



the
SOCIAL WORK
TEACHING PARTNERSHIP
West Midlands

Social Work Research

Guidance, ideas and tools for developing and applying evidence-informed practice

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2. Introduction

Background

Social work has been considered a 'practical' subject, an applied social science that draws on other disciplines to provide a research base to inform social work theory and practice. As social work has developed as a graduate profession, there has been a shift towards social work developing its own research base. Furthermore, effective social work practice should integrate research findings and theoretical knowledge into practice settings. Research skills are therefore included in and considered as an important part of pre-qualifying social work programmes.

Most social workers will not have undertaken research since qualifying, and the thought of doing research can provoke a series of anxiety and worries. There can be a sense of excitement at the prospect of discovering new insights into a topic of interest, however there can be a sense of confusion over what you are meant to be doing and when. One of the aims of the West Midlands Social Work Teaching Partnership is to strengthen the development and use of social work research in the region, providing an opportunity for practitioners to develop their skills in researching/theorising practice and influencing practice improvements.

Purpose

This guide aims to demystify research by providing social workers and social work students with a handy reference guide that explains key concepts and summarises how to plan research activity and the different types of research that can be undertaken. It provides support and guidance on the core skills required to undertake and use research, recognising the everyday skills and techniques involved. For links to additional resources please see the appendix.

Meeting professional standards

As social workers, informing our practice with relevant research is an *expected requirement of good social work practice*. Research should not be considered as something separate or distinct from practice but is intrinsic to it. This is because relevant research can be used to provide evidence that supports our professional decision making. Effective social work practice is a fusion of professional judgement and theoretical knowledge which develops and is supported by relevant evidence-based research.

Just as practice needs research, research needs social work practice. Social work research does not take place in a laboratory; social work is an *applied* social science. Social work research advances only by being undertaken in the real world, in the social work practice environment, and in collaboration with the people the research is about or for. Practice and research are therefore a two-way street.

There is a range of professional standards that social workers are required to adhere to. The **Professional Capabilities Framework (PCF)**¹ is the framework for social work practice and learning in England. It sets out nine common domains of capability that we expect to develop as social workers, and which others can expect of us. The PCF has nine domains which focus on specific areas of practice. This guide relates particularly to Domain 5: Knowledge, including the need to:

5.1 Demonstrate a comprehensive understanding and use of knowledge related to your area of practice, including critical awareness of current issues and new evidence-based practice research.

5.10 Recognise the contribution, and begin to make use, of research to inform practice.

1

<https://www.basw.co.uk/system/files/resources/PCF%20Final%20Documents%20Overview%2011%20June%202018.pdf>

5.11 *Demonstrate a critical understanding of research methods.*

Secondly, there is the **Post-qualifying standard: knowledge and skills statement for child and family practitioners**² which includes the need to:

‘Provide support based on best evidence, which is tailored to meet individual child and family needs, and which addresses relevant and significant risks.’

(Statement 1- Relationships and effective direct work)

‘...Communicate clearly and sensitively with children of different ages and abilities, their families and in a range of settings and circumstances. Use methods based on best evidence...’.

(Statement 2- Communication)

‘...Use child observation skills, genograms, ecomaps, chronologies and other evidence-based tools ensuring active child and family participation in the process...’.

(Statement 6 - Child and family assessment)

‘...Make use of the best evidence from research to inform the complex judgements and decisions needed to support families and protect children...’.

(Statement 9 - The role of supervision)

²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/708704/Post-qualifying_standard-KSS_for_child_and_family_practitioners.pdf

And the **Knowledge and Skills Statements for Social Workers in Adult Services**³:

'...They should be able to communicate clearly, sensitively and effectively, applying a range of best evidence-based methods... Social workers should have a high level of skill in applying evidence-based, effective social work approaches...'

(Statement 7 - Direct work with individuals and families)

'...Social workers should have a critical understanding of the difference between theory, research, evidence and expertise and the role of professional judgement. They should use practice evidence and research to inform the complex judgements and decisions needed to support, empower and protect their service users...'

(Statement 8 - Supervision, critical reflection and analysis)

Finally, there is a requirement for social workers to use research and evidence-based practice as set out in the regulator, **Social Work England's Professional Standards**⁴:

Standard 3. Be accountable for the quality of my practice and the decisions I make.

3.2 Use information from a range of appropriate sources, including supervision, to inform assessments, to analyse risk, and to make a professional decision.

3.5 Hold different explanations in mind and use evidence to inform my decisions.

Standard 4. Maintain my professional development

³https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/411957/KSS.pdf

⁴ https://www.socialworkengland.org.uk/media/1640/1227_socialworkengland_standards_prof_standards_final-aw.pdf

4.2 Use supervision and feedback to critically reflect on, and identify my learning needs, including how I use research and evidence to inform my practice.

4.3 Keep my practice up to date and record how I use research, theories and frameworks to inform my practice and my professional judgement.

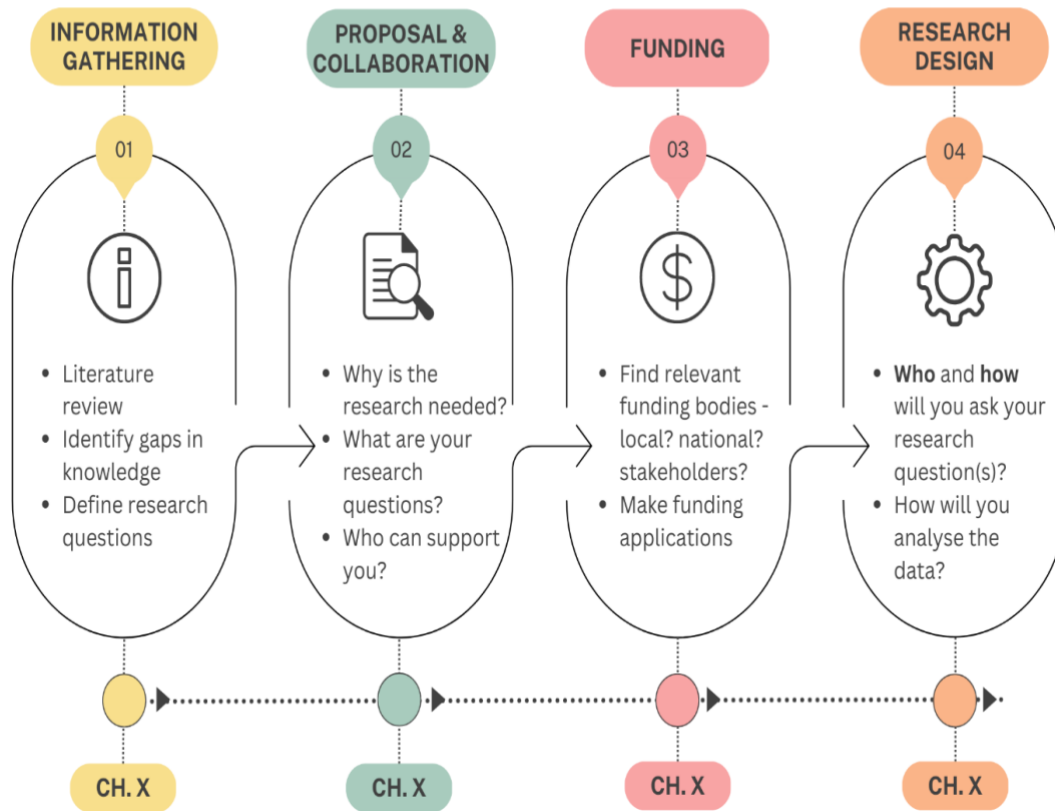
4.4 Demonstrate good subject knowledge on key aspects of social work practice and develop knowledge of current issues in society and social policies impacting on social work.

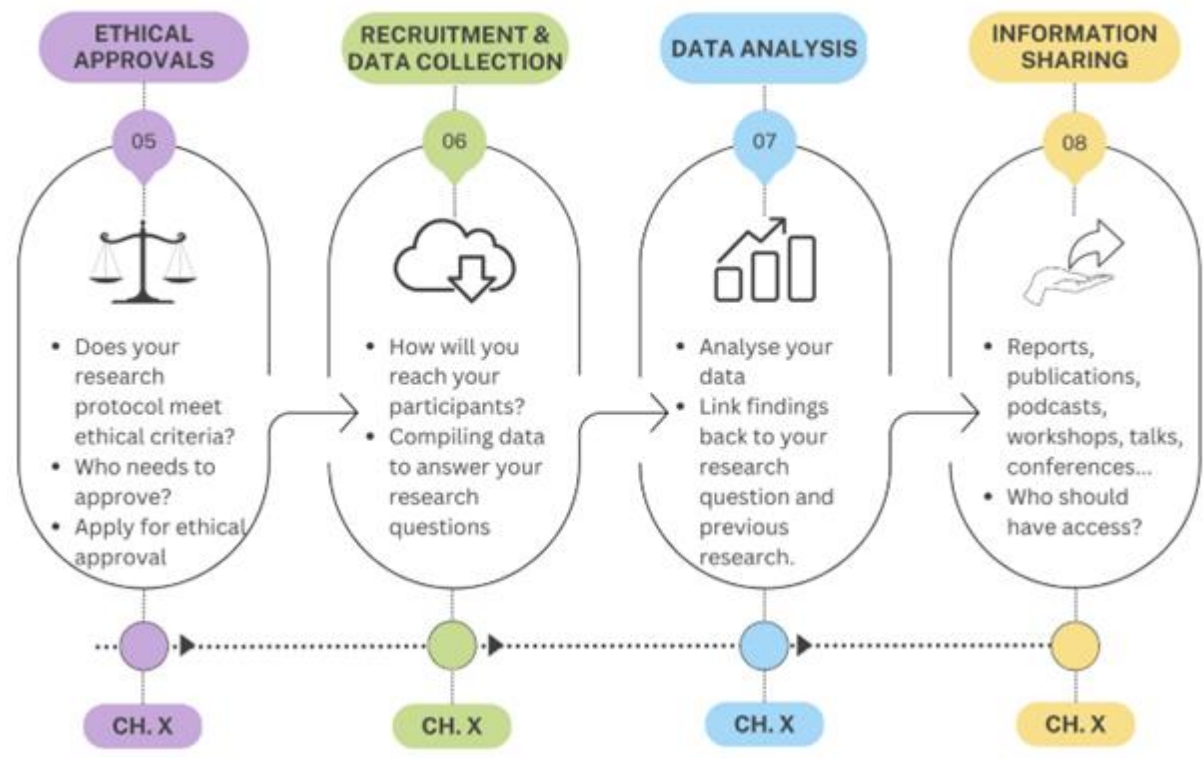
4.5 Contribute to an open and creative learning culture in the workplace to discuss, reflect on and share best practice.

4.6 Reflect on my learning activities and evidence what impact continuing professional development has on the quality of my practice.

You can use this guide and timeline to help you navigate through the research process:

Research Timeline





3. Knowledge for social work practice

Much of the knowledge for social work practice is derived from multiple sources, for example social theory, social research and the experience/knowledge of service users, families, communities, service organisations and social workers, and related professionals. Furthermore, social work knowledge is also informed by many related disciplines, for example, psychology, sociology, anthropology and psychiatry. Trevithick (2008)⁵ identifies the three areas of (1) practice knowledge, (2) theoretical knowledge and (3) factual knowledge that inform social work practice. The existence

⁵ Trevithick, P. (2008) Revisiting the knowledge base of social work: a framework for practice. *British Journal of Social Work*, 38 (6): 1212-37.

of a social work knowledge base is seen as essential to social works credibility, authority and professionalism.

The Social Care Institute for Excellence (SCIE 2003)⁶ provided a valuable model for the classification of knowledge:

- Organisational – knowledge gained from organising social care
- Practitioner – knowledge gained from doing social care
- Policy community – knowledge gained from the wider policy context
- Research – knowledge gathered systematically with a planned design
- User and carer – knowledge gained from experience of and reflection on service use.

Service users and carers can assist in knowledge creation by setting research priorities, by contributing to research activity as peer-researchers and by providing their perspectives as users of services.

As social work is closely related with these sources of knowledge, social workers need to have skills to contextualise and engage with these different sources and learn how and when to use them.

Knowledge is context specific with meaning relative to the perspectives of the various participants. Social workers often claim to use a knowledge base eclectically, picking and mixing in response to the changing needs of their clients. This results in a nebulous relationship between knowledge and practice, making it difficult for social work practice to be methodically scrutinised. Furthermore, it is suggested that social work knowledge is gained through experiential or situated learning rather than from formal taught theory. For example, Munro (2008)⁷ suggests that child protection social workers are inclined to rely on intuitive reasoning with limited analysis of application of theory.

⁶ <https://www.scie.org.uk/publications/knowledgereviews/kr03.asp>

⁷ Munro, E. (2008) *Effective Child Protection*. London: Sage

The limited empirical research relating to qualified social work suggests that formal (textbook) theory has little influence on conscious reasoning, instead social workers describe knowledge related to skills-based processes of 'knowing how'. This highlights the debate regarding social work basing its authority on formalised theory.

Reflection

Reflection is part of the ongoing learning process whereby social workers use knowledge to understand issues and apply it to practice. Reflection is seen as critical to the decision-making process, and frameworks, for example Kolb and Fry (1974)⁸ and Gibbs (1988)⁹ can be utilised to support social workers in reflection. Reflection often takes place within social work supervision, although this can exclude the more subjective practice information that is vital to the social work role.

Schon's (1983)¹⁰ classic text on the reflective practitioner recognises that a rigorous approach to knowledge can exclude the more subjective information vital to the social work role. Schon describes the use of common sense or knowledge-in-action to produce reflection-in-action or reflective conversation with the situation. More importantly Schon (1987)¹¹ suggests that social workers can be taught to be more reflective in their practice and therefore more effective in their decision making.

4. Evidence-based practice

⁸ Kolb, D.A. and Fry, R.E. (1974) *Towards an applied theory of experiential learning*. Boston: Alfred P Sloan School of Management.

⁹ Gibbs, G. (1988) *Learning by doing: a guide to teaching and learning methods*. Oxford, FE Unit Oxford Polytechnic.

¹⁰ Schon, D. (1983) *The Reflective Practitioner: how professionals think in action*. London: Temple Smith.

¹¹ Schon, D. (1987) *Educating the Reflective Practitioner: towards a new design for teaching and learning in the professions*. San Francisco: Jossey-Bass.

What we mean by evidence

Evidence can have a few different meanings, depending on the context. For example, in a court case, evidence is presented to prove or disprove an allegation, and is subjected to cross-examination to arrive at a judgement on its reliability and relevance to the case. By contrast, in science, evidence is used to support the development of scientific theory. Such evidence must be capable of being replicated in repeated tests and verified using consistent methods of observation and measurement.

What legal and scientific evidence has in common is that the evidence must stand up to scrutiny. Evidence that withstands scrutiny adds value to it, causing it to be considered 'correct', or 'true'. It is generally perceived that evidence validated in this way equates to 'truth', and is therefore factual, and is consequently something that we can *know*.

However, we must be cautious about such perceptions. Scientific theory deduced from evidence is only considered 'true' until contradictory evidence is identified. At that point, the scientific theory may be amended or even replaced with a new one that can explain the contradictory evidence. What were previously considered scientific 'facts', things that we 'know', can therefore change over time. Similarly, evidence used to establish guilt or innocence 'beyond reasonable doubt' can subsequently be found to be flawed and can be overturned on appeal.

Evidence is therefore relevant to establishing a *contingent truth*, one that is as true and correct at the time, insofar as we understand things at that time. It can be used to support and establish the best knowledge we have available to us but those things we know may change later. The Government funded National Institute for Health and Care excellence (NICE) is responsible for providing evidence-based national guidance across health, public health and social care. NICE guidance shows how the evidence led to each recommendation for safe, effective and cost-effective practice. Where there is a gap in the evidence NICE provides recommendations for research-
www.nice.org.uk

Defining evidence-based practice

In social work we talk about ‘evidence-based’ practice. As noted previously, we must be mindful that what we consider ‘evidence’ may not equate to ‘truth’ or represent the entirety of a solution to the circumstances or problem under consideration. Evidence that we may present at hearings, for example verifiable facts about a service user’s circumstances, the history of their engagement with services etc. can be presented accurately but may be subject to challenge as to relevance and applicability. Just like legal or scientific evidence, evidence utilised in a practice context needs to be capable of withstanding scrutiny.

In addition, practice is not solely about applying theory and using evidence-based research to plan the intervention proposed. Searching for the latest research and assessing its relevance and usefulness prior to undertaking appropriate action is not realistic in most cases. Action may be required immediately, and time may not be available to undertake research in advance, or to review the latest academic literature.

Social work practice is more immediately informed by other, non-research related factors. As identified above, these factors include the social worker’s professional experience, which brings tacit, and immediately available, knowledge of how to proceed, of how to deal with situations. Practice will also be informed by organisational policy and guidance. Practice is also likely to be delimited by resource constraints and scheduling considerations. In most cases, experience and tacit knowledge, organisational policy and guidance and resource or scheduling realities will tend to be foremost in the social worker’s practice.

It is during reflection / supervision, when social workers review their practice experiences, that there can be an opportunity to review and consider if knowledge from theory and evidence-based research can be used to provide further insight to practice. Reviewing social work theory or research literature is an activity that can provide knowledge that can be *useful* to the social worker, developing and deepening their professional, tacit knowledge. In this context, ‘evidence’ can be considered as any research that supports the development of social work practice.

However, just like legal or scientific evidence, conclusions that can be deduced from social work research evidence: theories, verdicts, assumptions, knowledge are contingent and capable of change, over time. Therefore, informing practice with research should be a career-long activity.

The importance of evidence-based practice

Much of the early material supporting an evidence-based approach to social work stressed the need to establish the effectiveness of social work to promote understanding and activity (Gambrill 2001)¹². The value of an evidence-based approach to social work has been considered in relation to agencies, practitioners and service users. In SCIE report, Marsh and Fisher (2005)¹³ highlights the six reasons for an evidence-based approach to social care:

1. The impact of professional decisions on people's immediate circumstances
2. The impact of professional decisions on people's futures
3. The need to challenge fundamental assumptions
4. The need for safeguards where professionals have extensive powers
5. Informing the public
6. Informing service users and enabling them to participate in decision making

In summary, an evidence-base can inform 'what's best?' (quality), 'what works?' (efficacy) and 'who decides?' (equality). In practice however, the utilisation of research findings has proved to be a complex task. It is important that social workers are taught the skills to search for and appraise relevant research evidence and synthesis meanings in a way that is accessible and applicable to practice settings.

¹² Gambrill, E. (2001) Social work: an authority based profession. *Research on Social Work Practice*, 11 (2): 166-75.

¹³ Marsh, P. and Fisher, M. in collaboration with Mathers, N. and Fish, S. (2005) *Developing the evidence base for social work and social care practice: using knowledge in social care, report 10*. London: Social care Institute for Excellence.

5. Identifying relevant research

Social workers should be skilled at identifying relevant research on topics related to areas of practice. Being confident in searching bibliographic databases is an essential skill for the social work profession in the digital age. This particularly relates to domain 5.1 of the PCF on awareness of new research.

Methods of Identifying relevant research

A literature search is the first stage in the search for relevant research. It is an organised investigation for material relevant to the topic across a range of sources.

There are four main types of literature:

- Textbooks
- Journal articles
- Official publications
- Grey Literature

Textbooks can provide an overview of established knowledge on a topic, rather than being the place to publish the findings of recent research. Regular publications, such as journals, are designed to publish up-to-date materials, including primary presentation of findings of research. Academic journals typically publish a new issue between four and twelve times a year. The set of issues for a particular year is called a volume. Each issue of a journal contains several articles. For articles to be accepted for publication it must be peer reviewed by a minimum of two peer reviewers familiar with the field. Journals are available electronically via the internet with universities and other organisations subscribing each year to defined sets of journals through agreements with publishers.

An official publication is any document, printed or produced by any other reprographic method in multiple copies, issued by an organization that may be considered to be an official body, and available to a public wider than that body. Examples can include Government publications.

Grey literature is a term used to apply to any papers that are not reviewed by experts in the field. Grey literature includes conference papers, organisational reports and news sheets as well as theses and dissertations published as part of academic studies. In favour of excluding grey literature is the argument that the highest quality research will be published in peer-reviewed journals.

Bibliographic databases

The search for relevant research starts with a systematic examination of a number of bibliographic databases. Examples include: *Scopus*; *Medline*; *PsycINFO*; *Social Science Citation Index*; *Applied Social Sciences Index and Abstracts*; *Social Services Abstracts*; *Social care Online*; *Social Work Abstracts*; and *LexisNexis*. Bibliographic databases contain collections of abstracts (summary) and references for articles published in a range of journals relevant to the focus of that database. These journal articles can be open access which means they are free to access to anybody or behind a subscription wall. The databases contain mechanisms to facilitate searching these abstracts for your topic of interest. Since there is no one database that can be considered a primary source for identifying social work research, a number of databases are often used to search for material in social work. Most databases have 'basic' and 'advanced' search engines with advanced searches providing more specific and detailed searches.

Internet searching

Each journal has a website on which it puts information about each article published. This usually includes the reference and abstract for free, even if there is a charge to access the full text. In principle, therefore internet search engines should be able to

retrieve at least the reference and abstract of any published article. Search engines (such as Google Scholar, Yahoo, Ask etc) are good enough to include alongside searching bibliographic databases, however, they generally only retrieve a modest fraction of the relevant articles available. See research tool kit appendix.

Furthermore, specific websites such as SCIE's Social Care Online¹⁴, Research in Practice¹⁵, the British Association of Social Workers (BASW)¹⁶, What Works for Early Intervention and Children's Social Care¹⁷ ¹⁸_[OBJ] provide a large range of knowledge and resources on social care and social work. This list is by no means exhaustive.

Systematic searching

Bibliographic databases have a system whereby when each abstract is added, it is indexed against a standard set of terms. This allows for **index-term searching** in which concepts are reasonably well captured by the index terms. If the concept does not correspond reasonably to an index term on a particular database, then **text-term searching** must be used, which means instructing the database to search in the titles and abstracts of articles for specific words. It is important not to think of one's own preferred term for what is regarded as popularly acceptable. Terms vary over time and across countries and cultures. For example, 'looked after children' is a term used almost exclusively in the UK, with authors in most countries using the term 'children in care'. The task is to retrieve relevant articles on the chosen topic regardless of terminology of the time, place and culture.

Most databases have a system for truncation to enable multiple variations of a word root to be searched at once, for example an asterisk (*), a question mark (?) or a dollar sign (\$). An illustration of this is *Child** will retrieve *child, children, child's, children's* etc. Similarly, most databases have a system of 'wild cards' using the same symbol

¹⁴ <https://www.scie-socialcareonline.org.uk/>

¹⁵ <https://www.researchinpractice.org.uk/>

¹⁶ <https://www.basw.co.uk/what-we-do/policy-and-research/social-work-knowledge-and-research>

¹⁷ <https://whatworks-csc.org.uk/>

¹⁸ <https://www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases>

as for truncation that can be used to represent any letter or no letter within a word. For example, *organi*sation* will retrieve both *organisation* and *organization*. Abbreviations can be in common use therefore, it is also recommended to use the abbreviated and the full version of common abbreviations, joined by 'OR'. For example, HRA OR Human Rights Act.

Search engines also use Boolean operators which are advanced search functions which enables you to narrow your research and find the most relevant literature. The most common Boolean operators are 'AND' 'OR' and 'NOT'. For example, inserting the word 'AND' between search terms will narrow the search to texts containing both terms. Inserting the term 'OR' will broaden the search to include texts that contain either term. To capture alternative terminology, brackets can be used, for example (foster care OR fostering service) AND (breakdown OR disruption). Inserting 'NOT' will exclude any resources containing that search term, for example 'community care' NOT 'mental health' will identify articles on community care but not those that refer to mental health.

It is worthwhile putting together a research profile to direct the search. This should include the research topic/interest/question, keywords and parameters. A date limit can be used for searching depending on the aspect of the research that is being sought. The amount of time it takes a database to search can generally be reduced by limiting the number of years searched. If the search yields too much information the research terms may need finetuned. Similarly, if there is too little information, it might be that the area has very little written about it, or again the search terms may need fine tuning.

Recording the search

Undertaking a search is a detailed exercise that requires knowledge, skill and care. It is important to keep a record of the steps taken in carrying out the search as evidence of rigour in reviewing the literature. This includes, recording the data bases used, the

concept groups, search terms used and the date on which the searches were undertaken. Often the abstract of the articles should be enough to determine whether the article is relevant for review. Look at the statement of purpose of the study and the conclusions, bearing in mind the focus of the research topic. Key aspects of each study should be extracted and presented in a table:

- Author(s)
- Year
- County of study
- Research design
- Intervention and outcome measures (if relevant)
- Study participants
- Data collection method
- Main findings

Completing such a table will require knowledge of research methods which will be discussed below.

6. Appraising research

Being able to access and analyse critically the research that may inform practice is a valuable skill for the professional social worker. It is important that professionals in the field can discern the quality of papers and the extent to which they gather valid data to inform practice. This particularly relates to domain 5.11 of the PCF on demonstrating an understanding of research methods.

Qualitative research

Qualitative research aims to capture some of the richness and complexity of people's lived experience, and its focus is the natural settings in which people live and work,

help and are helped. Qualitative research is seeking an understanding of what is generalisable in terms of being useful for understanding in a general sense of what is typically happening for people in this situation. There are various approaches to qualitative research which will be discussed further below. Many of these are general principles for research.

Rationale

The first step in appraising the quality of research is to question whether the rationale for the study is clear. The primary justification for qualitative research is that the experience or situation is unclear or ill-defined and that there are no concepts to describe or discuss it. Therefore, the rationale is that there is a topic which requires exploration.

Sample

The primary requirement of a sample for a qualitative study is that the respondents are 'information-rich' and that they have experiences relevant to the focus of the study. Qualitative studies generally become weaker when participants are asked about hypothetical situations which are further removed from their own experiences. The key skill for the qualitative researcher is to continuously reflect on the data gathered, comparing new material to what has already been gathered. As the number of interviews or focus groups increases, gradually the number of new themes emerging slows down, and 'saturation' where no new themes emerge is reached. Sampling to saturation would be an indicator of strength in a qualitative study.

Ethics

Ethical issues for qualitative research relate to the face-to-face nature of data gathering and the inherent subjectivity of the researcher. There is the possibility of bias due to preconceived ideas of the researcher or the perceptions of the respondents

about the researcher. There may also be researcher bias in the analysis of data. Therefore, it is important for qualitative research to address this subjectivity by ensuring that there is a reflective process built into the study. It is important that the researcher reflects on their role, assumptions, frame of reference and how they may be perceived to enable greater objectivity. Furthermore, engaging clients as co-researchers can be regarded as an admirable ethical principle. As with all research, appropriate ethical approval is essential and should be recorded in the paper reporting the study. Ethical considerations are discussed further, below.

Data collection

A qualitative study should make the method of data collection clear. Most often this will be interviews or focus group, but you may find reflective groups or case studies used. The study should provide detail on the number and length of interviews, the degree of structure, with a justifiable rationale for the choice between group and individual methods of data gathering. Ethnographic studies make extensive use of observation as a data gathering method which is more susceptible to criticism of researcher bias. Again, reflexivity is crucial in such studies.

Analysis of data

As the transcripts of interviews or focus groups are analysed, the main themes are identified in a process generally known as 'thematic analysis'. The themes being identified are compared and meanings assigned in a process called 'coding' the data. Analysis of qualitative data is about the representation of social phenomena.

Statement of findings

The statement of findings should be clearly presented, and themes should be substantiated with direct quotes or observations to enable the reader to appraise the relationship between the data and the analysis. A good qualitative study aims to create a new theoretical model which provides an understanding of what typically happens in

the types of situations or processes researched. A good theory or model has a clear focus and is coherent and useful in understanding some aspect of social life.

Credibility of findings

There should be a visible audit trail to ensure that the research supervisor can guarantee that the words spoken by the respondents were attributable to them. It is expected that the data is recorded, transcribed and ascription made to each respondent. An important methodological feature that can add quality to qualitative research is where the main researchers coding is 'verified' by another researcher being involved in the coding. Computer software can improve the quality of analysis by making large data sets more manageable. Questions which might be asked in terms of qualitative research include¹⁹:

- Did the sampling frame contain known bias?
- Was the questioning and context effective for participants to express their views?
- Do the themes reflect the meanings of participants as in the quotes provided?
- Is there enough internal evidence for the explanatory accounts developed?
- Are findings true to the data and do they allow the reader to see the analysis used?

Other approaches to enhance rigor include **respondent validation**, whereby participants on the study are asked to comment on the findings of the study, or **expert validation**, whereby experts in the field who have not participated in the study are asked to comment on the study findings. Also, another key concept is **reliability**, that is, is there enough information provided for the study to be replicated.

Quality of discussion and conclusions

It is important that the conclusions of the study are justified by the findings. Alternative explanations for the data should be explored rather than ignored. Also, a study has

¹⁹ Taylor, B.J., Killick, C. and McGlade, A. (2015) *Understanding and using research in social work*. London: Sage

added credibility if its findings are triangulated with other studies. In the discussion section all papers should discuss the extent to which the findings conform or contradict previous studies in the field. For qualitative research the study should explain how findings fit with other theoretical frameworks and how the new conceptualisations relate to other theory to create a fuller theoretical model, or conversely, contradict a model, leading to the need for further research.

Generalisability

For qualitative research generalisability is not based on the statistical representativeness of the sample from which the participants are drawn, as it would be for a survey. The key issue is whether the theoretical principles developed can be applied to a wider population.

Quantitative Research

Quantitative research is the process of collecting and analysing numerical data. It can be used to find patterns and averages, make predictions, test causal relationships, and generalise results to wider population.

Surveys

A survey is the most commonly used method of gathering data (although not exclusively quantitative) and can be defined as:

'...a method of asking an agreed series of questions of a subset of a population, to gather information that can be analysed to describe specific characteristics of the total population'²⁰.

It is important that a social worker can appraise research evidence provided in from survey methods whether they seek to describe the characteristics of a group or

²⁰ Taylor, B.J., Killick, C. and McGlade, A. (2015) *Understanding and using research in social work*. London: Sage

investigate the relationship between two or more variables. When assessing the quality of a survey report the practitioner is considering the strength of its method and the credibility of the conclusions. Four key measures have been identified in evaluating a survey²¹:

- *Valid*: measures the quantity or concept that is supposed to be measured
- *Reliable*: measures the quantity or concept consistent or reproducible manner
- *Unbiased*: measures the quantity or concept in a way that does not systematically under – or overestimate the true value
- *Discriminating*: can distinguish adequately between respondents for whom the underlying level of the quantity or concept is different

Rationale

The research question should flow logically from the background and literature review. This should describe the intentions of the study and the aspect of the subject being investigated. The existing literature to the theme will be critically analysed to identify existing knowledge and gaps to be filled. The research design needs to be based on a clear research question which is often expanded into aims and objectives. Finally, the rationale may describe why the study is important and its potential benefits to the knowledge base of the profession. A research hypothesis is what the research predicts will be the outcome. It is stated at the beginning of the study to guide the objectives.

Research design

A key issue for survey research is the mode for administering the questions. The chosen mode should be justified, and potential strengths and weaknesses discussed. Examples are self-completion questionnaires such as postal surveys or online surveys. Interview based surveys can be face to face or take place via telephone or

²¹ McColl et al (2001) Design and use of questionnaires: a review of best practice applicable to surveys of health staff and patients. *Health Technology Assessment*, 5 (31).

online platforms. Also, an existing data source, such as a case file or electronic records can be surveyed. The research design will have to take into consideration the time, cost and scope of administering a survey. In the rationale, a survey report should state the constraints and justify the chosen design. The research design should ensure there is no variation in administering the survey as this could distort the findings and limit credibility.

Sampling strategy

A key issue for survey design is the selection of the respondent group. It is important to ask how able the chosen respondents are to answer the research question. Furthermore, it is important factor in appraising the quality of quantitative survey-based research to consider the extent to which the respondents represent the focus population. Ineffective sampling is one of the ways in which an error can be introduced into a survey. All surveys introduce sampling error, but good surveys will seek to reduce this to an acceptable level. Researchers need to describe the sampling method, the sample size and the response rates. A power analysis will calculate the necessary number of responses to allow findings to be generalised with some confidence. See appendix tool kit for an example of calculating a power analysis.

Ethics

Most of the published research will have ethical permission from the relevant agency. There are strict ethical requirements related to research undertaken within organisations such as universities and government agencies. Research undertaken by social work practitioners also needs ethical approval and governance, unless the research fits the service evaluation model. It is this vital any practitioners undertaking research seek ethical approval and governance from those within their organisation and/or local authority, and this maybe someone who sits outside social work services. Studies that have received ethical approval can be deemed to have included

safeguards in relation to confidentiality and Data Protection, voluntary participation and informed consent, and the prevention of causing harm and distress.

Method for data collection

A potential weakness of the survey method is the inconsistency related to the need for interpretation in the question-and-answer process. The challenge for the researcher is to reduce the potential for variation. Any appraisal of a survey method should establish the extent to which the design includes:

- *Clear and explicit questions.* The research participant needs to understand exactly what is being asked of them, and the possible answers should cover all potential responses. Terms that are vague or could have more than one meaning should be avoided.
- *Objective and subjective measures.*
- *The use of scales.* Rating scales gather qualitative data in a quantitative manner, adding depth and meaning.
- *Validated tools.* It is possible to incorporate a tool that has previously been validated if the tool is used in the same context.
- *Piloting.* Questions should be tested with a small group of respondents who are like the focus population, to identify any potential areas of confusion or mistakes.

Analysing data

Data analysis needs to be carefully, systematically undertaken and explicitly described to improve the accuracy of the final results. Statistical procedures can be used to describe frequencies and distributions or to measure the impact of independent variables, for example age. The manipulation of data can be deliberately or inadvertently misused causing misinterpretation or incorrect conclusions. Therefore, when appraising a survey report, attention should be given to the way in which the

data has been analysed. It is therefore helpful to have a basic understanding of statistics. The most commonly used descriptive measures are frequency, percentage, range, mean, mode and median. Computer software including excel can be used to provide a descriptive summary of each variable allowing the prevalence and distribution to be discussed.

Research findings

Quantitative data can be presented in the form of **descriptive statistics** that describe the sample using summaries of each of the measured characteristics. These can be presented as frequency tables and measures of central tendency like the mean value. An example would be the numbers of a sample who worked in children's services or the average age of the sample. Similarly, findings can be illustrated using histograms or charts. **Inferential statistics** make predictions about entire populations by using techniques to investigate relationships and estimate how likely these are to occur in the broader population. Statistical advice is often sought on this. A good research report will present findings in a manner that is clear and understandable, and it should refer to all the data gathered and explain any omissions or low response rates. The discussion section will present a range of possible meanings and allows for some interpretation and application of the findings. However, it is important the author does not 'spin' research results to support an argument or justify an intervention.

Generalisability

In appraising a research survey report, the reader needs to consider how relevant the material is to their setting and location. The reader must compare contexts and the populations before presuming that the findings can be generalised.

7. Undertaking your own research

The first step in undertaking research is choosing a research topic and developing it into a specific research question. You need to ask yourself ‘what are my research interests?’. You may choose an area to research because of a personal or professional experience, or interest in an academic subject or awareness of a gap in the literature. To maintain enthusiasm over an extended period it is better to choose a subject that you are genuinely interested in.

Translating a general research interest into a research question can be quite challenging as it is important that your research question is not so broad that it is unrealistic for you to answer it, or too narrow that it lacks sufficient substance. You also need to consider what is it possible to study? What can you ethically research – consider how your research might impact on your participant’s? What can you access to study? Do you have the time and resources to study? It is important to formulate a research question as your project develops as it focuses the choice of the research design and the literature review.

It is important to allow enough time to undertake your research and allow for possible delays. For example, delays can occur when trying to obtain ethical approval, or participants cancel, and you must rearrange appointments. Also, the time taken to transcribe interviews or complete data analysis can take longer than anticipated.

It can be worthwhile to keep a research journal in which, for example, you jot down ideas, record results of your literature searches, keep notes of the texts you have read or write to do lists. A research journal can be an invaluable aid to promoting reflexivity

as it enables you to capture and examine your thoughts on the research process. It can facilitate clarity of thinking by working through confusions or dilemmas. As you write up your research it enables you to track your steps and remind yourself of the earlier steps. Also, throughout the process it is helpful to have all your material in the one place.

Terminology

It is important not to be intimidated by research terminology. There are specific terminology and definitions which are generally agreed upon. Take time to read and understand the terminology set out in Section 14 below.

Research Design

Once you have identified a research topic, you need to consider which research approach and research method to use. Research has traditionally been divided between *quantitative* and *qualitative* approaches. Both approaches can provide useful insights into a research topic.

Quantitative research tends to emphasise quantification and measurement which can be analysed using statistical tests to establish a relationship between variables, for example poor mental health and social exclusion. This can lead to testable hypotheses, for example, the hypothesis that higher levels of mental ill health are likely linked to higher levels of social exclusion. For examples of different types of tests and research questions, please see appendix Toolkit.

Qualitative research seeks to explain the meaning of social phenomena through exploring ways in which individuals understand their social world. For example, a qualitative study would explore the meaning of what is happening, for example, whether people with mental health issues are experiencing stigma or prejudice, whether participants are isolating themselves as a means of coping with distressing symptoms, or some other explanation.

Every approach to research has underlying assumptions about the nature of knowledge and the social world, which is referred to as *epistemological position*. Quantitative research has been influenced by positivism an approach to research which tends to follow a traditional scientific model which emphasises ‘objectivity’ by seeking to remove the values of the researcher from the study, with the role of the researcher is to infer laws that explain relationships between observed phenomena. Qualitative research has been influenced by interpretivism as an epistemological position which challenges the traditional scientific approach of positivism. Interpretivism argues that it is not possible to remove the researcher from the study as the researcher brings their own thoughts, values and beliefs as well as ethnicity, class, gender etc into the study. *Reflexivity* has been identified as the practice of researchers being self-aware of their own beliefs, values and attitudes and their personal effects on the research setting.

Within your research design consider the groups you are going to be working with. Consider how the group involved in the research can be involved and contribute to the research.

Types of Research Design

Action research is associated with smaller scale research projects that seek to address real-world problems, particularly in practitioners that want to improve practice. Rather than just studying the social world, action research seeks to change it in practical ways. Action research is not a specific research method but an approach that stresses the importance of links with real-world problems.

Participatory action research is a form of action research which involves those that are most affected. It challenges traditional power imbalances between the researcher as ‘expert’ and the research participant as a ‘passive subject’.

Appreciative enquiry is a relatively new theory which takes a positive approach to organisational development. It aims to identify good practice, design effective

development plans, and ensure implementation. It focuses the research process around what works, rather than trying to fix what does not.

Co-operative enquiry a way of doing research with people where the roles of researcher and subject are integrated. This means that all active participants are fully involved in research decisions as co-researchers.

Case study research is a detailed enquiry into a single example of a phenomenon. It is a more focused study in which a variety of research methods can be used. Three types of case study have been identified: a *critical case* is chosen because it challenges an existing theory of hypothesis; the *unique case* is chosen because its distinctiveness is its merit; and the *revelatory case* is chosen because it can provide new insights or ideas.

Clinical data mining is a practice-based research strategy to systematically analyse data gathered from agency records. It can be used by practitioners to evaluate their own interventions and reflect upon their own practice.

Ethnography has its roots in anthropology, where it has been used to develop an understanding of cultures or settings. It traditionally combines extended observations and qualitative interviews and can involve the researcher participating overtly or covertly in people's daily lives for a period of time. A key feature of ethnography is that it provides rich and detailed data which can examine subtle social and cultural issues that could be difficult to research using other approaches. However, the ethnically sensitive nature of observation and the time required can pose a challenge for this type of research.

Experimental and quasi-experimental research design are closest to traditional scientific approaches as it places most emphasis on removing possible sources of bias which is achieved through introducing a degree of randomisation at different stages of the process. The classic experimental design is the randomised control trial, in which participants are assigned to either an experimental or control group. The experimental group receives the intervention while the control group does not. The effects are then

measured in both groups. This does however raise ethical issues as one group does not receive the intervention. In social work to mitigate this, the design can be adapted to include two different types of intervention, or the control group receives the intervention immediately after the other receives it, the control group effectively being on a waiting list. Also, a common quasi-experimental design is pre and post design, in which a group of participants experiences an intervention and key variables are measured before and after the intervention to determine if there has been a change.

Narrative approaches are interested in in the storied nature of human conduct in which we respond to experiences by constructing stories and listening to the stories of others. Narrative research is often interested in the issues of identity

8. Undertaking a literature review

Once you have established a research interest and have started to think about a research question, the next step when undertaking research is gathering information and evidence from a variety of sources under a literature review in order to establish what is already known about your area of research. See tool kit appendix for advice on literature review recording.

What is a literature review?

A literature review is a comprehensive summary and critical appraisal of the literature associated with your research topic. In traditional research you will discuss your literature findings at two stages. Initially you will present your literature review to demonstrate your understanding of what has already been written in the field. After you have presented your own findings, you revisit the literature to compare your findings with previous research. Your literature review is an ongoing process that starts at the beginning of your research and continues throughout the project. This involves updating your literature review as new material becomes available and as you undertake your data collection, new areas of interest or focus can emerge. Consequently, undertaking a literature review can be an ongoing process.

Literature Search

Section 4 and 5 above provide guidance of identifying and appraising research. For a text to be included in your literature search it needs to be relevant and of sufficient quality. As stated above, when evaluating the material there is a number of questions that you should ask yourself to ensure that you do not waste time on irrelevant material. These include considering the research design, sampling, data collection methods, research ethics, data analysis, credibility of findings and the generalisability of the findings. Again, be systematic - keep a research journal as a record. Record the

date, database and search terms used. Make a record of the full reference list as you go along to avoid having to search for a reference at the last minute.

Sources

Primary sources are the foundation of original research. They allow you to: make new discoveries, provide credible evidence for your arguments and give authoritative information about your topic. If you don't use any primary sources, your research may be considered unoriginal or unreliable.

Primary sources provide raw information and first-hand evidence. Examples include interview transcripts or statistical data. A primary source gives you direct access to the subject of your research are more credible as evidence, but good research uses both primary and secondary sources.

Secondary sources are good for gaining a full overview of your topic and understanding how other researchers have approached it. They often synthesize a large number of primary sources that would be difficult and time-consuming to gather by yourself.

A secondary source describes, interprets, or synthesizes primary sources. Secondary sources provide second-hand information and commentary from other researchers which allows you to gain background information on the topic, and to support or contrast your arguments with other researchers' ideas. Examples of secondary sources include journal articles, reviews, and academic books.

Most research uses both primary and secondary sources. They complement each other to help you build a convincing argument. Primary sources are more credible as evidence, but secondary sources show how your work relates to existing research.

To determine if something can be used as a primary or secondary source in your research, there are some simple questions you can ask yourself:

- Does this source come from someone directly involved in the events I'm studying (primary) or from another researcher (secondary)?

- Am I interested in analysing the source itself (primary) or only using it for background information (secondary)?
- Does the source provide original information (primary) or does it comment upon information from other sources (secondary)?

Remember that all primary and secondary sources must be correctly cited to avoid plagiarism.

Writing up your literature review

Your literature should provide a coherent and critical account of the literature, identifying patterns and themes as well as evaluating the quality of the material. You need to provide an argument, or a series of arguments based upon your reading of the literature. You need a clear structure to your literature review, for example a chronological structure, outlining how your research topic has been written about over time. An alternative is to structure your literature review thematically. A good literature review does not take what has been previously written at face value but provides a critique. You need to include material directly relevant to the points you are making, and which demonstrates your ability to construct an argument.

9. Ethics

Social work research by its very nature, is more likely to involve vulnerable people, the disadvantaged, those with learning disabilities or mental health issues, the young and the old etc. It is central to social work professional codes of conduct, as well as to the good practice of research, that carrying out research with service users, carers and even fellow practitioners, we are mindful of the way we conduct ourselves and the effects of our actions. Research ethics provides us with a framework of conduct that defines what is acceptable and unacceptable and how we go about undertaking research. Central to this issue is that it is not acceptable for researchers themselves to decide what is and is not ethical. Research ethics are therefore usually subject to externally agreed research governance processes.

Harm versus risk

When undertaking research participants should not be exposed to physical or mental distress or danger. For practitioner research this is most likely to relate to the potential to cause psychological harm if the research creates upset, contributes to stigmatisation of participants, or draws attention to potentially deviant, risky or illegal behaviour. Also, participants may be left feeling exposed due to discussing their private lives or revealing more than they were comfortable with. Alternatively, they may feel undervalued if the research only values the data they provide rather than recognising them as individuals. To mitigate against this, as a researcher you need to minimise any potential negative consequences and ensure that the benefits of the research strongly outweigh any potential negative impact.

Informed consent

Informed consent involves ensuring that all potential research participants are fully informed about every aspect of the research and any issues that might influence their decision to participate. Consent is normally seen as having three elements for it to be valid:

- The person must have capacity to make the consent decision
- The person must be acting voluntarily and not under duress
- The person must be provided with enough information to enable them to make an informed decision

A comprehensive profile of the research should be explained in clearly spoken or written language with no hidden agenda and no area of the study considered outside the brief and/or understanding of the participants. All aspects of the process should be totally transparent. Informed consent can be facilitated by the provision of a Participant Information Sheet which explains everything the participant needs to know. Respondents should normally sign a consent form confirming they have understood the information given to them about the research and confirming their consent to be a research participant.

Informed consent can be problematic in relation to many different social groups. For example, research with children can involve liaison with parents, teachers and Local Authorities who may have parental responsibility for those in their care. In England, the matter of children deemed competent to provide informed consent sits within the case law of the Gillick case²². As a general principle, the practitioner researcher should seek parental consent for the purposes of interviewing children and young people, and for those aged 16 and above, one can assume they have the capacity to consent independently (Hardwick and Worsley 2011)²³.

²² Gillick v West Norfolk and Wisbech AHA AC 112 ((HL)) 1986 available online at http://www.hrcr.org/safrica/childrens_rights/Gillick_WestNorfolk.htm

²³ Hardwick, L. and Worsley, A. (2011) *Doing Social Work Research*. London: Sage

The right to privacy

There are established ways of protecting participants privacy:

- Confidentiality – ensuring that all the information collected from participants is not revealed in a form that can be linked or traced back to individuals.
- Anonymisation – ensuring real names are replaced with pseudonyms, protecting the participants identity.
- Editing – allowing participants to see the data related to them and allowing them to edit it or decide what can be revealed.
- Data protection – respect for confidentiality and adherence to Data Protection legislation is essential. Personal and confidential information should be kept secure, locked location or on computers that are firewalled, and password protected.

Research governance

Ethical approval does not normally apply to the collection of ‘secondary’ data. Rather where the researchers themselves is gathering ‘primary’ data from individuals then ethical approval is required. Where there is any doubt, appropriate enquiries should be made. It is likely that as a practitioner researcher you will be required to submit your research proposal to ethical scrutiny before an ethics committee. Ethical approval needs to be obtained prior to any contact with respondents.

There are three main avenues for consent that need to be considered for the typical social work practitioner researcher:

- Local authority (or social care employer) ethics committee
- Health ethics committee
- University ethics committee

10. Research Methods

Interviews

Interviews are best used for research that focuses on the knowledge, values, beliefs and attitudes of the participants. They are particularly good at helping participants to think through, consider and make things explicit that are implicit. Questions about a participant's beliefs and attitudes can be complex because responses may be affected by the wording and sequence of questions, but the use of multiple questions and scales can help.

The advantage that interviews have over questionnaires are that interviews are good at examining complex issues and producing rich data. The disadvantages are that they are more time consuming than questionnaires and are more complex and time-consuming to analyse.

Types of interview

Structured interviews are part of the quantitative survey research tradition and are similar to questionnaires, discussed below. Highly ordered and tightly designed interviews to collect data that can be quantified. Less popular due to the closed nature of the questions, however the more structured the interview the easier it will be to analyse the data.

Unstructured interviews are very open and range from a single question to a list of topics. The difficulty with unstructured interviews is that they produce a number of interview transcripts that are unique and can present a challenge to analysis.

Semi-structured interviews are the classic structure for qualitative research in social sciences whereby the researcher develops a list of questions known as the *interview*

schedule. This structure is popular as it provides sufficient structure to facilitate data analysis while giving sufficient flexibility to explore participants responses in-depth. It is important to consider accessibility for participants, online focus groups is one example.

Recruiting and selecting participants

In qualitative interviewing the most common approach to selecting participants is non-probability sampling and the specific sampling strategies used are:

Convenience sampling (sometimes known as accidental sampling) whereby researchers are looking for participants that are relatively easy to contact rather than how representative they are or any particular knowledge or experience they may have.

Purposive sampling (sometimes known as judgement sampling) is a procedure in which the researcher chooses participants who are likely to provide useful information, usually due to their knowledge, experience or role and are likely to want to discuss it. Mindful to consider how diverse your sample is as a wide range of roles that the interview data are difficult to analyse.

Theoretical sampling does not determine the number of participants at the beginning of the study, but researchers carry on interviewing until 'saturation' has been achieved, where no significantly new data are being produced and the themes have been exhausted.

Snowball sampling is where the research selects a small number of participants and then asks them to recommend other suitable people.

Quota sampling is a procedure in which the researcher decides to research groups or quotas of people from specific subsections of the population. Common categories are demographic information such as age, gender and ethnicity which can be related to the research topic.

Developing an interview schedule

Your interview schedule is a written plan of how you are going to structure the interview, including what questions you are going to ask and in what order. The aim of the interview schedule is to ensure that your overall research question is answered while promoting a natural flow of conversation with your participants. Time spent developing your interview schedule is important. It can be helpful to meet with interested parties to generate possible interview questions. 'Need to know' questions are essential for answering your research question, while 'nice to know' will probably never be analysed – be ruthless. Once you have a first draft interview schedule pilot it with someone who fits your sample as this may lead to significant improvements.

Types of interview question

It is important to be aware of the full range of interview questions²⁴:

Introductory questions such as 'can you describe an experience of...?' open up discussions and can lead to rich, descriptive accounts.

Follow-up questions encourage the participant to expand on their answers.

Probing questions enable you to identify particular responses that you would like further information on without directing the participants response, such as, *can you say more about that?*

Specifying questions are particularly helpful if participants are giving general, abstract responses, and enable you to obtain more precise accounts of what the participant has described

Direct questions allow you to introduce topics and are best used later in the interview when the participant has indicated which aspects of the topic are most important to them.

²⁴ Kvale, S. (1996) *Interviews: an introduction to qualitative research interviewing*. London: Sage.

Indirect questions enable you to obtain the participants views about other parties and are particularly useful for sensitive topics, for example, 'how do you think your fellow students would feel...?'.

Structuring questions or statements for example, 'can we get back to when you were talking about...' help order the interview and prevent drift to topics unrelated to the research.

Silence can be necessary in giving the participant time to think through their responses and add further information that they have omitted in a more structured, fast-paced interview.

Interpreting questions can consist of rephrasing a participant's statement to check your understanding or clarify what they meant.

What questions should I avoid?

- Avoid questions that engage your participants in abstract generalisation. Participants provide better quality data when they are asked about issues pertinent to them.
- Avoid double barrelled questions and long questions as participants are likely to remember only part of the question.
- Be careful of leading questions, that is questions that suggest a particular response as they are biased. It is also easy to show non-verbal approval or disapproval of participants views without realising it.
- Ensure that your questions are clear to avoid confusion and wasting time explaining what you mean. Avoid questions that contain jargon as these are likely to antagonise participants. Also, ensure that questions are not repetitive as this can confuse participants.
- Be careful about phrasing questions that can sound confrontational. While challenging questions can provide interesting responses, confrontational

questions can cause offense and participants may become guarded or refuse to continue.

- Participants can see 'why' questions as a cross examination and therefore provide a rational response not what might be a decision based on impulse, habit or tradition.
- Finally, ensure that your interview questions link directly to your research question.

Conducting the interview

Before the interview make a checklist of essential items to take such as interview schedule, consent forms, participant information sheets and a recorder. If possible, learn your interview schedule to assist with interview flow.

When you begin the interview remind the participants of who you are, the purpose of the interview. Make it clear they do not have to answer any questions that they do not want. Remind them they can withdraw at any time. Ask the participant to complete the personal information form, which asks for personal details. Discuss the consent form and verbally reinforce confidentiality arrangements. Check the participant is okay to have the interview recorded. There are two options for recording, audio and visual. Audio is usually sufficient. There are a number of advantages to recording the interview. You can give the participant your full attention.

During the interview work to build rapport and trust. Have breaks if necessary and follow up with the participant if points are unclear.

After the interview thank the participant for their time.

Transcribing

Transcribing audio recording of interviews is time-consuming. One hour of interview can take 2-6 hours to transcribe and the transcript from a one hour interview can be 20-40 pages long. While you are listening to the recordings you are starting to analyse

the data and see themes emerging before you begin the formal process of data analysis, discussed below. Transcripts should be double line spaced and have a wide margin for adding coding and other notes. You have a duty to ensure ethical storage of the participants information. Transcripts held as computer files should be password protected. Other person details recorded about the participants background information should not be kept with the transcripts but should be linked by a key in which each participant is given a number.

Focus Groups

A focus group is a group of individuals selected to provide their opinions on a defined subject, facilitated by a moderator who manages the group and promotes group interaction, enabling discussion between participants. Focus groups can be used on their own or combined with other research methods such as interviews or questionnaires. For example, focus groups can be effective in accessing shared public knowledge, interviews are better for gaining more personal, biographical information. For research topics that require both forms of information, combining both methods is effective.

Focus groups can enable you to gain significant amounts of information and are less time consuming than interviews. They provide the opportunity for a range of participants to express a range of opinions and challenge and interact with one another in an open environment.

Disadvantages

It can be challenging to coordinate a range of times and venues for a group of people to meet. Also, some group members may feel less confident than others in voicing their opinions or feel their opinions will not be accepted by the other group members. A skilled moderator can moderate against these risks. However, when participants

have complex relationships that involve potential role conflicts, focus groups are best avoided.

Recording and transcribing of the focus group discussion can be time-consuming and complex, as it can be challenging to identify the contribution of different members. Also, focus groups can offer less control over the discussion than an interview and if you are new to research, avoid using focus groups to discuss issues that are likely to be distressing to participants as this requires a significant amount of skill and experience in the moderator.

Furthermore, the data you obtain relates to the group and the group consensus. It can be difficult to conclude whether the individual participants genuinely hold this view. Similarly, it is difficult to gauge the strength of opinion in the group compared to individual surveys. And attempting to make generalisations based upon a focus group can be a mistake for example, you cannot conclude that the opinions of one group of social workers will be representative of all social workers.

Organising groups

Social research often uses groups of around 6-8 participants, however, larger groups may be required when the participants do not fully have knowledge of the topic. Larger groups can be problematic as some people may not get the opportunity to speak and thus resort to speaking to the people next to them, which may result in data being lost. Allowances should also be made for dropout rates (usually 10% to 20%) when planning the number of participants. You will also have to consider how many focus groups to conduct. For large scale research, three or four groups with any one type of participant is optimal. You can then determine whether you have reached 'saturation' whereby you are not getting any new ideas from further groups.

Groups can be naturally occurring where participants know each other, or stranger or assembled groups, which comprise of participants who do not know each other but have a similar background or experience. The choice of group depends on your

research. Participants are likely to talk easier in naturally occurring groups, however a potential issue is 'group think' whereby the dissenters in the group censor their opinions to enable the group to quickly reach a consensus and avoid conflict. This can be challenged and explored by a skilled moderator.

Recruiting and selecting participants

Participants for a natural group can be easier to recruit through existing networks, or via a key people who can distribute information about the research. Offering refreshments to participants can be an incentive, and some funded research can offer participants gift tokens. The aim with recruitment is to minimise bias when selecting participants. This can be done by introducing an element of randomisation, such as obtaining a list of potential participants then selecting names at random. When writing up your research you need to be clear about the process you have used and the strengths and weaknesses of your approach.

Most researchers prefer a group with a similar background or experiences that are the focus of discussion. If participants are selected to be placed in groups of similar people, known as 'segmenting', in large scale research this is usually by gender, race, age and social class (Morgan 1997)²⁵. For social work, the categories are more likely to be linked to role, for example, service user, carer, social worker etc. If you want to use more than one group, for example service users and professionals, hold separate meetings as participants may feel freer to share views, and by sharing the views of one group with another, you can see how the two groups interact.

Developing a discussion guide

A discussion guide is the list of topics or questions that you produce as moderator to guide the conversation. The group nature of discussion means that fewer questions

²⁵ Morgan, D. L. (1997) (2nd ed) *Focus Groups and Qualitative research*. London: Sage.

are asked than that of individual interviews. The discussion guide should have a clear structure:

1. Introduction – introduce yourself and thank the participants for coming. Summarise the research topic and discuss confidentiality and recording. Agree the ground rules, which may include, only one person speaking at a time, respect for each other, no side conversations with neighbours.
2. Warm-up questions – these aim to support the participants to feel comfortable speaking should be short, factual questions to every participant.
3. Introductory questions – introduce the topic and provide a context, encouraging the participants to think about the topic.
4. Key questions – principle questions directly related to your research question. The majority of the questions should be in this category to allow you sufficient time to address these in detail.
5. Closing questions – enable the moderator to check understanding of what has been said, by summarising and confirming the discussions, and they enable anything that has not been addressed to be discussed.

Role of the group moderator

The aim of the group moderator is to create an open and relaxed discussion while addressing the research question, and to promote the involvement of all participants. It may be beneficial to have a colleague to assist, for example, in taking brief notes to distinguish which participant is contributing at which time. A debriefing with your assistant afterwards with the recorder still running can provide a valuable addition to your notes. You need to continually monitor that the participants are directly responding to the question and that the group does not become side tracked. The discussion guide should be followed, although if a new issue arises, feel free to explore this if it is likely to prove useful. It is important for the participants to enjoy the focus group, but it should not drift into a therapy or support group.

Recording and transcribing

Video recording is optimal although this may be too intrusive and not be conducive to participants full engagement. Audio recording is the most common form of recording. To mitigate against technical difficulties, it is essential to check your equipment prior to the session. Following the session, you will have to write up your recordings. This can be a full verbatim transcript, covering every aspect of the conversation with associated notes, or a shortened transcript analysis which rather than being a verbatim account, covers the points made. A note based analysis relies mainly on notes, and a memory based analysis whereby most of the write up is based upon recall.

Once you have written up your data, it is essential you make back up copies and password protect your documents to ensure security of confidentiality. You will now be ready for data analysis which is discussed below in Section 12.

Questionnaires

Questionnaires are most appropriate when you want to collect straightforward information from a large number of people on a relatively-well understood topic. Questionnaires are more suited to gathering predominantly quantitative data but can be supplemented by some qualitative data gathered via open-ended questions. For this reason, questionnaire research is best suited for topics that are relatively well known.

Questionnaires have many advantages: they are relatively inexpensive and quick to administer; participants can respond in their own time; there is greater assurance of anonymity; and there is less opportunity of interviewer bias. However, questionnaires do have some limitations: they do not allow for probing and clarifying responses or for collecting additional information; the researcher cannot ensure that all questions will

be responded to; and the researcher cannot ensure the right person has completed the questionnaire.

Designing your questionnaire

You need to identify the variables that are most relevant to your research question. Variables are attributes that can take on different values with different participants and can include, for example, your participants attitudes, beliefs, behaviour and knowledge. The process of deciding which indicators to use when measuring variables is called *operationalisation*, i.e. how to convert an abstract concept into a quantifiable measure. When choosing indicators, you must consider whether they are valid (measure what we think they are measuring) and reliable (how consistent a particular measure is).

Consideration should be given to the layout of the questionnaire as an attractive layout can encourage a good response rate. When considering questions, begin by generating a range of possible questions, then review and discard those that are not relevant to your research question. It is important to divide your question into two groups – ‘need to know’ and ‘nice to know’. Try to restrict your questionnaire to ‘need to know’ questions to not put off participants by your questionnaire being overly long.

Questions are generally divided into those that are closed and those that are open-ended. For questionnaire research, closed questions with a fixed number of responses produce quantitative data which is easier to analyse. The questions should be clear, unambiguous, free from jargon, not repetitive, not include emotional or value-laden language, and leading questions should be avoided. Piloting the questions can be useful in identifying any issues with the questions.

Structure and format

Your questionnaire should follow a logical order which moves from what the participants know best to the unfamiliar. Similarly, you should begin with objective questions and move to more subjective/sensitive questions as the participants feel more comfortable. Participants can get questionnaire fatigue so have fairly straightforward questions at the end.

You can choose different formats for how you want participants to respond:

Exact responses require a specific answer, for example, the number of years of social work experience participants have.

Category responses require participants to select one response from a list of categories, for example, experience expressed as 0-2 years, 3-4 years etc.

Dichotomous responses are usually in the form of yes/no answers.

Likert scale questions usually require the participant to select a response along a sliding scale of agreement. The most common format is to have two extreme positions divided by a five point scale.

Semantic differential scale whereby two opposite adjectives are placed on a numerical scale and the participant chooses the number which best represents their view.

Graphic scales whereby graphic representations, such as faces, are used to represent participants views.

Constant-sum scales and pie charts whereby participants are asked to score two or more alternatives so that the scores add up to a fixed amount, or they are presented with a blank pie chart and asked to divide it up based on their views.

Ethics

Your research will have to go through an ethics committee or similar research governance process to gain ethical consent. It is common practice for questionnaires

not to require consent forms as consent can be implied by participants completing and returning the questionnaire. However, participants still require information about the research which can be included in information sheets or covering letters.

Questionnaires generally carry lower ethical risks than other research methods such as interviews or focus groups, as questionnaires offer the possibility of anonymity which is a higher level of protection than confidentiality. This makes questionnaires useful for researching sensitive topics because participants are more likely to disclose sensitive material if they can remain anonymous.

Sampling

Sampling refers to the process of selecting the participants involved in the research. Your sample is chosen from the total possible group of people known as the population. The two main types of sampling are probability and non-probability sampling. *Non-probability* sampling is more generally used in qualitative research and includes convenience, purposive, theoretical, snowball and quota sampling, discussed above.

Probability or random sampling is the most commonly used sampling method in questionnaire research and uses mathematical techniques to select research participants who are representative of the overall population. The randomisation increases the likelihood that the results will be generalisable to a wider population. Bryman (2012)²⁶ identified the four main types of probability sampling:

- Simple random sampling – most basic form of random sampling whereby cases selected randomly using random generator. Therefore, each unit of the population has an equal chance of being included in the sample.

²⁶ Bryman, A. (2012) (4th Ed) *Social Research Methods*. Oxford: Oxford University Press

- Systematic sampling – variation on simple random sampling in which cases selected in a systematic way from a sampling frame, for example, choosing every tenth case.
- Stratified random sampling – if there are particular factors you wish to concentrate on, you may wish to ensure the sample ensures sufficient representation.
- Multi-stage cluster sampling – when your sample is geographically spread, cluster sampling enables you to group together potential participants.

Analysis data and presenting your findings will be discussed in detail in Section 12 below.

11. Document analysis

Document analysis is becoming more popular as online documents / libraries make content more accessible. The definition of a 'document' in the context of documentary analysis is very broad and can include paper and electronic documents, but also photographs, newspapers, film, television content. Often the term 'text' is used instead of the term 'document' to cater for this. Scott (1990)²⁷ proposes four criteria for judging documents for research purposes:

- **Authenticity:** who is the author and is the document genuine
- **Credibility:** is the document a true and undistorted account and to what extent is there an editorial bias / attempt to present certain arguments etc. This is very likely to exist, so recognising it is key
- **Representativeness:** is the document representative and typical of its kind, questioning this helps to avoid excessive focus on atypical examples
- **Meaning:** is the evidence presented clear and comprehensible, also is the meaning literal or latent - explicit and straightforward or implicit and requiring interpretation

Your approach to documentary analysis will differ depending on your research question.

Traditional, positivist approach	Interpretative approach
Documents provide evidence	Documents reflect social phenomena
Example: review newspaper reports for frequency of attacks by people with a diagnosis of schizophrenia	Example: review newspaper reports for how people with schizophrenia are portrayed
Research topic: Incidence of violent assaults involving individuals with a diagnosis of schizophrenia	Research topic: Media representation of schizophrenia

²⁷ Scott, J. (1990) *A matter of record: documentary sources in social research*. Cambridge: Polity Press.

The source of the documentary analysis in both examples is the same: newspaper reports, but research focus and approach are different.

Difference between literature review and documentary analysis

A literary review is a critical summary of other authors’ analysis and interpretations of their data; it analyses and reports on what others have found. Documentary analysis is your own collation of data and analysis of that data. A key difference is the data source. In documentary analysis the data is from a primary resource: raw data you have collected. If from a literary review you are considering secondary data - someone else’s data.

Literary review	Documentary analysis
Critical summary of another’s research	Your own original research
Analysis by others, summarised by you	Your own analysis
Data sources are secondary, to you	Utilises your own primary (raw) data sources

Documentary analysis: a 3 stage process

1. Decide on your research question and design your approach

Research methods can be quantitative (for example, surveys, questionnaires) or qualitative (for example, interviews). Content analysis can use both.

A key quantitative technique, content analysis involves reviewing sources and categorising them into a quantifiable form by counting and recording key terms relevant to your research question. Content analysis is a useful technique when you have wide ranging and multiple sources (e.g. mass media, television news), and is especially useful for analysing phenomena over time. For example:

- Analysis of media portrayals of individuals with mental health problems to identify how mental health is presented: e.g. emphasis on violence to others, self-harm, eccentric / comic portrayals etc.
- Analysis of case studies to identify gender proportionality
- Analysis of advertising to identify minority ethnic representation

The key is to determine what you are looking for but also how you are going to express that when searching; how you are going to 'code' the search. There are two coding techniques:

- *Manifest coding* looks for explicit, visible terms and counts the frequency of those terms or their defined variants. This is the most straightforward approach. To use this technique, specify relevant terms and their variants and count them.
- *Latent coding* looks for the implicit content of the text. It interprets the text to find the implied meaning in text that may be ambiguous. An example would be to determine whether the article was positive or negative in its tone; approving or disapproving etc. This is unlikely to be apparent from more straightforward manifest coding searches. To use this technique, implied meanings and tone need to be found and interpreted. A disadvantage of this technique is that what is considered an implied meaning may open to challenge; you must decide that the implied meaning supports your analysis and provide a rationale for this.

Manifest coding be used to quantify content in a transparent way. It is relatively objective and reliable as it can be easily checked. It is useful for longitudinal studies over time. It can also be used to highlight what is not present in the source material, e.g. omission of certain qualifying terms, minority ethnic representation in advertising literature etc. Latent coding can be used to provide insight into content that may reveal biases and the unstated intentions of its authors.

However, manifest coding can be criticised as a relatively crude approach because it isolates text from its context and may lose its originally intended meaning. Also, similar terms not searched for, or implied meanings would be omitted. It may also focus on what can be easily measured instead of what is significant. Latent coding offers

greater flexibility but can be controversial as it is based on interpretation, which is less objective and open to challenge. This drawback can be addressed by having multiple individuals analyse the same sources; if they agree, this creates a stronger interpretation.

As with all quantitative techniques, content analysis can identify phenomena and trends without offering an explanation why. There is a risk that the phenomena that is counted and analysed may not have significant value to developing theory.

2. Decide which documents to analyse and what to include in your sample

You need to have a clear idea about your *inclusion criteria*; what it is you are searching for and the document types you will include as in your research. You may restrict your criteria to government policy papers, or peer-reviewed journals or news reports, for example. You must also decide on the key words or terms that you are looking for, if you will include any derivations or alternative spellings of the word in common use (if applicable) and, potentially, any commonly used synonyms of the key terms. The inclusion criteria you use, and the sources searched using the inclusion criteria, should be detailed in the documentary analysis report.

The *sample size* can vary considerably. If the samples are of documents hundreds of pages long, you would include fewer than if the documents are short. You may have a very wide selection of documents to choose from, or too few. If too many, you could narrow your inclusion criteria. There are risks in doing this, for example, restricting the time period to narrow the inclusion criteria may then be skewed by a significant event or trend that was prevalent during that time period, but not representative over a longer period. An alternative to narrowing criteria is to use random sampling where a sample from the larger group (population) is selected. An electronic search that returned 500 items could have a sample of 10%, for example. If there are too few articles available and widening the inclusion criteria is not possible or advisable, it may be that a qualitative analysis is more appropriate.

3. Collect and analyse your data

Once the document sample has been identified / collected you must specify how your (manifest or latent) coding will be done. This needs to be defined clearly so that your research results can be replicated.

- Step 1: Decide on your *basic unit of analysis*. This is the definition of the amount of text that will be included in coding. For manifest coding this could be the presence of a single word, or the sentence the word is found in, or the paragraph. It may be the entire article, which may be particularly relevant for latent coding.
- Step 2: Design a codebook and recording sheet. The codebook is the instructions on how the documents in the sample will be coded, including guidance on how to allocate a particular code. Again, this is so that the research can be replicated.

Coding data found in the source documents should consider four dimensions (Neuman, 2006)²⁸:

- *Frequency*: was the search term present in the document
- *Direction*: was the mention positive, negative or neutral; requires rating on a scale
- *Prominence*: e.g. mentioned on page 1, or much later in the document
- *Intensity*: how powerfully was the message / intention in respect of the search term? For example, what prominence did the document give to the socio-economic background of the subject of the document.

Details of the codebook could therefore include:

- Case ID - sequential numbering of the sample documents, for reference
- Gender (of subject(s) in document, if relevant; 1 – female; 2 – male, 3 – unknown, etc.

²⁸ Neuman, W.L. (2006) (2nd ed) *Basics of social research: Qualitative and quantitative approaches*. Boston: Allyn and Bacon.

- Type of source document (unless all the same)
- Name of publication, date of publication
- Categories relevant to your analysis; e.g. gender, ethnicity, named condition (e.g. schizophrenia)
- Positive / negative context (e.g. if stigmatising language used); this could also be part of the categories relevant to your analysis
- Prominence: e.g. headline, page 1, page 2 or 3 etc

Using a table in e.g. Microsoft Word or Excel is a good way record your codebook. If using Excel, you can use its counting features. Where possible, codebook results should be expressed in numeric terms which is an appropriate format for quantitative results. Numeric results also enable use of statistical analysis software.

Advantages and disadvantages of documentary analysis

The advantages are:

- The data exists for you to find and use, you don't need to create it
- Avoids timescale and logistical challenges of other techniques, e.g. negotiating interviews or arranging focus groups, also lower ethical risks as does not directly involve participants
- Documents / texts are readily available in electronic format online; easy to select, collate and search for keywords
- Documentary analysis is relatively easy to replicate, making it a verifiable method

The disadvantages are:

- Availability of information can be overwhelming
- Limited by the documents / texts that are available, and they were produced for reasons different than yours, so may require extraneous information

- Quality of documents / texts may vary, especially with older documents only available in physical format, e.g. may be pages missing etc.
- You need to consider your biases: what you may include or omit

12. Analysing your data

Data analysis is the process of developing understanding, of making sense, of the information collected. It is concerned with providing meaning and context to the data collected. Different techniques are used for qualitative and quantitative data.

Analysing qualitative data using thematic analysis

Data analysis of qualitative research analyses words. Thematic analysis is a commonly used technique for analysing this sort of data. Braun and Clarke (2006)²⁹ developed a 6-stage thematic analysis approach, described below.

Before we review this, the qualitative data needs to be collated and prepared.

Preparation

1. Write up your data

Type a transcript of the interview or focus group. Things to consider are:

- Do you need a verbatim account or something that summarises?
- Should non-verbal cues be included, pauses, emphasis etc

Text to speech software is increasingly effective at producing transcripts although they should always be manually checked for mistranslations. They may not also indicate which speaker the remarks are from or include pauses etc. in which case these may need to be added.

²⁹ Braun, V. and Clark, V. (2006) Using thematic analysis in psychology. *Qualitative research in psychology*, 3:77-101.

2. Format transcripts

Double line spacing and a wide margin for coding or other notes is advised. Line numbering can also be useful.

3. Password protect / encrypt your transcript

Ethical considerations mean that it is good practice to password protect or encrypt the document to prevent it being accessed by unauthorised persons.

4. Separate transcripts from personal information

Ethical good practice also requires that you should ensure that any personal details that can be used to identify the participant(s) in the interview or focus group are retained separate to the transcript. A key or code should be used on the transcript to identify participants. Should the transcript be access by unauthorised persons, the identities of the participant(s) are protected. This should be extended not only to personally identifiable information like name and address but also to data about the participants that may have been collected for statistical purposes, like gender, age etc. This is because in small sample sizes this information may lead to participants being identified.

5. Context

Decide if it is relevant for the transcript to include details of where the interview or focus group took place, and other contextual but non-identifying information about the participants. For example, the location may be relevant to the state of mind of the participant; their demeanour or presentation may be relevant, e.g. if they are tired, agitated, distracted etc.

6. Keep your original transcript safe

Once the transcript has been prepared, keep it safe. Always work on a copy in case you make a mistake and need to start again.

Thematic analysis

Thematic analysis is used to identify and report on patterns (themes) within data. It is a flexible approach.

There are three terms that need to be understood:

- Data set - the total data to be used in the analysis, all the transcripts
- Data item - one of the transcripts from an interview or focus group
- Data extract - e.g. a quote from an interview

Stage 1 - Familiarisation

Read all the transcripts. Although you collected and transcribed the transcripts, reading them again in their final form can be helpful in identifying patterns you may not have noticed previously. You want to be comfortable with the whole data set. You should try and identify patterns / themes. Make notes.

Stage 2 – Initial coding

Coding the transcript requires you to read the transcript and identify the smallest parts (codes) of text and build this into patterns (themes). As noted above, the transcript should include a margin for noting the codes against the relevant section of transcript text. As you read the transcript you note your initial codes in the margin next to the text. These initial codes are your interpretation, or coding, of the text. Coding should be applied to the entire text, not only parts that look most interesting, or appear at first to be most relevant to your research focus. You should code for as many potential

themes as possible, initially. Some sections of text may not be coded at all, if there is nothing relevant, and some may relate to more than one code. The goal is to build up a coded view of the text being analysed.

You must decide if you are going to use the participant's words as initial codes or your own words. The former is *emic* coding as it relates to words used by the participant. The alternative, *etic* coding uses your own words as codes. The advantage of the latter is that the code terms used could be associated with your chosen theoretical or professional perspective. Etic coding may also be more consistent, as the wording used by participant(s) may change as the interview or focus group progresses.

This can be a difficult process as the transcripts will not always provide text clearly relating to the codes. This difficulty means that thematic data analysis is not a passive exercise, looking for repeated words that correspond to codes. You must consider and make choices if a section of transcript text does or does not correspond to one of your codes. Inevitably, your choices will reflect your understanding and experiences; the coding decisions cannot be entirely objective. However, qualitative research recognises that the researchers' perspective cannot be removed from the process, instead assumptions should be questioned transparently.

When you have completed coding the text you should copy all instances of the text that relate to a code, ideally into a separate document named after that code. These extracts from the transcript are *data extracts*. Depending on the number of codes you have there may be numerous documents. Repeat this process for the other data items (transcripts) in your dataset (sample), adding their data extracts to the same document for each code. Once you have collected all of the data extracts check if they form a coherent pattern.

Stage 3 - Searching for themes

The next step is to group the codes into potential themes. Themes are broader than the codes and at a higher level than the basic level of the codes. They will appear to

capture something, a relationship, between individual codes allowing them to be grouped together, and will relate to the research question or focus.

One way of doing this is to write each code on post-it notes and put them all on the wall, moving those that seem related to be together. Judgement is required and you may need to check back to data extracts to confirm that codes that appear closely related really are.

Once multiple themes emerge from your analysis of the codes, you may detect that there is an apparent hierarchy of themes. Some may appear to be sub-themes of others. Also, some may appear to be more important, others perhaps more peripheral. Some codes may not fit well into any of your themes, and you may temporarily group these as 'miscellaneous', but do not discard any of your code analysis, or discount any apparent themes yet.

You may find it helpful to produce a thematic 'map' if graphical representation is helpful to you.

Stage 4 - Reviewing themes

Qualitative data analysis involves going back over and reviewing what you have done so far. You should now review your identified themes in two ways. Firstly, within each theme. Check and confirm that all of the transcripts' data extracts are properly coded. Check and confirm that the codes are all relevant to the theme they have been grouped under, and not another theme. Assess whether each theme stands up: is there sufficient data behind it and is the data similar / consistent within the theme.

The output of this may be that some themes seem weaker than others and should perhaps be absorbed into another theme. Or, that a theme should really be considered as two or more themes and you need to split the data accordingly. The purpose of this second review is to ensure that the data extracts and codes within a theme cohere meaningfully and that themes are distinct.

Having reviewed within each theme, you should now review across the entire dataset (all your transcripts). This is to confirm that the theme you have extrapolated from your coding analysis represent the full dataset: do the themes accurately encapsulate the meanings expressed by the participants overall: do your themes express that meaning faithfully.

Stage 5 - Defining and naming themes

The next stage is to refine the themes. Consider how you have named the themes and if they accurately capture what the theme is about. You may again need to go back to the data extracts within each theme to validate the refinement of the theme. Again, you may find that sub-themes now seem appropriate to express the themes more accurately.

The objective of this stage is to have refined a very clear concept for each theme, what it includes and does not include. By this stage the themes should be able to be described in a few sentences and your naming of the theme should succinctly convey what the theme is about.

Stage 6 – producing the report

With your themes and their definitions finalised and soundly derived from the thematic analysis and coding you have performed across the entire data set, you will be able to produce a coherent and qualitatively sound report of your thematic analysis and the data.

Analysing quantitative data

There are three stages of basic descriptive statistical analysis:

- Coding your data
- Entering and cleaning your data
- Analysing your data and presenting your findings

Stage 1 - coding your data

As stated above, you will have pre-coded data as part of developing a questionnaire or during documentary analysis.

Stage 2 - Entering and cleaning data

Data should be entered into a spreadsheet (for example Microsoft Excel). Cleaning the data includes checking the data has been entered accurately. This should be done to confirm that:

- all data items have been included, e.g. all the completed questionnaires have been entered
- data for each item is entered accurately and fully, matching what was recorded
- Any blank data fields are because the data item source was (correctly) blank for that field

You should recheck to validate that your source data from your data items has been entered on the spreadsheet correctly. If there are many data items, you should check a sample.

If there is missing data, e.g. questionnaire questions not completed by participants, you have a number of options:

- Delete cases – omit these questionnaires from the entered data, if those with missing data represent relatively few data items (e.g. less than 15%)

- Delete variables – if there is a specific question that accounts for much of the missing data, this question could be deleted from the data set. However, deciding to do this depends on how important that question is to your analysis
- Sample mean approach – replace missing values with the mean value of all results for the question

Stage 3 – Analyse your data

Different levels of measurement provide different types of data. The types of data are:

- Nominal – data allotted to named categories in no particular order, e.g. 1 for male, 2 for female, etc. Data of this sort cannot be used for most forms of statistical analysis.
- Ordinal – data placed in ordered categories where the categories have a relative relationship, e.g. a 1-5 scale from 'Strongly Agree' to 'Strongly Disagree'. Ordinal values like these allow us to determine that a respondent to this question who 'Strongly Agrees' does so more intensely than another who merely 'Agrees'. However, we cannot gauge how much more intensely. The numbers 1-5 are relative signifiers, they do not possess any true arithmetic quality: an ordinal value of '5' is not *more* than a value of '3'; we could just as easily use 'A' to 'E' instead of 1 to 5.
- Interval – similar to ordinal but with equal intervals between values. A temperature scale is an example of this type of data measurement. The zero point for the scale will be arbitrarily fixed. For example, a temperature of zero degrees Celsius was arbitrarily assigned to be the point at which water freezes
- Ratio – Similar to interval but with a true point of zero, e.g. age.

Types of quantitative analysis

The following types of measure can be applied to some or all data types listed above:

- Percentages – show figures as a proportion of the whole
- Frequency tables – show the incidence of particular responses / results
- Measures of central tendency (averages) - three kinds:
 - Mean – arithmetic average calculated by dividing the sum of all responses by the number of those responses. Only possible to use with interval or ratio data
 - Median – the mid-point of all the response values if listed in order. Can be determined for any type of data
 - Mode – the most common result. Can be determined for any type of data
- Measures of dispersion (range) - the spread of data, its lowest and highest points. Often provided as contextual for mean measurement

Note

- Interval and ratio data types can have mode, median and mean measurements
- Ordinal data can have mode and median measurements, but not mean
- Nominal data can only have mode

13. Writing up your research

Writing up your research is a significant undertaking. This section summarises some advice on coping with the challenges.

Writing

Many people postpone writing in favour of doing extensive reading. While some reading is obviously required to research your topic, writing should not be postponed for too long. This is because writing assists the process of identifying your thoughts and helps to shape your ideas. The more you write the more practiced at it you become, so write early and often. When writing, initial drafts are essential to working out what to say, the arguments you will use etc. Drafting and redrafting is a process of iteration that results in successively improved drafts.

Structure

Your university or organisation will provide specific guidelines on formatting and content. The following are likely to feature as required elements of the format:

- Title page
- Table of contents
- An abstract – summary of the research, research design and conclusions, usually 250-350 words
- Introduction – introducing the research question, outline of the research approach taken and structure of the dissertation. The importance or relevance of your research to the field should be set out here
- Literature review
- Methodology – how you conducted your research. This section should include:

- Overall research approach – qualitative or quantitative; methods used – interviews, focus groups, questionnaires; why was that method used
- Sampling used
- Analysis approach and why that approach was taken
- Ethical issues and how you addressed them
- Limitations and constraints of your research
- Findings and discussion
- Conclusion
- References
- Appendices – additional information, e.g. copy of questionnaire

Presenting qualitative data

Qualitative data should be presented in prose form so findings and discussion of them will be presented together. Your goal is to present a coherent and persuasive narrative of the thematic analysis you will have undertaken. You should aim to present and explain at the level of your themes, and not at the lower level of questions or codes.

You should use quotes from respondents to reinforce your thematic analysis, provided the quotes are particularly relevant. However, if small sample sizes risk identifying a participant, direct quotes should not be used. Also, if working with small sample sizes, avoid using percentages in favour of text: instead of '80%' say 'four out of five'. The latter is more honest as the sample size is clarified.

Presenting quantitative data

Quantitative data findings should be presented in tabular or graphical / chart form and discussion in prose, so findings and discussion can be separated.

Raw data is often presented in an appendix. Doing this allows you to focus on presenting only key data and measurements in the findings section. This can aid

clarity by reducing the amount of data presented. As an additional aid to clarity, charts and tables should be used. There are many options, including:

- Pie charts – good for displaying the relative proportions of values present
- Bar graphs / charts – good for comparing data across categories
- Frequency tables – good for presenting information about the relative occurrences of different values

Charts and graphs are used to present data with clarity, so be careful to ensure that they are not inadvertently misleading by:

- Giving them a title
- Showing units of measurement
- Mark axes to show scale in bar charts
- Using a legend to explain use of differentiating colours / symbols

In the discussion section you should express what the significance of the quantitative data measurement results mean and their implications for theory or your field. However, be cautious not to overstate these implications by assuming that your findings can be extrapolated too widely.

The conclusion

The conclusion will summarise your research and principal findings. You should never introduce new discussion or consideration in the conclusion; it must be a summation of what has been said previously in the dissertation. It can include lessons learned or specific recommendations for policy or future research

Additional points

Structure

Do not rely on section headings alone to provide structure for your research. Use your prose to guide the reader from one section to the next by concluding each section with a recap of the section and a brief introduction what comes next.

Sentences and paragraphs

Keep it simple and consistent. Express one point per sentence, do not make several points in one sentence. Use a paragraph to group several sentences that are related, do not have single sentence paragraphs. This will help with the cadence and flow.

Be selective

Leave out material you may have researched that is weaker or extraneous to your argument. It is not necessary to include something just because you have researched it. If your argument is strong it will not need the additional material, which may end up distracting the reader or introducing weaker arguments, diminishing the whole.

Using 'I'

The tradition of using the passive voice in writing up research and avoiding the personal 'I' is less important than it once was. It is increasingly acceptable to use 'I', particularly in qualitative research, which encourages the active voice. Use of 'I' should not be overused, however, only when it is natural or adds to what is being said.

Dissemination of Research

Effective dissemination of research is simply about getting the findings of your research to the people who can make use of them, to maximise the benefit of the research without delay.

For NIHR 2019 guide please see:

<https://urlsand.esvalabs.com/?u=https%3A%2F%2Fwww.nihr.ac.uk%2Fdocuments%2Fhow-to-disseminate-your-research%2F19951%23%3A~%3Atext%3Dof%2520being%2520utilised.-%2CWhat%2520does%2520NIHR%2520mean%2520by%2520dissemination%253F%2Cof%2520the%2520research%2520without%2520delay&e=9f250c40&h=bde0edcb&f=y&p=n>

14. Glossary

Action research - an approach to research that stresses the importance of links with real-world problems and a belief that research should serve practice ends.

Boolean operators – specific codes used during electronic literature searches to manipulate your search terms to achieve the best results.

Case study – a research design that entails the detailed and intense analysis of a single case.

Causality – a concern with establishing causal connections between variables, rather than mere relationships between them.

Census – the enumeration of an entire population, unlike a sample.

Closed question – a question employed in an interview schedule or self-completion questionnaire.

Code, coding – codes act as tags that are placed on data about people or other units of data.

Coding frame – listing of codes used in relation to the analysis of data.

Comparative design – a research design that entails the comparison of two or more cases.

Content analysis – an approach to the analysis of documents and texts that seeks to quantify content in terms of pre-determined categories.

Convenience sample – a sample that is selected because of its availability to the researcher.

Correlation – an approach to analysis of relationships between variables.

Data – information that you are going to collect in order to answer your research question, for example the words used by interview participants or numerical information from questionnaires.

Dependent variable – a variable that is causally influenced by another variable.

Discourse analysis – an approach to the analysis of talk and other forms of discourse.

Empiricism – an approach to the study of reality that suggests that only knowledge gained through experience and the senses is accepted.

Epistemology – the study of knowledge.

Ethnography – research method whereby the researcher immerses themselves in a social setting, observing behaviour and combined with qualitative interviews.

Focus group – a form of group interview, facilitated by a moderator, whereby emphasis is upon interaction of the group and joint construction of meaning.

Generalisation – a concern with the external validity of research finding.

Grounded theory – an approach to research that emphasises the importance of generating new concepts and theoretical frameworks from data.

Hypothesis – an informed speculation which is set to be tested.

Independent variable – a variable that has a causal impact on another variable.

Informed consent – a key principle in social research ethics. It implies prospective participants should be given as much information as possible to enable them to decide to be involved in the research.

Interpretivism – a broad term to describe a range of epistemological approaches that challenge the traditional scientific approach of positivism. It requires the social scientist to grasp the subjective meaning of social action.

Interview schedule – a collection of questions designed to be asked by an interviewer.

Likert scale – a widely used format developed by Rensis Likert for asking attitude questions. Respondents are typically asked their degree of agreement with a series of statements. The scale is then deemed to measure respondent intensity of feeling about an issue.

Literature review – a comprehensive summary and critical appraisal of the literature that is relevant to our research topic. It presents to the reader what is already known in the field.

Literature search – the process of identifying texts that are appropriate using electronic or manual searches.

Longitudinal study – a research design in which data are collected on a sample on at least two occasions.

Mean – everyday average, namely, the total distribution of values divided by the number of values.

Median – the midpoint in a distribution of values.

Methodology – refers to how you are going to undertake your research. It includes the research approach, including your epistemological position and specific research methods e.g. interviews, questionnaires.

Mode – the value that occurs most frequently in a distribution of values.

Moderator – the person who guides the questioning of a focus group.

Multi-strategy research – a term used to describe research that combines quantitative and qualitative research.

Non-response – a source of non-sampling error that occurs whenever some members of a sample refuse to cooperate or supply the required data.

Null hypothesis – a hypothesis of no relationship between two variables.

Open question – a question employed in an interview schedule or questionnaire that does not present the respondent with a set of possible answers. Compare with closed question.

Operationalisation – the process of how to convert an abstract concept into a quantifiable measure through deciding which indicators to use when measuring a particular variable.

Research Approach – the traditional division between quantitative and qualitative approaches in research.

Participants – replaces the outmoded term ‘research subjects’ and suggests a more active and equal role, in which participation is informed and chosen freely.

Population – the universal units from which the sample is selected.

Positivism – an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality. It stresses objectivity and seeks to establish casual relationships.

Probability sample – a sample that has been selected using random sampling and in which each unit in the population has a known probability of being selected.

Purposive sampling – a popular approach used in qualitative research where participants are chosen because they possess relevant characteristics for the research question.

Qualitative research – tends to emphasis words as data, and rather than seeking to test a hypothesis, seeks to explain the meaning of social phenomena through exploring the ways in which individuals understand their social worlds.

Quantitative research – tends to emphasis quantification in the collection and analysis of data. Tends to be influenced by positivism which emphasises ‘objectivity’ by seeking to remove the values and attitudes of te researcher from the study.

Questionnaire – a collection of questions administered to respondents.

Quota sampling – whereby the researcher decides to research groups or quotas of people from specific subsections of the total population.

Randomised control trial – participants are randomly assigned to one of two groups: an experimental group and a control group. The experimental group receives the intervention while the control group does not, and the effects measured.

Random sampling – sampling whereby the inclusion of a unit of a population occurs entirely by chance.

Range – the difference between the maximum and the minimum value in the distribution of values.

Reliability – a measure of how consistent or stable a particular measure is.

Replication – the degree to which the results of a study can be reproduced.

Representative sample – a sample that reflects the population accurately.

Research design – a framework for the collection and analysis of data.

Research method – the practical ways that you are going to collect your data, for example, interviews, questionnaires, focus groups.

Sample – the segment of the population selected for research. It is a subset of the population.

Sampling error – difference between a random sample and the population from which it is selected.

Semi-structured interview – a context in which the interviewer has a series of questions that are in the general form of an interview guide but is able to vary the sequence of questions.

Simple random sampling – a sample in which each unit has been selected entirely by chance. Each unit of the population has an equal chance of being in the population.

Snowball sampling – the researcher selects a small number of participants and asks them to recommend other suitable people.

Surveys – used to study large groups or populations collected predominantly by self-completion questionnaire.

Standard deviation – a measure of dispersion around the mean.

Structured interview – a research interview in which all the respondents are asked exactly the same questions in the same order with the aid of an interview schedule.

Systematic review – a form of literature review that uses an explicit and transparent set of formal protocols that seek to minimise the chances of systematic bias and error.

Systematic sampling – a probability sampling method in which units are selected from a sampling frame according to fixed intervals, for example, every tenth unit.

Thematic analysis - a method for analysing qualitative data by identifying patterns of meaning.

Transcription - the written translation of a tape-recorded interview or focus group.

Unstructured interview – an interview in which the interviewer typically has only a list of topics or issues often called an interview guide, which are covered. The style of questioning is usually very informal.

Validity – a concern with the integrity of the conclusions that are generated from a piece of research.

Variable – attributes that can take on different values with different cases and could include your participants attitudes, beliefs, behaviours, knowledge or some other characteristic.

Research Tool Kit

Support with literature Reviews:

- Internet Searching- Google Tips-
https://www.google.com/educators/downloads/Tips_Tricks_17x22.pdf

- PRISMA 2020 literature search flow diagram
https://libguides.mq.edu.au/systematic_reviews/prisma_screen

- How to record a literature Review- example-
<https://www.ncbi.nlm.nih.gov/books/NBK62485/table/results.t1/>

- Foster et al 2013 paper on applying literature search results to practice-
[https://www.researchgate.net/publication/259350391 Translating Research In to Practice Criteria for Applying Literature Search Results to Your Work](https://www.researchgate.net/publication/259350391_Translating_Research_In_to_Practice_Criteria_for_Applying_Literature_Search_Results_to_Your_Work)

- CASP Appraisal Tool-
<https://casp-uk.net/casp-tools-checklists/>

Systemic Reviews:

- PRISMA Checklist for Systematic design:
<https://meridian.cvm.iastate.edu/wp-content/uploads/2017/06/PRISMA-2009-checklist.pdf>

Referencing

- Quick Guide to Harvard Referencing:

<https://www.bcu.ac.uk/library/services-and-support/referencing/harvard/harvard-style-guide>

Quantitative Research

- Support with Power Analysis

<http://www.mormonsandscience.com/gpower-guide.html>

- Choosing the right statistical test- Types and examples-

<https://www.scribbr.com/statistics/statistical-tests/>

National Institute for Health and Care Research resources

The NIHR have substantial resources and avenues of support including:

NIHR Scholar Resources and Training

CRN WM Early career research scholars and training opportunities regionally

<https://sites.google.com/nihr.ac.uk/nihr-crnwm-scholarsite/scholar-resources>

NIHR Learn- now includes local learning, national training courses, DELVE online library of resources and access to online webinars of, the following links maybe of particular interest:

- The NIHR introduction to exploring options for engaging with and using research and Career development in research:

<https://www.nihr.ac.uk/health-and-care-professionals/career-development/social-care-practitioners.htm>

- **The NIHR Introduction to Research in the Social Care Setting:**

An interactive learning programme for those in the social care setting who are new to research or anyone who is working in research and would like to know about how research works in social care or social work setting.

You can register here:

<https://id.nihr.ac.uk/authenticationendpoint/login.do?RelayState=ss%3Amem%3A348dd9c0db25c3c3f352af4dc7fff59a6670bb26043d7f24e3413a4cd5d20e7e&commonAuthCallerPath=%2FsamlSso&forceAuth=false&passiveAuth=false&tenantDomain=carbon.super&sessionDataKey=b9c41486-5b30-4604-aebf-35a218932823&relyingParty=learn.nihr.ac.uk&type=samlSso&sp=NIHR+Learn&isSaaSApp=false&authenticators=GoogleOIDCAuthenticator%3AGoogle%3BAtributeBasedAuthenticator%3ALOCAL>

- **The NIHR Research Learning Lectures:**

A series of lectures covering a variety of topics relating to basic science, clinical trial methodology and statistics. The lectures provide career advice for anyone who wishes to know more about research or work towards a career in research or academia.

<https://sites.google.com/nihr.ac.uk/associatepische/nihr.ac.uk/associatepische/events/research-learning-lectures?pli=1>

- **NIHR Funding avenues for social care studies and career development with NIHR and help and guidance for social care research applicants:**

<https://www.nihr.ac.uk/researchers/social-care-researchers>

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