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Adithya Pradyumna

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Silver Jubilee conference of the Karnataka Association of Community Health – walking down the memory lane

Girish N Rao
Qualitative Research: An overview
Suma R K

Research is critical in biomedicine because it leads to new discoveries and can change peoples’ lives by improving health and wellbeing. However many health problems of today cannot be solved due to problems of interpretation and meaning; and a complex interplay of social factors. Qualitative research has its roots in social science and is more concerned with understanding why people behave as they do, their knowledge, attitudes, beliefs, fears, etc. It aims to help us to understand the world in which we live and why things are the way they are. Qualitative research is especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations.

The characteristics of qualitative research are it seeks to explore phenomenon, has an open ended question format, data is in textual form, and the study design is iterative, that is, data collection and research questions are adjusted according to what is learned.

Qualitative research designs

Four major types of qualitative research design are phenomenology, ethnography, grounded theory, and case study. Phenomenology literally means the study of phenomena. It is a way of describing something that exists as part of the world in which we live. Phenomena may be events, situations, experiences, or concepts. We are surrounded by many phenomena, which we are aware of but not fully understand. Example: back pain. Correlation studies may tell us about the types of people who experience back pain and the apparent causes. Randomized controlled trials of drugs compare the effectiveness of one analgesia against another. However, what is it actually like to live with back pain? What are the effects on peoples’ lives? What problems does it cause? A phenomenological study might explore, for example, the effect that back pain has on sufferers’ relationships with other people by describing the strain it can cause in marriages or the effect on children of having a disabled parent. Phenomenological research begins with the acknowledgement that there is a gap in our understanding and that clarification or illumination will be of benefit. Phenomenological research will not necessarily provide definitive explanations but it does raise awareness and increases insight.

Ethnography: The term means “portrait of a people” and it is a methodology for descriptive studies of cultures and people. In health care settings, researchers may choose an ethnographic approach because the cultural parameter is suspected of affecting the population’s response to care or treatment. For example, cultural rules about contact between males and females may contribute to reluctance of women from an Asian subgroup to take up cervical screening. Ethnography helps health care professionals to develop cultural awareness and sensitivity and enhances the provision and quality of care for people from all cultures. Ethnographic studies entail extensive fieldwork by the researcher and is extremely time consuming. Analysis of data adopts an “emic” approach. This means that the researcher attempts to interpret data from the perspective of the population under study. The results are expressed as though the subjects themselves, often using local language, and terminology to describe phenomena were expressing them. Ethnographic research can be problematic when researchers are not sufficiently familiar with the social mores of the people being studied or with their language. Interpretation from an “etic” perspective - an outsider perspective - may be a misinterpretation causing confusion. For this reason, the ethnographic researcher usually returns to the field to check his interpretations with informants thereby validating the data before presenting the findings.

Grounded theory: The main feature is the development of new theory through the collection and analysis of data about a phenomenon. It goes beyond phenomenology because the explanations that emerge are genuinely new knowledge and are used to develop new theories about a phenomenon. A key feature of grounded theory is the simultaneous collection and analysis of data using a process known as constant comparative analysis. In this process, data are transcribed and examined for content immediately following data collection. Ideas, which emerge from the analysis, are included in data collection when the researcher next enters

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Another drawback is that too
is particularistic and contextual.
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understanding of the purpose of
are not generalizable. This is a mis-
therefore the results of the research
sentative of similar cases and
study research is that the case un-
duce a particular manifestation.
ables as possible, case studies can
potential to capture as many vari-
which has been observed. Memos
form in the researcher’s conscious-
raw data is reviewed. Hypotheses
between various ideas or categories
are tested out and constructs
formed leading to new concepts or
understandings. In this sense, the
theory is “grounded” in the data.
Case study: is a highly versatile
research method, used to describe
an entity that forms a single unit
such as a person, an organisation,
or an institution. It ranges in com-
plicity. The most simple is an illus-
trative description of a single event
or occurrence. More complex is the
analysis of a social situation over a
period of time. The most complex
is the extended case study, which
traces events involving the same
actors over a period of time ena-
bling the analysis to reflect
changes and adjustments. By at-
tемпting to capture as many vari-
ables as possible, case studies can
identify how a complex set of cir-
cumstances come together to pro-
duce a particular manifestation.
One of the criticisms aimed at case
study research is that the case un-
der study is not necessarily repre-
sentative of similar cases and
therefore the results of the research
are not generalizable. This is a mis-
understanding of the purpose of
case study research, which is to de-
scribe that particular case in detail. It
is particularistic and contextual.
Another drawback is that too
many subjective decisions are
made by the investigator to offer
genuinely objective result.

Qualitative data collection tech-
niques
Several methods exist for data
collection in qualitative research;
however, there are four main
methods of data collection, namely
Participant observation, Focus
Group Discussion, in depth inter-
view and Participatory Rural Ap-
praisal.

Participant observation always
takes place in community settings,
in locations believed to have some
relevance to the research ques-
tions. The method is distinctive be-
cause the researcher approaches
participants in their own environ-
ment rather than having the partic-
ipants come to the researcher.
Techniques for collecting data
through observation include writ-
ten descriptions, video recording,
photographs, and artefacts. Differ-
ent types of participant observa-
tion are direct and indirect; struc-
tured and unstructured; overt and
covert. Strength of this method is it
allows for insight into contexts, re-
lationships, behaviour. Weakness
is it is time consuming and re-
quires conscious effort at objectiv-
ity because method is inherently
subjective.

Focus group discussion is a
form of qualitative research
method in which the interviewer
asks research participants specific
questions about a topic or an issue
in a group discussion. Focus
groups, unlike individual inter-
views, provide the added dimen-
sion of the interactions among
members. This method is espe-
cially well suited for socio - behav-
ioral research that will be used to
develop and measure health ser-
ices that meet the needs of a given
population. An FGD requires the
following: 6 - 12 participants who
are willing to talk about the issue
under discussion; participants
should be as homogenous as pos-
sible with respect to their back-
ground characteristics; moderator
conducting the discussion but not
leading the discussion; recorder
who notes down the proceedings
and draws the sociogram; record-
ing equipment with a backup.

Focus groups are a popular
method for assessing public expe-
rience and understanding of ill-
ness, identifying ideas concerning
health-risk behaviours and dan-
ger, and discovering the public’s
perception of causes of diseases.
Focus groups are also exception-
ally effective for study of sensitive
issues as well as issues that are dif-
ficult to access, such as acute men-
tal distress, HIV/AIDS, or sexual
health issues. Conducting a focus
group requires a high level of re-
sources. The process involves for-
mulating research questions, de-
veloping protocols, soliciting par-
ticipants, arranging venues, facili-
tating focus groups, transcribing,
analysing data, and reporting the
findings.

Focus groups are better used to
explore specific or narrowly fo-
cused topics; otherwise, the data
obtained is likely to be diffused,
thus making data analysis a diffi-
cult task. Focus group discussions
have several advantages. It is an
excellent method for collecting
qualitative data where participants
are able to build upon one an-
other’s comments, stimulate think-
ing and discussion, and thus gen-
erate ideas and breadth of discus-
sion. It can produce high quality
data because the focus group mod-
erator can respond to questions,
probe for clarification, and solicit
responses that are more detailed.

A fundamental disadvantage of
focus groups is its susceptibility to
bias, because group and individual opinions can be swayed by dominant participants or by the moderator. In addition, control over the group discussion could be a problem and time can be lost on issues irrelevant to the topic if a discussion digresses from the original topic. In such situations, the data could be “messy”; therefore, it is imperative that moderators need to have facilitator skills to overcome this potential setback. Groups are often difficult to assemble and response rate could be a problem. A telephone or mail reminder to the participants of the time and place of the setting is helpful. It is advisable to over recruit by 20%, as some people may change their minds about participating or fail to turn up on the day of the discussion.

In “in depth” interviews have very little structure at all. The interviewer goes into the interview with the aim of discussing a limited number of topics, sometimes as few as one or two, and frames the questions based on the interviewee’s previous response. Although only one or two topics are discussed, they are covered in great detail. Unstructured interviews are exactly what they sound like - interviews where the interviewer wants to find out about a specific topic but has no structure or preconceived plan or expectation as to how they will deal with the topic.

Ask questions in a neutral manner, listening attentively to participants’ responses, and asking follow-up questions and probes based on those responses. No lead questions, no expression of approval/disapproval.

Key Informant interviews are qualitative in depth interviews of 10 to 20 people selected for the first-hand knowledge about a topic of interest. KI is known as key because of his/her unique position in the community by the virtue of which he/she can impart a useful piece of information. This method is used when qualitative, descriptive information is sufficient for decision-making, when the main purpose is to generate recommendations and when preliminary information is needed to design a comprehensive quantitative study.

Participatory Rural Appraisal (PRA) an approach for shared learning between local people and outsiders to enable development practitioners, government officials, and local people to plan together appropriate interventions. It empowers the poor and marginalized communities. Offers a basket of techniques including social mapping, Venn, or chapathi diagram, ranking exercise, and trend analysis.

Sampling in Qualitative Research
Qualitative research uses non-probability sampling methods namely purposive sampling, quota sampling, and snowball sampling. Purposive sampling is the most commonly used. The sample size is relatively small but consists of information rich cases. Sometimes, the number of people in the sample is not known before the research starts and the sample undergoes change during the research in respect of size and type. Usually sampling goes on until saturation is achieved, that is until no new information is generated and informational redundancy occurs.

Data Analysis in Qualitative Research
Qualitative data consist of words and observations and not numbers. Data analysis includes reading the text repeatedly, coding to identify themes, organize them into coherent categories, identify patterns and connections within and between categories and drawing conclusion. In recent years there are several software programs, for example, Ethnograph, NUD*IST, SAS, CDC EZ-Text specifically to analyse qualitative data.

Ethics in qualitative research
The lack of emphasis on ethical issues of qualitative research may relate to a belief that it is unlikely to harm participants. Four potential risk to participants are anxiety and distress; exploitation; misrepresentation; and identification of participants in published papers, by themselves or by others.

Risk to participants in qualitative health services research
Four potential risk to participants are – anxiety and distress; exploitation; misrepresentation; and identification of participants in published papers, by themselves or by others.

Anxiety and distress: Qualitative research aims at in depth understanding of an issue, including exploration of the reasons and context for participants’ beliefs and actions, so is often designed to be probing in nature. Interviews, the commonest method, may provoke anxiety and distress. Example, in a study of chest pain carried out, the focus of the interviews led some respondents to express anxieties that episodes of chest pain which they had previously to be insignificant might signify serious disease.

Exploitation: When a researcher is also a health professional, power imbalance is exaggerated in two ways. First, the participant may feel pressurized to participate in
research because of a sense of duty, or because they depend on the good will of their careers. Secondly, although it is often assumed that a qualitative interview, which allows the participant to speak in their own terms, can be therapeutic, this feature can also potentially lead to exploitation and harm.

**Misrepresentation:** The analysis of qualitative data inevitably is influenced by the theoretical framework, epistemological commitments, personal characteristics, and preconceptions of the researcher. First, most health services research projects are designed to answer specific questions about the patients’ perceptions and behaviour and as such are strongly directed by preconceived theories. Secondly, sampling strategies are often determined by these theories, and participant characteristics, which are considered significant, such as gender and socio-economic status, are built into the study design. Thirdly, there is some evidence that the dynamics of the qualitative interview and the nature of data collected can be affected by the professional background of the researcher.

**Identification of the participant by self or others:** Qualitative health services research studies collect large amounts of information about participants’ health and illness, lifestyles and views about health care, as well as information about members of their families and social groups. If identification occurs, it potentially may lead to serious harm such as prejudice and reprisal to the participant or their wider social group. Interview transcripts contain multiple clues to the person’s identity, such as their name, employment details, place of residence and events, which have occurred in their communities. It is therefore impossible to anonymize interview data at the stage of analysis, and the identity of participants often will be known to the person carrying out the transcription.

**Inconvenience and opportunity cost:** As well as the serious potential risks outlined above, the inconvenience and opportunity costs involved in participating in qualitative research are often underestimated. Most qualitative studies in the health services involve in-depth interviews with participants. Such interviews normally last for at least an hour and necessitate the participant travelling to a research centre or allowing the interviewer into their home. In some studies, participants will be asked to take part in a second interview.

**Reducing the risk of harm**

**Scientific soundness:** A fundamental ethical requirement of all research is that it is scientifically sound. It should be properly designed and carried out by researchers with adequate levels of expertise and supervision. It should also be ‘worth doing’, in the sense that the results are likely to lead to tangible benefit.

**Follow-up care:** Research into health and health care may raise participants’ expectations that help will be forthcoming, especially when they know that the interviewer is a health practitioner.

**Consent:** A minimum requirement for an interview study should be that written consent be obtained from the participant after they have been informed, verbally and in writing, about the following issues: the purpose and scope of the study, the types of questions which are likely to be asked, the use to which the results will be put, the method of anonymization and the extent to which participants’ utterances will be used in reports. Participants should also be given time to both consider their participation and to ask questions of the researcher.

**Misrepresentation and misinterpretation:** Several measures can be employed to minimize the risk of misinterpretation. ‘Respondent validation’ refers to the process whereby researchers feedback the analysis to the participants before the findings are published. However, that practice has limitations.

**Confidentiality:** confidentiality means that no personal information is passed on except in exceptional circumstances. In most cases, qualitative health services research aims for anonymity and confidentiality, and should use foolproof strategies for the secure storage of tapes and transcripts. Pseudonyms or initials should be used in transcripts and, where possible, other identifying details should be altered. The failure to address these issues can lead to the identification of participants and may make it easier, through a process of elimination, to identify others.

**Strengths of qualitative research** are that issues can be examined in detail and in depth. Interviews are not restricted to specific questions and can be guided or redirected by the researcher in real time. The research framework and direction can be quickly revised as new information emerges. Although findings cannot be generalized to a larger population, can however be transferable to another setting.

**Limitations of Qualitative Research**

1. Research quality is heavily dependent on the individual skills of the researcher and more easily
influenced by the researcher’s personal biases.

2. The volume of data makes analysis and interpretation time consuming.

3. It is sometimes not as well understood and accepted as quantitative research within the scientific community.

4. The researcher’s presence during data gathering, which is often unavoidable in qualitative research, can affect the subjects’ responses.

5. Issues of anonymity and confidentiality can present problems when presenting findings.

6. Findings can be more difficult and time consuming to characterize in a visual way.

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