientists to EU research programmes from the mid-1990s, when they were assigned a role as the junior partner in collaborations with the 'natural' sciences, into the 2000s when they took full advantage of having their own socio-economic funding stream (see Appendix 1 for information about EU funding programmes). The Horizon 2020 (2013-20) and Horizon Europe (2021-27) programmes increasingly emphasised the importance of adopting an integrated approach to research as well as the need to demonstrate economic, social and cultural impact. This shift in focus came at the same time as the UK government was also promoting an integrated approach to projects within the framework of UK Research and Innovation (UKRI) (HM Government, 2016b).



According to Jo Johnson (2017), the Minister of State for Universities and Science in the Cameron government, UKRI was designed to focus on 'cross-cutting issues that are outside the core remits of the current funding bodies, such as multi- and inter-disciplinary research, enabling [UK Higher Education] to respond rapidly and effectively to current and future challenges'. When UKRI incorporated the UK's six research councils in 2018, a stated aim was to increase 'integrative cross-disciplinary research (UKRI, 2018)', reflecting the European Commission's strategic goal for the sciences.

This article examines the implications of closer disciplinary research integration for UK social sciences. Drawing on good practice examples of collaborations across countries, disciplines and sectors at both national and international levels, similarities are identified in the skills and expertise acquired from coordinating and participating in international collaborative research. Suggestions are made for honing these approaches to assist social researchers who work across disciplinary and sectoral boundaries in overcoming the additional challenges they face when bringing about the integration of different types of methods and data in a post-Brexit environment.

UK participation in EU research programmes

Between 2007 and 2018, UK researchers across the disciplines were reportedly drawing more funding from the EU budget than they were contributing (Royal Society, 2015, p.12; European Commission, 2019). Analysis of data for the EU's Horizon 2020 programme (FP8) in 2018 showed that, in relation to other EU member states, higher education (HE) institutions in the UK accounted for a significant proportion both of EU28 participants across the sector and of total funding distributed. As shown in Table 1, researchers in UK HE recorded almost a fifth of EU28 participations and of funding awarded for individual excellence across all disciplines, due to their relatively large share of European Research Council (ERC) grants and Marie-Skłodowska-Curie actions (MSCA). Analysis of the award holders hosted by UK universities in the ten years of operation of the ERC demonstrated that the UK had become a particularly attractive location in which to conduct internationally recognised excellent research (ERC, 2018). Compared to ERC and MSCA awards, however, the UK recorded a relatively small share of participants and funding under the Horizon 2020 Societal Challenges (SCs), the flagged thematic pillar identified for targeted social science and humanities (SSH) participation.

Table 1: Horizon 2020 UK participation and funding in 2018 (as % across EU28)

Туре	Participants	Ranking	Funding	Ranking
Higher education (HE)	24.5	1	27.4	1
Research organisations	3.6	7	3.9	7
Public bodies	11.9	1	19.9	1
Private for-profit entities	10.4	5	10.3	5
Excellent Science	18.4		19.4	
European Research Council (ERC)	20.4	1	20.5	1
Marie-Skłodowska-Curie Actions (MSCA)	20.1	1	19.9	1
Societal Challenges (SCs)	9.9	3	12.4	
Industrial Leadership (LEIT)	8.9	7	9.7	

Sources: author's compilation based on data from HM Government (BEIS), 2018, tables 1.2, 1.3; and European Commission, 2018a.



The UK scientific community used evidence about the benefits of EU collaborations across countries and disciplines to make a powerful case for continuing support from the UK Government even in the event of a no-deal Brexit scenario and of the UK becoming a third country (House of Lords, 2016). The Government responded by issuing an underwrite guarantee for projects that were successful in securing funding from EU programmes through to the end of 2020 (HM Government, 2016a), and by committing to maintain as strong a European science and innovation partnership as possible (HM Government, 2017). However, a technical notice acknowledged that the guarantee would not cover ERC grants or MSCAs since these programmes were not open to third-country participation.

It has been argued that associated, 'neighbouring' or pre-accession status, which entitles countries including Iceland, Israel, Norway, Serbia and Switzerland to receive grants under the various EU programmes, would give UK researchers the best chance of retaining funding and leadership opportunities from outside the EU (House of Lords, 2016, pp.64–6; House of Lords, 2019, pp.28, 33). Admittedly, associated-country status would not afford the UK all the advantages of being a full EU member state. Associated countries pay into the framework programmes and may attempt to influence the shape and substance of programmes during the consultative phase, but they have no formal role in deciding (i.e. voting on) content or direction.

UK social science participation in EU programmes

The vote to leave the European Union after more than 40 years of membership – during which UK social scientists had made a substantial contribution to EU social research and policy – came when the proportion of EU funding for UK social sciences had been increasing, whereas UK government and research council funding had been declining. Unlike the life sciences, the social sciences received relatively little funding support from charities to compensate for their limited share of government funding (Hantrais and Thomas Lenihan, 2016). The available trend data demonstrated that the volume of EU funding received by UK social scientists began rising in the 1990s with the introduction of a dedicated funding stream for Targeted Socio-Economic Research (TSER) under FP4 (1994–98). FP5 to FP7 (1998–2013) enabled UK social scientists to consolidate their international collaborative research under their own funding stream.

Opportunities were also provided in FP4 for social scientists to be involved in 'coordination activities'. They could contribute to the analysis of the economic and social implications of projects conducted by researchers in the natural sciences in targeted areas such as sustainable development, food production and transport, which continued to be thematic topics in Horizon 2020 (see Appendix 2 for information about relevant thematic content in EU programmes and instruments). However, the entrenched divide between the natural and social sciences prevented them from taking advantage of the opportunities afforded by the programme.

The relatively poor performance of the UK in the pillar devoted to Societal Challenges in Horizon 2020 reflected the continuing difficulty of integrating the social sciences across the EU. Of the 260 projects funded under SSH-flagged topics, in 2014 only 72 (28%) were coordinated by SSH partners (Hetel et al, 2015, p.13). The proportion had increased slightly by 2017, when 70 out of 229 projects (31%) were led by SSH coordinators (Kania et al, 2019, p.23). However, if projects on 'inclusive, innovative and reflective societies' (SC6) are excluded from the analysis, the proportion falls to 17% in both years, confirming the subordinate role assigned to SSH in interdisciplinary projects, and the enduring depiction of social sciences as a 'handmaiden' to the natural sciences (Gilbert, 2016).

The commission's monitoring reports also showed that, in 2014 under SC1 to SC5 (see Appendix 2 for full topic areas), economics, business and marketing represented by far the largest cluster of projects for SSH disciplines (58%), followed by political science, public administration and law in SC6 and SC7 (38%). The humanities and the arts contributed 3% of projects under SC6 and formed the largest cluster



for projects under the stream for Leadership in Enabling and Industrial Technologies – Information and Communication Technologies (LEIT-ICT). In 2017, economics constituted 31% of the total number of SSH disciplines, while political science and public administration accounted for 28%. Education, communication (12%) and sociology (9%) were considered to be fairly well integrated in statistical terms, whereas history, demography, geography, anthropology and ethnology, essentially humanities disciplines (each with between 1% and 5%), were poorly represented.

The monitoring reports demonstrated that, in the early years of the H2020 programme, the UK had been more successful than other member states in obtaining funding for projects with SSH participants in a number of areas, as indicated in Table 2. The UK ranked first for participation in four of the SCs and in LEIT-ICT in 2014. By 2017, it had slipped down the ranking and was in third position for overall participation. The distribution of SSH project coordinators by country showed that, in 2014, Germany was recording the largest number of SSH-led projects with 15 (19%). The UK and the Netherlands shared second place, each with ten coordinators (13%). By 2017, Germany, Italy and the UK shared first place for the number (13) and proportion (15%) of SSH-led projects.

Table 2: UK SSH participation and ranking in Horizon 2020 Societal Challenges, 2014 and 2017

Societal challenge	No of participants		% of participants		Ranking	
	2014	2017	2014	2017	2014	2017
Total for SSH-flagged topics	146	87	16	9	1	3
SC1 Health, demography	24	12	21	13	1	2
SC2 Food security	20	9	19	10	1	4
SC3 Secure energy	11	7	11	8	2	1
SC4 Smart transport	11	3	14	3	3	6
SC5 Climate, environment	5	11	12	12	3	3
SC6 Innovative societies	43	31	14	34	1	1
SC7 Secure societies	17	6	17	7	1	3
LEIT-ICT	13	3	27	3	1	7

Sources: Hetel et al, 2015; Kania et al, 2019.

During the same period, UK SSH researchers were consistently successful in hosting ERC grant holders. Compared to the physical (around 20%) and life sciences (under 20%), UK SSH hosted almost a third of all award holders in their disciplines in the ten years (2007–17) since the creation of the ERC (2018). Despite the uncertainty since the referendum result, UK SSH were still receiving almost a third of all advanced grants (AdG) and consolidator grants (CoG) in 2018. Although the number of starting grant (StG) holders opting to be hosted by UK institutions declined between 2017 and 2018, they still accounted for 24% of all SSH awards and constituted a considerably larger proportion than for any other member state (see Figure 1).



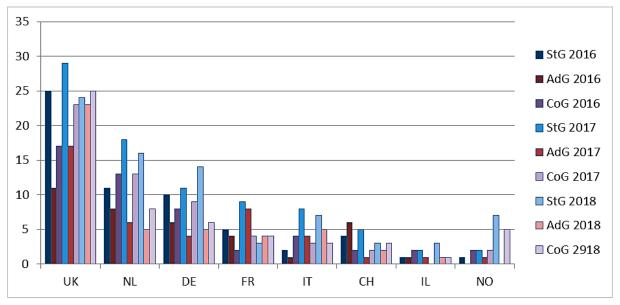


Figure 1: Numbers of SSH awards in 2016-18 by type and selected countries

Source: data collated from ERC, 2018.

The level of interdisciplinarity and the amount of impact outside the scientific domain were not primary assessment criteria for ERC awards, although 'for a large fraction of projects the research performed found recognition or applicability outside its main field (Q4) or brought together areas that previously did not have much interaction (Q5)'. The evaluators also found that interdisciplinary projects were 'more likely to lead to significant advances or breakthroughs' (European Commission, 2016, pp.4, 8; 2018b, pp.7-8, 12).

The advent of Horizon 2020 with its emphasis on disciplinary integration created challenges reminiscent of those encountered in earlier framework programmes, and similar to those foreshadowed in the UK Government's 2016 White Paper on 'Higher education: success as a knowledge economy' (HM Government, 2016b, p.6). As noted above, the social sciences lose out when they are 'embedded' in hitherto 'technical' science challenges. The experience of UK social scientists in the Horizon 2020 Societal Challenges suggests that they will need to develop further their ability to bridge disciplinary boundaries in Horizon Europe (FP9) if they are to achieve the same leading position as they did in the past for ERC awards and MSCAs. They will also need to draw on their expertise of working across cultures and disciplines if they are to fulfil their potential for 'delivering economic impact and social prosperity, and creating social and cultural impact', as aspired to in UKRI's (2018) mission statement.

Towards closer integration of SSH in EU programmes

Although the SSH continued to have 'their own proper space within FP7', the European Research Advisory Board (EURAB, 2005, p.5) – chaired by Helga Nowotny, who was to become president of the ERC in 2010 – argued for 'a much stronger and more deliberate integration of SSH into the whole scope and objectives of FP7'. The EURAB report stressed the importance of the SSH contribution not only in their own fields but also in the delivery of science and technology programmes. The complex multifaceted nature of the topics selected for the Societal Challenges meant that embedding SSH research across Horizon 2020 was essential to maximise the returns to society from investment in science and technology. Opportunities were, therefore, provided for SSH not only to collaborate closely with science, technology, engineering and mathematics (STEM) in the search for solutions to major societal challenges, but also to partner with other SSH researchers and practitioners (European Commission, 2014a).



Horizon 2020 was designed to reflect the policy priorities of the Europe 2020 strategy and to address the essentially social concerns shared by citizens in Europe and elsewhere, presented in terms that chimed well with UKRI's aims and objectives:

'A challenge-based approach will bring together resources and knowledge across different fields, technologies and disciplines, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities, such as piloting, demonstration, test-beds, and support for public procurement and market uptake.'

(European Commission, 2014b)

The conditions for successfully embedding SSH were laid down at different stages of the research process: SSH experts were to be included in the Horizon 2020 Expert Advisory Groups; they should be part of the evaluation panels for topics with SSH dimensions; and work programme topics with SSH dimensions needed to integrate fully SSH research and researchers (Hetel et al, 2015, p.7).

The annual monitoring reports on the 'Integration of Social Sciences and Humanities in Horizon 2020' tracked the progress made in integrating SSH disciplines in funded projects. They measured 'quality of integration' primarily in terms of quantitative indicators: the share of SSH partners (higher than 10%); budget allocated to them (higher than 10%); contributions signalled (in project abstracts, keywords, work programmes and deliverables); and variety of disciplines involved in the project (meaning at least two distinct SSH disciplines) (Hetel et al, 2015, p.8).

After a period of three decades during which the social sciences – and progressively the arts and humanities – had been supported by their own dedicated programme and budget line in the EU's framework programmes, frequently requiring interdisciplinary collaboration (see appendices), it was not surprising to find that 'quality of integration' was deemed to be most prevalent in SC6 (Europe in a changing world – inclusive, innovative and reflective societies) where multidisciplinarity was essentially between neighbouring SSH disciplines. In 2014 and 2017, using these criteria, 100% and 98% respectively of SC6 projects were assessed as being well integrated. Under SC3 (secure, clean and efficient energy), 56% of projects in 2017 showed no integration, compared to 30% in 2014. Overall, the proportion of projects across the SCs showing 'good' integration was found to have declined between the two dates (Hetel et al, 2015, p.16; Kania et al, 2019, p.27).

Topic areas were categorised differently for ERC awards. Data for the 2016-18 rounds indicated a preference among SSH award holders in UK HE for topics involving the study of 'institutions, values, environment and space'. A growing interest was shown in 'individuals, markets and organisations' and 'the study of the human past' (ERC, 2018).

A British Academy (2018, pp.9,10,12) Brexit briefing on 'The value of European research collaboration', representing the SSH approach, stressed the importance of inter- and cross-disciplinarity that extends 'beyond the humanities'. The examples provided of EU interdisciplinary collaborations were, however, confined primarily to combinations of the SSH disciplines required to understand the differences between legal, political, cultural, historical and social contexts. Less often, projects were cited that involved computer scientists and associated partners from civil society and cultural institutions.

The monitoring reports for EU-funded projects identified the relative lack of integration between SSH and STEM subjects as a major shortcoming of the programme, particularly in the 13 member states that had joined the EU since 2004. The 2014 report suggested ways in which improvements could be made:

'To address this issue, the topic texts of future Work Programmes need to explicitly call for SSH contributions and be framed with the SSH as an integral part of the solution. In addition, the range of SSH disciplines invited to contribute needs to be significantly broadened. This is particularly important for the humanities. Last but not least, stronger efforts need to be undertaken in the EU-13 Member States to promote interdisciplinary research approaches and the possibilities these create for the SSH communities.' (Hetel et al, 2015, p.6)



The fourth annual monitoring report for projects funded in 2017 commented on the advances recorded in 2017 while stressing that the integrated approach needed to be further developed and deepened by applying integration strategies

"...from the drafting of the calls and their topics, the preparation of conceptual proposals for projects, the setting up of project consortia, to the selection and evaluation of projects by evaluators with clear SSH expertise. In addition, the expected societal impact must be explicitly set out in the topics of the calls for proposals as well as in project proposals and their implementation reports." (Kania et al., 2019, p.95)

The authors argued that the successor programme, Horizon Europe for 2021–27, should recognise that: 'The earlier SSH expertise is integrated in a project – not merely as an add-on element – but as a core element, the more impact it can create' (Kania et al, 2019, p.4). Partly in response to the ongoing challenges faced by the social sciences and the continuing 'handmaiden threat', the European Alliance for Social Science and Humanities (EASSH) was formally constituted in 2015 'to promote research on social sciences and humanities as a resource for Europe and the world'. In its responses to the consultation on Horizon Europe, EASSH (2019a, 2019b) strongly supported the case for a revised methodology for monitoring interdisciplinary integration, while also suggesting how the impact assessment of projects and programmes under Horizon Europe could be improved.

Systematising cross-disciplinary research methods

Funding bodies at both national and international levels have increasingly been required to demonstrate the value of fundamental and applied research in terms of policy relevance and societal impact. In many cases, more emphasis has been placed on multi-disciplinary collaboration, which in turn has presented researchers with methodological challenges in integrating and meshing different intellectual traditions and research practices. In their reports, the European Commission, advisory boards and other committees and funding bodies cite examples of best practice in interdisciplinary collaboration and integration in the Societal Challenges (for example Hetel et al, 2015, pp.18-20; Kania et al, 2019, pp. 33, 37, 42, 46, 51, 59). Evaluators regularly make recommendations for improving the design and delivery of high-quality, high-value multi-disciplinary projects. Project reports do not, however, usually discuss how researchers can achieve effective integration, in particular across SSH and STEM subjects.

The literature on social science methods shows how different disciplines have developed their own distinct theoretical traditions, schools of thought, research designs, data collection methods and analytical strategies. Insofar as interdisciplinary research crosses, or breaches, disciplinary boundaries, it can be said to raise many of the same issues of language, culture, concepts and method as international comparative research (Hantrais, 2009, pp.22–44). Arguably, the challenges to be met extend well beyond simply ensuring that SSH experts are more actively involved as advisers and assessors of multi-disciplinary projects, as intimated in the commission's monitoring reports.

A much-rehearsed epistemological debate within the social sciences concerns the qualitative versus the quantitative paradigms, although social scientists frequently disagree about any necessary fit between philosophical assumptions and the practice of research and choice of methods (Bryman, 1988; Brannen, 2005). Notwithstanding such deep-seated differences in approach, size presents challenges in collaborations between SSH and the natural sciences. Consortia required by European Commission programmes tend increasingly to be modelled on the natural sciences and are larger than those in the social sciences. In turn, size raises issues of status concerning the prestige of particular disciplines, with STEM subjects held in higher esteem. These differences inevitably feed into the research process, preventing the social sciences from becoming equal partners to engineering and science (Gilbert, 2016).



It is, therefore, paramount that multi-disciplinary teams devote time and resources to creating a level playing field at the outset of a research programme when the 'rules of the game' are being established. Whatever the mix of disciplines, the topic of investigation and the size of the research consortium and its component disciplinary clusters, best practice requires that the members of a research team reach a mutual understanding of their conceptual frames of reference, theoretical traditions and schools of thought, cultural contexts and expectations at the outset, with a view to creating 'communities of practice' (Denscombe, 2008). The success of projects that cross-disciplinary boundaries depends on reflexivity about method and process, as revealed in the research design and data collection strategies they adopt, together with the willingness and ability of partners to share knowledge and the interpretation and reporting of findings (Brannen and Nilsen, 2011; Lewis and Brannen, 2011). Dialogue workshops, as recommended by EURAB (2005, p.18), cross-boundary observation, analysis, reporting, and learning, as well as end-user workshops have all been found to be essential in ensuring the exchange of ideas and information throughout the research process in international comparative projects (for examples see Restore, 2012). These practices are also important in enabling scientists to engage across disciplines and with policymakers and other stakeholders.

In the UK, research councils have been proactive in initiating cross-disciplinary collaborations, exemplified by the 'sandpit model' developed by the Engineering and Physical Sciences Research Council over more than a decade (EPSRC, 2019). Sandpits involve intensive five-day residential interactive workshops for 20 to 30 participants, who commit to engaging in a carefully structured process designed to cover a range of tasks. They include defining the scope of the issue; agreeing a common language and terminology amongst diverse backgrounds and disciplines; sharing understanding of the problem across participants' expertise; using creative and innovative thinking techniques in break-out sessions to focus on a problem; and turning sandpit outputs into research projects.

On a smaller scale, funding bodies in the UK are increasingly using 'speed-dating' events to encourage collaborations across disciplines, exemplified by a joint call launched in 2015 by the Economic and Social Research Council and Biotechnology and Biological Sciences Research Council (ESRC/BBSRC, 2019). The two councils organised a much shorter and less highly structured 'speed-dating' event, compared to the EPSRC's sandpits, resulting in eight interdisciplinary projects in the area of social and behavioural epigenetics. These innovative, collaborative projects between biological and social scientists aimed to understand the complex interactions between social phenomena, human biology and behaviour; as well as the impact of early life experiences on future health.

ESRC (2019) has subsequently drawn out five lessons for collaborative research that apply across cultures and disciplines. It advises researchers to explore why they and their research partners want to collaborate; to establish (competing) accountabilities; to identify their collaborative approach and the implications for the shape of their collaboration; to discuss money, time and resources with their partners; and to reflect on the scope for legacy from their collaboration.

Cross-disciplinary research methods in practice

While the groundwork for establishing cross-disciplinary projects can be valuable as a bonding exercise, and the lessons offered by ESRC provide useful guidelines, they do not prevent team members from encountering unforeseen difficulties as their projects unfold. For example, issues may arise due to differences in research cultures and associated expectations that are often not immediately obvious.

The experience of organising, analysing, appraising and providing training in international social research methods over many years made it possible to identify the framework, briefly outlined below. Guidelines were designed for researchers to use in reporting how they addressed the challenges that arose during the course of their research projects (see Restore, 2012, for methods frameworks and exemplary case studies).



Selection of team members

The criteria for selecting team members should include personal skill sets, competencies – topic, discipline, linguistic and cultural knowledge – based on experience of working in international contexts or organisations, and/or with other team members. Complementary personal characteristics need to be considered together with an understanding of different intellectual traditions, methodological preferences, time-keeping practices, attitudes to authority, as well as individual and institutional demands and expectations.

Ensuring adequacy of funding

The requirements of funders and of different disciplines (equipment and infrastructure needs) must be acknowledged and taken into account. EURAB (2005, p.17), for example, stressed the importance of ensuring adequate funding and incentives for SSH researchers to enable effective delivery of EU programme goals.

Agreement on communication strategies

Team members need to reach agreement on their dissemination and communication strategy. While they may share a common language of communication across disciplines, they should agree about how to report and disseminate findings to a variety of stakeholders and audiences in different languages. Strategies should be devised to deal with incompatibilities that often arise about author order or when disciplines use diverse criteria for evaluating publications.

Selection of topic and research questions

Particularly when the topic is determined by the funders, team members need to discuss its relevance and meaning for different disciplines, in terms of both research methods, theoretical advancement and practical/policy implications. The EURAB 2005 (p.16) report for FP7 provided examples of activities and themes where there was a prima facie case for including social scientists: for example, 'meeting societal challenges for health', 'energy efficiency and savings' or 'conservation and sustainable management of natural and man-made resources'. In formulating research questions, conceptual issues must be thoroughly scrutinised paying careful attention to the potential for (mis)translating concepts across disciplines and cultures.

Research design and choice of methods

The theoretical or pragmatic appropriateness of the rationale for the research design in different disciplines raises cultural, legal and ethical issues associated with the researchers' disciplinary and institutional backgrounds. They include the legal requirements in the countries, societies and cultures where the research is being conducted, potential conflicts of interest, data protection issues, permissions, libel, intellectual property, procurement and confidentiality. Depending on the disciplinary mix, these aspects can have different implications for the research design, data collection, analysis, interpretation and validation of findings.

Cultural and societal impact

As policy relevance and societal impact have become increasingly important criteria for assessing EU and national research funding programmes, particularly for the social sciences, project members are required to pay attention to the longer-term implications of their work. EASSH (2019a), for example, recommends that account should be taken of different types of impact models as well as their tangible and intangible impacts on society. ESRC provides an impact toolkit for social science researchers and offers a 'celebrating impact' prize.



Conclusions

The involvement of UK social scientists in EU-funded research programmes has been a two-way process. Through their participation in programme and steering committees, evaluation panels and consultative and advisory groups, they have been able to play an influential role in shaping the EU research landscape, its research agenda, priorities, processes, quality control mechanisms and policy development (Hantrais, 2019, pp. 53-9). Through their coordination and participation in EU projects and networks, UK social scientists honed their skills in working within, between and across research cultures and disciplinary boundaries. They learned how to broker knowledge transfer between the commission's research and policy directorates-general. As EU-funded projects increasingly focused on the policy implications of research and value for money, UK social scientists applied their experience and expertise in creating impact. They are, therefore, well placed to anticipate policy relevance and societal impact in multidisciplinary research projects, while responding to the new challenges created by pressures for ever closer cross-disciplinary integration. Despite the sometimes unsupportive environment, they are also equipped to play a lead role in the effective delivery of whatever form of scientific association is agreed with the EU post-Brexit.

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Appendix 1: EU research funding schemes and social sciences

Research programmes	Dates	Acronym	In bn €	SSH integration
Framework Programme 4 Targeted Socio-Economic Research	1994–98	FP4 TSER	13.2	Science and technology policy, education and training, social exclusion and integration
Framework Programme 5 Marie Curie Fellowships	1998–2002	FP5 MSCA	15.0	EU socio-economic policy Researcher mobility
Framework Programme 6 Integrating Projects Networks of Excellence	2002–06	FP6 IPs NoEs	16.3	Responses to major needs in society; science and society; collaboration
Framework Programme 7 European Research Council	2006–13	FP7 ERC	20.5 7.7	Multi-disciplinary and cross-theme research Investigator-driven cross-disciplinary frontier scientific excellence
Framework Programme 8 Horizon 2020 Societal Challenges Leadership in enabling and industrial technologies Information and Communication Technologies European Research Council	2014–20	FP8 H2020 SCs LEIT-ICT ERC	77.0 29.7 13.6 13.1	Mission-oriented socio- economic research and policy, models and values Cyber security, internet of things, human-centric digital age, bottom-up innovative ideas Dedicated SSH funding
Framework Programme 9 Horizon Europe Marie Skłodowska Curie actions European Research Council	2021–27	FP9 MSCA ERC	94.1 6.8 16.6	Global Challenges and Industrial Competitiveness Transnational, intersectoral, interdisciplinary mobility Investment in research targeted at new and emerging issues confronting society

 $Sources: \ European\ Commission,\ online\ factsheets,\ statistics,\ funding\ programmes.$



Appendix 2: EU SSH research themes

Horizon 2020: Societal Challenges (2014–20)

SC1	Health, demographic change and wellbeing
SC2	Food security, sustainable agriculture and forestry, marine maritime and inland water research and the bioeconomy
SC3	Secure, clean and efficient energy
SC4	Smart, green and integrated transport
SC5	Climate action, environment resource efficiency and raw materials
SC6	Europe in a changing world – Inclusive innovative and reflective societies
SC7	Secure societies – Protecting freedom and security of Europe and its citizens

Horizon Europe: Global Challenges and industrial competitiveness (2021–27)

Clusters	Areas of intervention
Health	Health throughout the life course, environmental and social health determinants, non-communicable and rare diseases, infectious diseases, tools, technologies and digital, health care systems solutions for health and care
Inclusive and secure societies	Democracy, cultural heritage, social and economic transformations, disaster- resilient societies, protection and security, cybersecurity
Digital and industry	Manufacturing technologies, key digital technologies, advanced materials, artificial intelligence and robotics, next generation internet, advanced, computing and big data, circular industries, low carbon and clean industry, space
Climate, energy and mobility	Climate science and solutions, energy supply, energy systems and grids, buildings and industrial facilities in energy, communities and cities transition, industrial competitiveness in transport, clean transport and mobility, smart mobility, energy storage
Food and natural resources	Environmental observation, biodiversity and natural capital, agriculture, forestry and rural areas, sea and oceans food systems, bio-based innovation systems, circular systems



ERC: Social science and humanities research domains and disciplines

	Domains	Disciplines
SH1	Individuals, institutions and markets	Economics, finance and management
SH2	Institutions, values and beliefs and behaviour	Sociology, social anthropology, political science, law, communication, social studies of science and technology
SH3	Environment and society	Environmental studies, demography, social geography, urban and regional studies
SH4	The human mind and its complexity	Cognition, psychology, linguistics, philosophy and education
SH5	Cultures and cultural production	Literature, visual and performing arts, music, cultural and comparative studies
SH6	The study of the human past	Archaeology, history and memory

Sources: European Commission, online factsheets, statistics, funding programmes.



Doing research in care homes: the experiences of researchers and participants

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Abstract

The UK Prime Minister's Challenge on Dementia 2020 includes a target for more research to be conducted in care homes, yet research in care homes can be complex, as they are both homes and workplaces.

We reflect on our experiences as researchers on a mixed methods study in six care homes over a year. We include the experiences of care home residents, their families and friends, and members of staff.

Care home staff turnover was high, funding was constrained, and priorities often differed from those of the researchers. Negotiating ongoing access and data collection was, therefore, challenging at times. Most residents did not mind taking part, but those who preferred not to, felt able to decline. Private space was limited

Research in care homes needs to be adequately planned and resourced, including funding for staff time, if staff, residents and visitors are to participate in a meaningful way.

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Introduction

Older people in care homes, particularly those with dementia, are often excluded from research (Davies et al, 2014). The UK Prime Minister's Challenge on Dementia 2020 listed an explicit aim of 'more research being conducted in, and disseminated through, care homes' (Department of Health, 2015, p.33), echoing calls made by researchers over the past decade (see, for example, Froggat et al, 2006; Froggat et al, 2009; Katz, 2011). UK care homes have also expressed a desire for more research to give 'a better understanding of how best to provide care and what "good" care looks like, as well as obtaining evidence to support the good quality of care already provided' (National Institute for Health Research (NIHR), 2017, p.7).



The ENRICH network of research-ready care homes was set up through the Dementia and Neurodegenerative Diseases Research Network (DeNDRoN) in 2012 to facilitate care homes research (Davies et al, 2014). ENRICH is funded by NIHR and now provides online resources for researchers, care home staff, residents and their families, and the public (see **www.enrich.nihr.ac.uk**). The UK Prime Minister's Challenge on Dementia 2020 included a target that most care homes would be signed up to the ENRICH network by 2020. As of July 2018, around 1,750 were signed up¹ – 15.5% of the estimated 11,300 UK care homes (Competitions and Markets Authority, 2017).

In recent years research in UK care homes has increased (Gordon et al, 2012). There have been several reviews of such work (Luff et al, 2011; Luff et al, 2015; Davies et al, 2014), and NIHR has published its own review of research in care homes funded by its programmes (NIHR, 2017). Though this showed an increase in the number of studies designed to improve the lives of people living in care homes, NIHR acknowledged that 'the research base is still new and relatively underdeveloped' (NIHR, 2017, p.29).

In this paper we draw on our NIHR-funded study exploring the feasibility of evaluating life story work with people with dementia.² We have previously published a paper from this study about the importance of involving people with dementia (both those living in care homes and not) as advisers and participants in research (Brooks et al, 2017). In that paper we discussed how to approach some of the challenges that have led to people with dementia being excluded from research, such as issues around communication and assumptions about capacity to consent to take part in research.

This paper builds on our previous work, moving away from specific people to focus on the institutional context of the research – care homes. We focus on two factors particularly relevant to social researchers. First, care homes, and the UK social care sector as a whole, face considerable financial constraints. Therefore, their resources for supporting research are limited. Secondly, care homes are **homes** as well as **workplaces**. It is unusual for researchers to be present in a person's home without being invited by them. Researchers should be mindful of the power imbalance their presence in care homes can create.

There is little written from the perspective of participants in care homes research (Dewing, 2009), so this paper includes the views of residents, visitors and staff about their involvement.

This research was part of a wider project examining the feasibility of evaluating life story work in dementia care. We used qualitative and quantitative methods, including standardised outcome measures, interviews and focus groups. We also gathered information from care records. Participants were residents, visitors and staff members. A full report of the study has been published elsewhere (Gridley et al, 2016).

In reflecting on our experiences, we are mindful of observations made by Luff et al (2015, p.197) after their own study of care homes research:

'while many studies alluded to methodological weaknesses in the study, these were not often detailed and failed to provide future researchers with enough information to avoid repeating mistakes or identify more successful approaches where multiple approaches were used. In general, there was little discussion by authors reflecting on the process of undertaking research in a care home setting.'

We aim to give a detailed reflexive account of our methods, and highlight learning and potential challenges so others may avoid these in their work.

¹ Email communication from Adam Smith, programme manager, Office of the National Director for Dementia Research, NIHR, (6 July 2018).

² Life story work involves both recording aspects of a person's past life, present interests, and future plans and wishes, and using that information to improve their care or for their pleasure.



Researchers' reflections

Several issues arose during the fieldwork. First, despite all the included care homes having signed up to the research, it was sometimes difficult to negotiate access, particularly in care homes in which (senior level) staff turnover was high. Secondly, even when access was granted, staff and research priorities were not aligned. While researchers were concerned that, for example, questionnaires should be filled in fully and on time, staff had care tasks to complete with little slack in their rotas to devote to the research. Finally, the physical and temporal environment sometimes made it practically difficult to execute the research. These issues are addressed in turn below.

The reflections in this section are drawn from researchers' contemporaneous field notes, made electronically on the day of fieldwork or the day after.

Negotiating and arranging access is difficult when management turnover is high

The care homes provider organisation was involved in the initial funding bid, and access to individual care homes was negotiated by their dementia care consultant, a co-applicant on the project. We recognised, at the start, that taking part in the research could potentially be an onerous task for care homes, particularly as it required the delivery of a new intervention (life story work). Care homes were, therefore, approached only if their managers were positive about research and keen to implement life story work. However, turnover of management staff in the care homes sector can be high, and the lead-in time to the research was lengthy. By the time fieldwork commenced, the managers of two of the six care homes had left and their care homes had withdrawn from the project. These were replaced by two new care homes, but turnover of staff (both managers and care workers) continued to pose a significant problem.

In two further cases, where managers left and their replacements had not been involved in the decision to take part, lack of interest or understanding in what had been agreed made it difficult to arrange fieldwork visits. More than once we arrived to find our scheduled visit had not been prioritised, or had been entirely forgotten.

Staff priorities differ from researchers' priorities

Recruitment and retention of care staff as participants in the research was considerably lower in care homes with changes of management during fieldwork, than in homes with consistent management. This may, in part, have been due to reduced overall capacity. But also, in each care home, the manager's approach influenced whether care staff felt able to spend work time taking part. Engagement was highest when managers demonstrated to staff that this was a legitimate part of their work:

'Did staff baseline [questionnaires] in the morning starting with the manager, who sat with us in the communal area so other staff could see it was part of the working day and not something that had to be done in their own time' **Field notes from Care Home 3**

Nevertheless, care staff still sometimes struggled to complete questionnaires during shifts. We gave staff the option of completing later and returning by post (using pre-paid, addressed envelopes), but we did not receive any questionnaires this way. It was more effective to ask staff to complete questionnaires while we were at the care home, but staff were busy with daily care tasks, and sometimes other activities such as training sessions, activity groups or day trips. We always tried to arrange visits so that they did not clash with planned activities, but often arrived to discover staff and residents were engaged in activities we had not been told about. This lack of communication was perhaps a symptom both of staff turnover and of the research being a low priority compared with other activities.



Care homes have little private space

We spent full days at each care home, so it was useful to have a room away from the public lounge to keep bags and paperwork, to talk to potential participants privately about the research, and to support them as they completed interviews and questionnaires. The space available varied between care homes. One care home had two dining rooms, so we could use the second one without disrupting meals (although we were occasionally joined by residents doing jigsaws or playing Scrabble). In one, we had use of a conservatory; in another, a sensory room. This meant other residents could not use them during our visits. One care home put us in the staff room, but we could not take carers or residents inside, and staff felt unable to use it for lunch.

We therefore found we were often depriving other residents or staff members of a resource for a day. Sometimes, we supported residents to walk back to the privacy of their rooms, but moving anywhere took time and effort and, in some cases, residents were reluctant to move. So, we sometimes had to ask people questions in communal rooms, which could be quiet and with many residents in, potentially compromising confidentiality.

Care homes are busy

Care homes' daily routines influenced our research plans. We were advised to time our arrival for 10.30am, after breakfast. Lunch was usually between 12pm and 1.30pm, allowing time for residents to be escorted to the dining room. By 4pm some residents were getting tired, and the care home staff were preparing for evening meals. A whole day of fieldwork could, therefore, translate into just four hours of contact time with residents. It could take over an hour to complete the questionnaires with each resident and family member. It was, therefore, important to have two researchers present on each day to maximise what could be achieved.

Sometimes participants were not available on the day of our visit because of impromptu day trips or admission to hospital, and it was quite common for people to be called away for a hairdressing appointment or routine medical visit (for example from the district nurse or chiropodist). On some occasions, we arrived to discover that few of the included residents were available.

A key lesson learned was how labour-intensive research in care homes can be and, thus, the importance of properly resourcing the fieldwork, particularly when it involves people with dementia who may need more time to complete research tasks. Even short quantitative questionnaires can take some time to deliver when participants need support. Having researchers more locally-based would have increased efficiency, and may also have helped build better relationships with care home staff and residents.

Experiences of residents, visitors and staff

Very few academic articles discuss involvement in care homes research from the perspective of the participants (Luff et al, 2015). As we were assessing how feasible a full evaluation would be, it was important for us to understand the acceptability of the research to the participants. In this section, we outline participants' views about taking part, drawn from interviews with care home residents and their families and friends, and focus groups with staff members.

Residents' experiences

Researchers in care homes are usually invited by staff, and it is, therefore, important that residents feel able to decline to talk to them. We gained informed consent from residents who could give it, and followed a process using consultees to include those without capacity (see Gridley et al, 2016 and Brooks et al, 2017 for further details). All participants were asked for assent each time we met, and we were reassured to find that several did not agree (citing being tired, or wanting to take part in a Scrabble game instead), even if they had agreed on previous occasions. This gave us reasonable confidence that residents who were participating were happy to do so. Residents reported that they enjoyed talking to us, and 'didn't mind' answering questions.



Some residents did, sometimes, conflate doing the life story work with taking part in the research, for example responding to our questions about the questionnaires with answers about their life story book or photographs. This was an understandable confusion, and one which some staff members experienced too.

Visitors' experiences

Carers' comments covered both the research and the life story work, but were often not specific to the care home setting. For example, carers expressed some dissatisfaction with the use of questionnaires, particularly proxy measures, noting that it was difficult to describe situations and to know how their relatives felt.

More positively, carers noted they were mostly happy to take part. Several commented that completing the questionnaires did not take long, and gave them something to do when visiting relatives. Many felt the research would not necessarily help their relative, but it might help others: consistent with the motivations both carers and patients have given for taking part in other research projects (Gysels et al, 2008).

Carers' perspectives included thoughts on how the research could have affected their relatives. A few noted that their relative may have felt anxious, perhaps feeling that they might have done something wrong.

'It wasn't that he wasn't happy to talk to you but I think afterwards ... he sort of gave me the impression that he felt, because he hadn't been expecting it, but I don't know that he would ever expect it even if you'd warned him, that he'd said things on the spur of the moment that perhaps if he'd had chance to think about it he wouldn't have said' **Carer, Care Home 4**

'If I didn't do it [sit with the person while we went through the outcome measures], she would be very worried if you were asking her all these questions, and she worries when you write things down because she thinks you're recording everything' **Carer, Care Home 2**

Many carers believed relatives would have been pleased the research was being done, even if presently were unable to understand the reasons for it.

Staff members' experiences

Staff comments also covered both the life story work as an intervention and the research itself. Care home staff were generally positive about the research and the intervention, but some commented that they felt pressured to have achieved something in terms of the life story work – something we did not, in fact, require. Several felt they should have had extra time in their workday to complete questionnaires, take part in focus groups, and do life story work:

'It's great they [care home provider] get involved in these kind of studies but I do think that they need to offer support to the staff. If we're going to be doing this study as we'd wanted to do it, and as we should, there should have been staffing arrangements made to free up time for people to do it properly' **Member of staff, Care Home 1**

This supported our own observations that staff members often had little time either to deliver life story work intervention or to take part in research. Research funding covered a payment to the care home providers, but this had been used to fund training sessions, not to cover staff time to implement life story work (which was expected to be integrated into their existing work) or for taking part in research.

Some staff were simply not familiar with the idea of research. This was in contrast to members of NHS staff who, in a different stage of the same study, had little trouble understanding the nature and purpose of standardised outcome measures. Echoing the views of carers, staff found questionnaires repetitive and vague, found the tick-box nature of the measures constraining, and commented that answers had nothing to do with life story work. We made our information as straightforward as possible, but there was still occasional confusion: for example, one member of staff had completed a questionnaire about attitudes to dementia for a colleague, rationalising that they were just tick boxes, and she knew what the other person would say anyway.



Discussion and reflections

Preparation is essential for researchers planning to work in care homes. One literature review (Dewing, 2009) identified that much research in care homes is carried out by inexperienced researchers and, aside from one study (Mentes and Tripp-Reimer, 2002), there was 'a notable omission of reflections on the researcher's experience and skills, and how this influences their preparedness' (Dewing, 2009, p.227). Care homes themselves have identified the need for care homes research training for inexperienced researchers (Davies et al, 2014). We were experienced researchers, supported in our preparations by Innovations in Dementia (a community interest company supporting people with dementia to be involved in research), yet we still faced some of the same challenges as other researchers. We advise other researchers to ensure they are appropriately prepared.

Our access to care homes was not dependent on 'cold calling' managers, which Davies et al (2014) have identified as being very labour intensive. Instead, we worked with a provider before applying for funding for the research, and would recommend this to others where possible, as it gave the provider organisation some sense of ownership. The provider chose appropriate care homes to be involved in the study, and our role was to negotiate when and how.

Nevertheless, while we had built a relationship with the provider before the research began, we still had to develop relationships with individual care homes during the course of the project. When relationships were underdeveloped or disrupted this seemed to affect the sense of ownership and commitment of care home staff to the research. In common with other research projects, staff turnover and changes in management had a particularly detrimental effect on the practicalities of fieldwork in care homes (Luff et al, 2015).

We relied on care home staff to facilitate access to residents and families, but staff have professional responsibilities towards the people in their care (Dewing, 2009), and personal preferences about access (Bartlett and Martin, 2002). Thus this process was not always straightforward.

We also found some staff were unfamiliar with the research process. We should, perhaps, have made more effort to explain the importance of repeated measures to staff who felt they were repetitive, as much good quality evaluation relies on such tools. Given that education, and even literacy, can vary among care home staff (see, for example, Hussein et al, 2009), staff may have benefited from more support with explaining the study to potential participants, whether residents or their visitors.

The day-to-day routine of care homes has also been identified as a challenge for researchers (Higgins, 1998; Hall et al, 2009), and we also found this. Privacy was sometimes an issue (Hall et al, 2009), and some residents did prefer to participate in research in communal areas (Wilson, 2011). However, even having researchers in communal areas may feel intrusive at times (Ellmers, 2009). Care homes staff and residents have extensive demands on their time, and it was, therefore, difficult to find opportunities for research tasks (Hall et al, 2009).

Financial incentives are rarely offered or expected in care homes research (Davies et al, 2014). We covered the cost of the time for which the provider's dementia care consultant (a co-applicant) worked on the project (including delivering the life story work training), but did not provide payments to care homes. This may have contributed to difficulties we experienced. It is important to recognise the cost to care homes of taking part in research. Staff members who were research participants completed questionnaires and took part in interviews, but also spent time contacting families, and facilitating conversations with residents and access to care records.



Staff members were expected to deliver the intervention and take part in research during normal working hours, but time pressures meant these lower priority tasks were often not completed. We suggest that financial support for care homes to cover back-filling posts when staff members are involved in research would help facilitate research participation in these settings, perhaps in line with the way NHS support costs are apportioned (see Department of Health, 2013).

Future research in care homes might focus more on developing reciprocal relationships with individual care homes, and perhaps building the research into their activities schedule. It may not seem much, but we were always sure to provide refreshments (usually tea and cake) each time we visited, and we shared this with anyone in the vicinity, not only those taking part. This was well received, and we felt it helped to embed us in the setting, and put hosts at ease. At one care home, our last visit was made into a wider event where residents shared their life story work with others. Visitors were invited to join in, which created a celebratory atmosphere, and gave something back to those who had supported us.

Limitations

Researchers were only present during the day, meaning access to staff on night shifts was limited. We did leave information about the study for staff on other shifts to complete but none did.

Response rates for staff questionnaires overall were low, and it is possible we could have adopted further measures to improve this, for example by offering online completion. However, there is evidence to suggest that this does not necessarily increase response rates for fixed (rather than open-ended) questions (Denscombe, 2009), and it would likely have been impractical for this population (Cho et al, 2013, p.393; Scott et al, 2011, p.10). Care home staff do not routinely use email as part of their work, and do not often have staff email addresses, so we would have been reliant on providing a link on paper for staff to follow on their own devices, which they may not have been able to access during work hours anyway.

Without access to personal contact details for staff members, we were limited to sending reminders to care home managers and relying on them to remind staff to fill in the questionnaires if they had not done so during our visit. This was not very successful.

Visits were widely spaced, and while we did build relationships with some members of staff, and in some cases family carers, it was not possible to do this with all. Some staff members left the organisation during the study, and residents died or were taken ill. All residents in the study had dementia, in many cases severe, and did not recognise us on our return visits.

Older adults from minority ethnic groups were largely absent from our study, which reflects their underrepresentation in care homes compared to the general population (Banks et al, 2006).

Conclusions

The UK population is ageing, and increasing numbers of people live in long-term care homes. The importance of hearing views from those living and working in, and visiting, care homes is recognised, and there is a push from government, researchers and care homes themselves to do more research. However, there are numerous challenges to be overcome.

In this paper we have detailed the experiences of researchers working on a mixed methods study in six care homes over the course of a year. Even with experienced researchers and a well-resourced project we faced some of the same challenges experienced by other researchers.

Staff members were dedicated to residents and largely enthusiastic about the research. However, tight schedules made it difficult to take part and to contact family carers. Ensuring meaningful engagement for residents with dementia (and, to some extent, their family carers), meant we were often effectively using qualitative methods to collect quantitative data.



We make a number of recommendations based on our own experiences:

- Research teams and care homes should agree their commitment to each other early in the research process. Where possible, more than one member of senior staff at care homes should be involved in this to provide some continuity in the event of staff changes
- It may be appropriate to consider using local researchers to limit travel, improve the efficiency of the fieldwork, and to help build relationships with more frequent visits
- Where appropriate, it can be useful for researchers to make their presence known generally in the care home, for example by talking to all staff members in team meetings, and providing posters with photographs for care homes to display to residents and visitors, so they know who and what to expect
- ▶ It would be best if some payment could be made to care homes to cover staff time for taking part in research. If this is not possible (for example with smaller research projects), researchers should consider how they can give something back to the care home

Care homes are both homes and workplaces, and any attempt to increase or improve research in care homes must be mindful of this.

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Consulting the oracle: using the Delphi method in research with undocumented migrant children

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Abstract

Although there are estimates of the number of undocumented migrant families resident in the UK, there are currently no estimates at local authority level. As a result, undocumented migrant families are often invisible in local discussions of child poverty and safeguarding, can be excluded from services to safeguard their welfare, and face the risk of destitution. This paper explores the Delphi method as a way of using expert consensus to estimate numbers of undocumented migrant families. Fieldwork was completed in Birmingham, West Midlands, but uses a methodology transferrable to other areas. A median estimate of 1,500 families, containing 1,900 children was reached. The paper concludes with a discussion of the methodological difficulties encountered, and recommendations for use of the method in the future.

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Introduction

Undocumented migrant children are some of the most vulnerable in the UK (Jolly, 2018). However, there are currently no estimates of the numbers of undocumented families at local authority level. The absence of reliable data compounds the invisibility of undocumented migrant families, hindering the delivery and planning of support services, and the work of solidarity and campaigning groups (Koser, 2010, p.182). Although undocumented migrant families are excluded by the no recourse to public funds (NRPF) rule from most social security benefits, and from accessing paid employment, local authorities retain a responsibility to safeguard the welfare of all children in their area under (in England) section 11 of the Children Act, 2004, and one of the few entitlements that undocumented migrant families possess is 'child in need' support under (in England) section 17 of the Children Act, 1989. A method which is able to explore the extent of the issue of unsupported migrant children at local authority level is, therefore, particularly useful, because it is at local authority level that child in need services are organised and delivered.



Residual model

Perhaps the most widely accepted method of estimating the size of the undocumented migrant population is the residual method, which subtracts estimates of the lawfully resident foreign-born population from the total foreign-born population using census data to reach a de facto 'residual' number of the undocumented population (Pinkerton et al, 2004). Using this method, Gordon et al (2009) estimated that there were 85,000 UK-born children resident in the UK in 2007. This figure was subsequently revised by Sigona and Hughes (2012) to conclude that there were 120,000 undocumented migrant children in the UK at the end of 2011. Most recently, Dexter et al (2016) updated this figure to 144,000.

However, data to calculate the residual are not available at local authority level. In order to calculate the residual, it is necessary to know the size of the foreign-born population which has been granted settlement in the UK; the numbers of EEA citizens; as well as figures for emigration, deaths and births for the foreign-born population in a local area (Woodbridge, 2005, p.12). Even if disaggregated data were available for the numbers of families granted settlement by local authority area, it is not known whether families move after being granted settlement, or remain in the same area.

The Delphi method

Given the difficulties of applying the residual method at a local authority level, an alternative method is Delphi: a structured, iterative technique for eliciting expert consensus on a topic (Linstone and Turoff, 2002). In Delphi, a panel of expert respondents is invited to participate in a series of questionnaires over a number of rounds. Respondents are anonymous and known to the researcher, but blind to each other. The open questionnaire in the first round acts as a survey instrument for the second round of structured questionnaires, consisting of summarised information from the previous round. Participants are encouraged to reflect on the feedback, and are given the opportunity to amend their responses, in order to facilitate the emergence of a consensus. The method is characterised by the use of expert participants rather than a representative sample of the population (Goodman, 1987, p.730).

Delphi has been used in a variety of settings including future forecasting (Rowe and Wright, 1999), nursing research (Keeney et al, 2001), and educational research (Green, 2014). Gordon et al (2009, p.33) identify Delphi as one of the three 'extensively investigated' methods of quantifying the undocumented migrant population, and the method has been used to estimate the size of undocumented migrant populations in other European countries, including Switzerland (Piguet and Losa, 2002); the Czech Republic (RILSA, 1997), Italy (ISTAT, 1991) and the Netherlands (Zandvliet and Gravesteijn-Ligthelm, 1994). However, the method has not previously been applied to research with undocumented migrants in the UK. Pinkerton et al (2004) acknowledge that the method could be applied in a UK context, but question how it would be verified, recognising that its reliability would rest on the knowledge of participants. Although a panel with expert knowledge of the undocumented migrant population across the whole of the UK presents difficulties, for a smaller area, such as a single city, the method becomes more feasible due to the smaller size of the population in question and the local knowledge of the panel.

Method

The size of Delphi panels varies considerably, with no consensus on their optimum size. Skulmoski et al's (2007) review of published Delphi research found that panel sizes ranged from three to 171, with the majority having a panel size of less than 30 (Skulmoski et al, 2007, p.6). However, more than the size of the panel, the usefulness of the method relies on selecting 'experts' who have a greater insight into an issue than the general population. This reliance on experts leaves the technique vulnerable to charges of elitism, and the reliability of expert knowledge over the general population is by no means an uncontested principle, with the method susceptible to a 'halo effect' of confirmation bias amongst a panel with mutually reinforcing views (Sackman, 1975). Nonetheless, for exploring a population which is hidden and invisible, the knowledge of people who have direct experience of an issue, rather than detached experts, or of the general public, is of particular value.



The majority of panel members were recruited through a steering group of the key voluntary sector agencies in Birmingham working with undocumented migrants. The panel was predominantly drawn from the voluntary and community sector, and so additional attempts were made to recruit representatives from the local authority (both officers and elected members). However, no local authority representatives decided to take part in the panel. This is perhaps not surprising, given the controversial nature of the issue, public hostility to irregular migration, and the fact that the local authority would have a safeguarding obligation to any undocumented migrant children who are identified in the research, with potentially significant financial implications for the local authority (R. Clue v Birmingham, 2010).

This lack of local authority representation on the panel was a weakness in the composition of the panel, which meant that a valuable local perspective wasn't included in the estimates. However, unlike other areas of social work practice, local authorities are not the sole or even the largest agency working with undocumented migrants. The total number of families supported by the local authority at the time of the panel was 163 families, but panellists reported receiving an average of 15 new referrals a week for undocumented migrant families. Even accounting for staff leave and holiday closures, panel members were in contact with a significantly higher number of families than the local authority. Nonetheless, efforts should be made in future research to involve local authority representatives to ensure that all relevant local perspectives are included.

In order to broaden the perspectives included in the panel, three 'experts by experience' who had themselves been undocumented were also recruited. Half of those in employment were involved in direct work with children and families, either as a practitioner or in a managerial role (Table 2). Two thirds of the panel were employed by a charity, either locally or nationally (Table 1).

Table 1: Q. Which best describes your own situation?

Panel members	Number
Undocumented migrant/former undocumented migrant	1
Volunteer with undocumented migrants	4
Employee with local charity	5
Employee with national charity	7
Researcher	1
TOTAL	18



Table 2: Q. If you work or volunteer with undocumented migrant families, which best describes your role?

Job role	Number
Direct work with families	8
Managing direct work with families	1
Strategic or policy role	3
Other	3
TOTAL	15

Data collection took place between March and September 2016. Questionnaires were hosted online using an encrypted site, and the initial survey was piloted with three volunteers to ensure that it was understandable and the questions were clear. All participants were given a participant information sheet, and informed consent was indicated through an online tick box. 18 people took part in the panel, including practitioners, policymakers, and undocumented families themselves. Participants were asked a total of 26 questions over three rounds, starting with basic demographic information about the participant and their knowledge and experience (see Table 3).

Table 3: Delphi questionnaire

Round	Question
One	1.1 Which best describes your own situation?
	1.2 If you work or volunteer with undocumented migrant families, which best describes your role?
	1.3 In your experience, what are the most common districts of Birmingham that undocumented migrant families live in? (please choose up to 3 in order of frequency, with #1 being the most common)
	1.4 Based on your personal or professional experience, over the past 12 months, have the numbers of undocumented migrant families living in Birmingham: Increased, Decreased, Stayed the same, Unsure
	1.5 Approximately how many undocumented migrant families does your agency work with in a typical week in Birmingham?
	1.6 Based on your personal or professional experience, over the past 12 months has destitution amongst migrant families in Birmingham: Increased, Decreased, Stayed the same, Unsure
	1.7 Approximately what percentage of the families you work with are supported by the Local Authority under Section 17 of the Children Act 1989?
	Nhich are the main organisations who work with undocumented migrants in Birmingham? (Please name up to five organisations)



	1.9 Based on your personal/professional experience, approximately how many undocumented migrant families would you estimate are currently living in Birmingham?
	1.10 Based on your personal or professional experience, how many undocumented migrant children (under the age of 18) would you estimate are currently living in Birmingham?
Two	2.1 Based on the above information (from round one), how many undocumented migrant families do you think are likely to live in Birmingham?
	2.2 How many children?
•••••	2.3 Has your estimate changed since round one? If so, how? (Increased or decreased)
	2.4 Please give any reasons for your answer (e.g. why you changed your estimate, or why it stayed the same?)
Three	3.1 Based on the above information (from round two), how many undocumented migrant families do you think are likely to live in Birmingham?
	3.2 How many children?
	3.3 How sure are you about your answer? (Likert scale)
	3.4 Has your answer changed since round two? If yes, how has your estimate changed? (Increased or decreased)
	3.5 Please give any reasons for your answer (e.g. why you changed your estimate, or why it stayed the same?)
	3.6 What do you think are the three most common countries of origin for undocumented migrant families in Birmingham?
	3.7 According to a report from the London School of Economics there were an estimated 618,000 undocumented migrants in the UK in 2007. If this estimate is correct, it would mean that 11% of the total foreign-born population in the UK are undocumented, and of that group, 25 % are under 18. Based on your experience, do you think this is true in Birmingham?
	3.8 How sure are you about your answer?
	3.9 Is there anything else you would like to say?

In round three, a question was added to allow participants to compare their answer with external information. This enabled participants to triangulate and compare their responses with other sources. A question was added to see how certain participants were of their answer, and a question about the most common countries of origin was added to enable a comparison to be made with other demographic data about Birmingham (See Table 3).



Results

All panel members regularly encountered undocumented migrant families. Numbers ranged from between five and 35 undocumented families each week (mean: 12, median: 9), and between five and 40 children (mean: 16, median 15). However, the situation of these families varied widely. The percentage of these families who were destitute¹ ranged from eight to 100% (mean: 64%, median: 73%). The percentage supported as 'children in need' under section 17 of the Children Act (1989) was between 0 and 80% (mean: 40%, median: 38%).

These differences reflected the variety of job roles of panel members. Nonetheless, panel members were on average more likely to see families who were destitute than those receiving Section 17 support.

When asked whether the number of undocumented migrant families had increased, decreased, or stayed the same over the previous twelve months, none thought that numbers had decreased; twelve (67%) believed that numbers had increased; one (6%) thought numbers had stayed the same; and five were unsure (28%). When asked if destitution had increased, participants were even more definite – 15 (83%) thought destitution had increased over the previous twelve months; one thought they had stayed the same (6%); and only two were unsure (11%).

In the first round, two participants left the estimate of numbers of undocumented migrant families blank. To avoid this, the question was made compulsory in subsequent rounds. The 16 who did respond gave answers ranging from 200-7,000 (mean: 2,100, median: 1,000). Estimates of numbers of children ranged from 200 to 15,000 (mean: 2,698, median: 1,288). Answers clustered towards the extremes, with half of answers 1,000 or below, and two estimates of 7,000. It is unclear why this was the case, although it is notable that the two highest estimates were from participants with a 'strategic or policy' role, and the lowest estimates were from participants with a direct role with children and families. It is, therefore, possible that the lower estimates were based on the individual caseloads of practitioners, while the higher estimates drew on a more strategic perspective which took into account wider trends across the city.

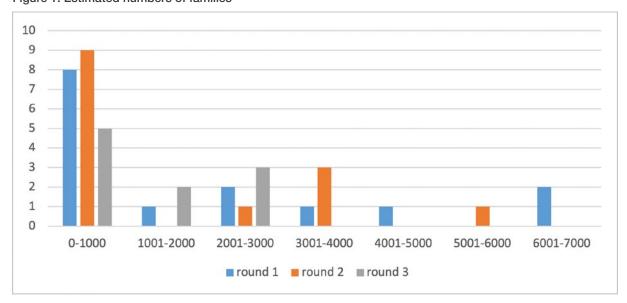


Figure 1: Estimated numbers of families

¹ Defined in the Immigration and Asylum Act 1999 as not having adequate accommodation or the means of obtaining it; or having adequate accommodation or the means of obtaining it, but unable to meet other essential living needs.



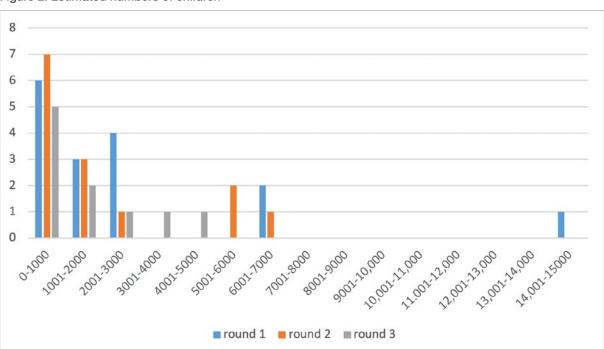


Figure 2: Estimated numbers of children

Table 4: Median estimates of children and families in each round

	Median children	Median families
Round 1	1,288	1,000
Round 2	1,350	1,000
Round 3	1,500	1,050

Nine out of the 14 participants in the second round changed their answer from round one, considerably narrowing the range. However, estimates still diverged strongly, ranging from between 300 and 5,001 for families. The median remained 1,000, although the mean had reduced to 1,872, and results still showed a positive skew (see Figure 2). Similarly, for children, the range had reduced and was now 400-7,000, and the median had increased to 1,350, but the mean had fallen to 2,232. Despite the reduction in the mean compared to round one, nine participants (81%) increased their estimate, with only two (18%) reducing their estimate. This anomaly is accounted for by the fact that so many answers were clustered in the 0-1,000 bracket and by the outlier of 15,000 in the first round.



In the final round, seven out of ten participants changed their answer from round two. Again, a majority chose to increase their answers, but by a smaller margin – six increased their estimate, and one decreased it. The estimates of family numbers had narrowed to between 400 and 3,000 with an increase in the median to 1,500 and a reduction in the mean to 1,460, as the higher outliers adjusted their assessments downwards. Similarly, estimates for children ranged from 600-5,000, and the median had increased to 1,500, while the mean had fallen to 1,890.

Linstone and Turoff (2002) maintain that three rounds are most commonly sufficient to attain stability in responses and avoid repetition for participants. Given this insight, and the fact that the mean and median answers had converged to within 390 for children and 40 for families, the process closed after the third round. The final estimates are given below in Table 5.

Table 5: Final estimates of numbers of children and families

Number of children	Number of families
Median 1,500	Median 1,000
Range 100 to 3,000	Range 500 to 2,500

Analysis

Comparison with other sources

The research took place in Birmingham where, at the end of 2013, the city council was providing financial support to 163 undocumented migrant families to prevent destitution (Birmingham City Council, 2013, p.13). However, this number is likely to represent a small proportion of the total undocumented migrant families in the city because it does not include families who have never approached children's services, nor those who have approached the local authority for support, but were refused. Dexter et al (2016) use data from 35 local authorities to estimate that six out of ten undocumented migrant families approaching children's services are refused support, and one agency in Birmingham reported that only 8% of its referrals of undocumented migrant families to the city council received Section 17 support (Birmingham City Council, 2013, p.31). Therefore, the finding of the panel that only a minority of undocumented migrant families was supported by children's services appears to be substantiated by other sources.

According to census data, the foreign-born population in Birmingham in 2011 was 238,313 (Krausova and Vargas-Silva, 2013). If Birmingham had the same proportion of undocumented migrants as the UK in total, using Gordon et al's (2009) estimate, there would be 6,554 undocumented migrant children in Birmingham, a figure which is considerably higher than even the highest estimate in the final round of Delphi. Similarly, if the Sigona and Hughes (2012) estimate of 120,000 undocumented migrant children living in the UK at the end of March 2011 is used as a benchmark, there would be 3,590 undocumented migrant children in Birmingham. Finally, if Dexter et al's (2016) estimate of 12,000 undocumented migrant children in the West Midlands region in mid-2014 is disaggregated to city level, Birmingham would have 3,008 undocumented migrant children (See Figure 3).

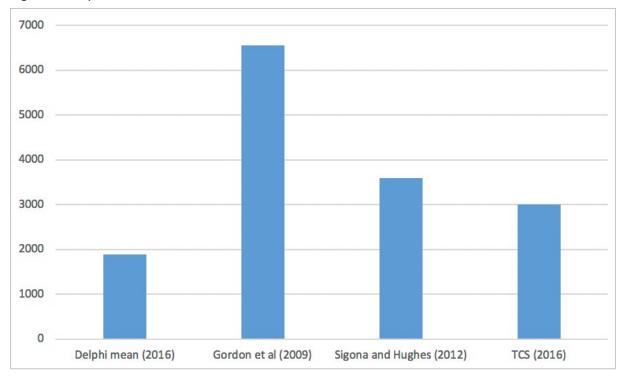


Figure 3: Comparison of estimates of undocumented children

Each of the other figures is within the range of all but round three of the Delphi panel, and all but the projection based on Gordon et al are in the range of all three rounds of Delphi. Nonetheless, out of all the projections, the Delphi panel gave by far the lowest estimate of numbers, which is perhaps surprising, given that experts who work with undocumented migrants might be expected to have an interest in emphasising the numbers of families. This can possibly be explained by the fact that panel members extrapolated their estimates from the numbers of families they met in their work or daily lives, and, therefore, under-represented those families not in contact with support services.

Attrition and engagement

The process of recruitment and of ensuring that the maximum number of participants took part in each round was time consuming, taking six months from the first recruitment meeting to the end of round three. Millar et al (2006) suggest that the process should take four months, including planning, but with only five days for each of the rounds. However, significant delays were experienced due to panel members not responding within this timeframe. The difficulty of sustaining engagement is most likely a reflection of how busy participants were in their jobs, as some participants acknowledged. Finding the time to complete a questionnaire took considerable thought and engagement (including reviewing case files and other internal data sources). Delays in responding were not necessarily an indication of a lack of interest in the subject, as 13 out of 18 participants asked to be kept informed of the research results and left email contact details to do so. In future Delphi panels more active ways of engaging with participants could be used, such as offering face-to-face interviews and telephone conversations rather than asking participants to click on a link in an email. Another factor which might improve retention is the use of incentives. In this research there was no financial reward for completion of each round, but a small cash incentive might be a way of acknowledging the time and effort of contributing to a Delphi panel, and of ensuring continued engagement.



Despite attempts to contact participants, there was attrition at each round. Of the 18 participants in round one, 14 participated in round two, and ten in round three. Half of the eight participants who dropped out between round one and round three described themselves as undertaking direct work with undocumented migrant families; three described their role as 'other'; and one didn't respond to the question. This meant that the final panel consensus had proportionally fewer people whose role was direct work with children and families, and those who remained had higher first-round estimates than those who left the panel. This is interesting, as it has already been identified that frontline practitioners tended to make lower estimates than other panellists. It is, therefore, surprising that the final consensus estimates were lower than projections using other methods.

Table 6: Comparison between estimates of panel remainers and panel leavers

	Mean families estimate (round 1)	Mean children estimate (round 1)
Panel leavers	1,092	1,054
Panel remainers	2,705	3,870

A compromise had to be reached between ensuring the maximum number of participants took part, and the need to keep the rounds close together to ensure that participants remembered their answers in each round. Rounds were kept open beyond the recommended time period in order to maximise participation. However, in rounds two and three, five respondents needed prompting to remember the answers they had given in previous rounds, which suggests that the gap was too long in this instance, and rounds should have been shorter.

Quality/validity of data

By its nature, the Delphi method can only offer a partial perspective, giving an overview of the opinion of experts in the field. Most participants gave estimates based on their own experience, using casefile data and information about the numbers of people accessing their own service. This was useful information which had not been previously shared outside their own organisations, and which, without the guarantee of anonymity that the Delphi process provided, they might have been reluctant to share publicly.

Nonetheless, despite the insider knowledge that panel members possessed, most expressed a lack of confidence in their answers. In the final round, a supplementary question was introduced to test participant confidence in their answer using a four-point Likert scale. The intention was to better evaluate the reliability of individual estimates in the event of a clear consensus failing to emerge (Millar et al, 2006, p.21). Participants were very uncertain of their responses, reflecting the difficulty of estimating a hidden population, even amongst those who were knowledgeable about the issue. None said they were very sure of their answer, and only two were slightly sure. In contrast, the majority were unsure, either slightly (three), or very (four). One participant explained:

'It's very difficult to know or even guess the answer to the question as my personal experience teaches me that a lot of people only seek help when they are not able to cope at all. I can't be at all sure.' (undocumented migrant)

Another commented:

'[It is] very difficult to gauge the amount of undocumented families living in Birmingham, so most of it based on experience and guesswork.' (charity employee)



Despite their reticence about making an estimate, participants were well-informed about the issue, all had contact with undocumented migrant families either personally or through their organisation, and they drew on both their personal experience and the responses of others in making decisions:

'Having previously amended my estimate based on the figures provided after round one, I do not believe that my experience of working with destitute families with children and the estimates of others indicates that my estimate should be decreased, but I have no first-hand experience which indicates that it should be further increased.' (frontline worker for national charity)

Others drew on their knowledge of relevant research to triangulate with their own statistics, and the responses of others:

'I think the answers of the majority in the first round made me reconsider my initial figure and I lowered it. However, I have reviewed numbers of undocumented families accessing our service – which is only open to certain people – and extrapolated them while taking into account Nando Sigona's research conclusions (120,000 undocumented children in the UK). In light of this, I have decided to raise my estimate again.' (frontline worker for local charity)

Recommendations

Validity

One of the difficulties with the Delphi method is that it is not possible to externally verify the validity of the answers given. It was, therefore, important to build in checks and opportunities for reflection within the process. This was done through asking why people had given particular responses and how sure they were of each answer, and feeding these responses back in subsequent rounds in order to better inform panel members. It was also helpful to introduce outside information to panel members in order to compare their own estimates with external evidence. In this study, this was introduced in the final round, but it could also have usefully been introduced earlier on in the process, which may have helped to reassure participants about their answers.

Panel composition

To ensure a balanced panel, it was important to include 'experts by experience', practitioners and strategic workers, and the panel was effective at recruiting representatives of all these groups. However, as discussed above, there was difficulty in recruiting local authority representatives. Future Delphi panels should allow additional time to build relationships with local authority representatives before the start of the panel, using contacts at a strategic level and attending meetings and other events to encourage participation.

Timing

The process was time consuming and labour intensive, so enough time (up to six months in total from recruitment to completion of analysis) should be allocated for the process. Particular delays were experienced in recruiting people to the panel, and ensuring that panel members participated in each subsequent round. As a result, some panel members needed to be reminded of their initial responses. Researchers should make every effort to minimise the time between rounds, ideally less than two weeks, and should follow up with participants in a flexible way. The use of financial incentives should also be explored as a means to encourage participation. Where it is not possible to keep rounds to under two weeks, participants should be provided with individual summarised feedback on their earlier responses.



Conclusion

There is no explicit agreement in the Delphi literature about defining consensus, and this is open to interpretation by the researcher. As the information above shows, it is difficult to reach consensus on a contested and under-researched issue. However, while it is challenging to reach consensus, and a degree of divergence remains after three rounds, there does seem to be a tendency for estimates to converge around a figure of the low thousands for children in Birmingham who are undocumented. Furthermore, there was a stronger consensus amongst panel members that numbers of undocumented migrant children and families are increasing; that a minority of families are known to local authority children's services; and that a majority of these families are experiencing destitution. These findings are not a definitive estimate of the situation of undocumented migrant children and families in Birmingham, merely an indication of the collective knowledge of people who are familiar with this particular group of children and families. The result should, therefore, be treated with caution and not viewed in isolation from other information. But it does provide new knowledge of a previously unresearched issue.

Given these findings, and despite the limitations of the method, it can, therefore, be cautiously concluded that the Delphi method is a useful way of eliciting new information about a hidden issue (Millar et al, 2006, p.31). If used thoughtfully, it can be helpful in informing debate and supporting practice at a local level. If the learning points described in this pilot study are applied, the method could be productively used in other geographical areas to explore the same issue or, more broadly, any research issue that is hidden and where traditional data sources are not available.

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How often should we collect data for longitudinal studies?

Joel Williams, Kantar

Abstract

Longitudinal studies are a powerful tool for understanding change in individual lives over time. However, they suffer from problems of attrition, particularly if the time interval between each sweep of the survey is lengthy. A key survey design question is 'how far are rates of attrition affected by the frequency with which sample members are surveyed?' This research note explores data from the British Household Panel Study/Understanding Society to estimate how far attrition rates increase when the time interval between sweeps is lengthened. The optimal gap is a complex function of attrition rates, measurement errors, and costs – and is also topic-specific. But this research note may help those designing studies to gauge the likely consequences of different lengths of time between sweeps.

How often should we collect data for longitudinal studies?

A longitudinal study of the same set of individuals can provide unique insights about a population. In particular, it provides evidence about how much change is experienced by individuals within a population over a defined period of time. In contrast, a repeated cross-sectional study with the same data collection points can only tell us about how individual-level dynamics *average out* across that population.

However, longitudinal studies can be damaged by attrition (individuals dropping out of the survey). After each data collection point, there is a decrease in the number of people who participated at every data collection point. Although statistical methods are available to reduce the consequent risk of biased inference, the loss of information caused by sample erosion is real and will, over time, lead to unstable inferences that are over-dependent on the particular sample that was drawn from the population.

Even quite low levels of attrition can cause problems over the longer term. In the chart below, we show the net level of sample erosion for three different levels of attrition. Under a 'low attrition' scenario (3-10% dropping out after each data collection point, with a higher rate of attrition at earlier points than at later points), the sample erodes to a little over half its original size by point 10. Under a more typical 'medium attrition' scenario (12-25%), the sample has eroded to less than one sixth of its original size over the same timeframe. Higher attrition levels, typical of online panels, limit analysis to no more than four or five data collection points.

¹ The presented attrition scenarios are low ($x_t = x_{t-1}$... $x_2 = 10\%$), medium ($x_2 = 25\%$) and high ($x_2 = 40\%$).



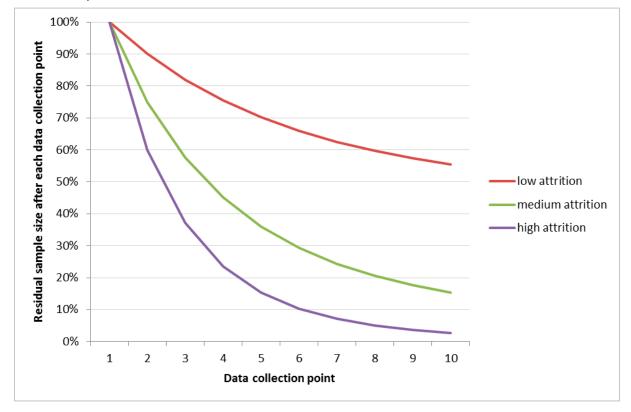


Chart 1: Sample erosion under three attrition scenarios

An obvious question to ask is how far point-by-point attrition rates vary as a function of the timeframe itself. For example, how much more attrition would we expect if the gap between each data collection point was two years rather than one but the study design was otherwise the same? This is an important question to ask because some studies require long timeframes to yield sufficiently rich data. If a two-year gap brought only slightly more point-by-point attrition than a one-year gap then a two-year gap might be the better choice over (say) a ten-year timeframe. Of course, it is true that a two-year gap undoubtedly brings a greater risk of measurement error when collecting retrospective data but it might be worth taking that additional risk in exchange for lower attrition over the target timeframe.²

Optimal data collection frequency is undoubtedly study-specific but few study leaders are willing to risk their substantive research goals by experimenting with different data collection timeframes. However, there is one 'natural' experiment we can look at that provides at least a partial answer. In 2010 the British Household Panel Study (BHPS) was integrated into wave 2 of its successor study, Understanding Society (USoc).³ Each of the 8,991 remaining households in the BHPS was randomly allocated to one of 12 survey months, meaning an average 11-month data collection differential between those households randomly allocated to survey month 1 and those randomly allocated to survey month 12. The chart below shows the relative USoc participation rates for these households as a function of survey month allocation.

² For a thorough coverage of the issues surrounding data collection frequency, see p.18-19 of Lynn, P. and Lugtig, P. (2016). 'Total survey error for longitudinal surveys'. Understanding Society Working Paper Series, 2016-07.

³ Wave 1 of USoc was used to recruit the new household panel, so wave 2 was the first 'longitudinal' data-collection point relevant to the BHPS panel. For a fuller description, see p.10 of Buck, N. and McFall, S. (2012). 'Understanding Society: design overview'. Longitudinal and Life Course Studies 3: 5-17.



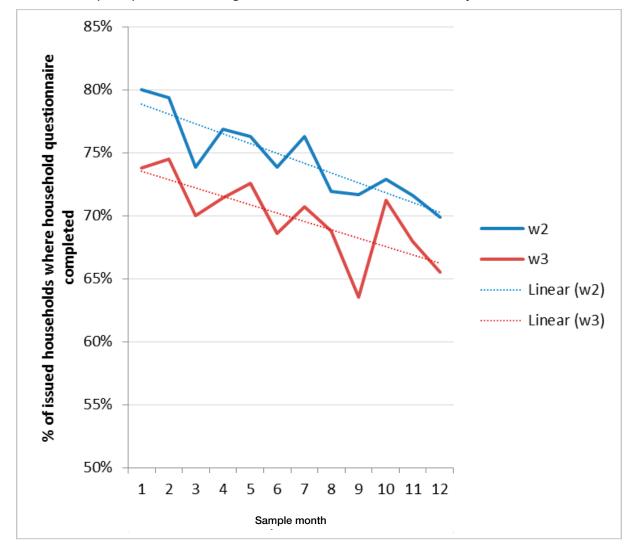


Chart 2: USoc participation rates among BHPS households as a function of survey month allocation

The solid blue 'w2' line shows the proportion of issued BHPS households in each survey month that provided household-level data at USoc wave 2. It is fair to say that the later the survey month the lower the participation rate and that this effect is broadly linear (see the dotted blue line approximation).⁴ The expected participation rate drops by an average of 0.8%pts for every additional month of lag since the last (BHPS) data collection point.⁵ We might, therefore, estimate that a 12-month lag would reduce the USoc wave 2 participation rate by 9.3%pts.⁶

⁴ The Pearson correlation coefficient (R) between survey month and wave 2 participation rate = -0.65.

⁵ The last BHPS data collection point was September through to December 2008. The lag between the sample issue date of the last BHPS data collection point and the sample issue date of Usoc wave 2 varied from 16 months (households allocated to sample month 1, January 2010) to 27 months (households allocated to sample month 12, December 2010).

⁶ We call this a 'natural' experiment rather than a true experiment because there is no control over other elements that might differ between survey months (e.g. different pressures on fieldwork resources). These might have had a negative effect on participation rates independent of the data-collection lag. However, in a comment on this note, Professor Peter Lynn at the University of Essex said, 'If anything, other factors would have worked in the other direction'.



The solid red 'w3' line shows the participation rate one year later as a function of survey month. On average, the participation rate is 6.3%pts lower than it was one year before. We also see that the (red dotted line) linear approximation is in parallel to the (blue dotted line) linear approximation for 'w2'. This means that the wave 3 participation rate does not vary as a function of the – randomly different – data collection lag at wave 2. In other words, the impact of the different wave 2 data collection lags on the participation rate is confined to wave 2 and does not carry over to wave 3.

The chart also provides a study-specific answer to the question 'is a one-year gap better than a two-year gap?' In this case, a one-year gap looks the better choice because the expected wave 3 participation rate for those allocated to survey month 1 is 4.3%pts higher than the expected wave 2 participation rate for an imaginary cohort allocated to survey month 13 (i.e. 12 months later). In other words, two data collection points – one at the start of a 13-month period and one at the end – would be expected to yield a higher net participation rate than just one data collection point at the end of that period. Adding an extra 'opportunity' to leave the study would be less damaging than adding 12 months to the gap between the last BHPS data collection point and the first (wave 2) USoc data collection point.

Of course, this evidence does not tell us the *optimal* gap between data collection points, merely the difference in BHPS attrition rates as a function of data collection lag. The optimal gap is a more complex function of attrition rates, measurement errors, and costs – and is also topic-specific. Consequently, for a study like BHPS/USoc which collects data on multiple topics, there is no single answer to this question. A one-year gap between data collection points is a reasonable compromise between these competing analytical goals and, importantly, is a good fit for the current scale of the study budget. However, as with all open-ended longitudinal studies, there is a risk of a future budget shock that would force a reassessment of the relative value of each design feature. In this scenario, switching from a one-year gap to a two-year gap between data collection points (either universally or alternatively only for less 'dynamic' subgroups) might have to be considered even if, methodologically, the one-year gap is preferable.