

Sample Size for Interview in Qualitative Research in Social Sciences: A Guide to Novice Researchers

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ABSTRACT

This review aimed to answer the question of how many interviews are enough for one qualitative research? The question 'how many interviews are enough for one qualitative research is persistently controversial among qualitative researchers in social science. For this frequently occurring question especially among novice practitioners, the majority of scholars are opted to say no universally guiding rule to decide on a required number of sample for qualitative research rather 'it depends'. But, this also raises another insight among researchers urging them to look for different things, i.e., on what circumstance would be making a decision about the required number of respondents depend? Though we lack one guideline dictating researchers how to decide on the number of sample size, the majority of researchers agree on one reasonable answer this is 'it depends'. Indeed, in our work, we endeavor to identify, on what it depends? We also attempted to figure out or indicate the commonly referred range of sample size in qualitative research. Generally when we sum up our review work, the decision on "How many" is depended on several factors among which the following are some; the focus of the research, the type of research question, available resource and time, institutional committee requirements, the judgments of epistemic community in which a researcher is located, the nature of the selected group, the domain of inquiry, the experience of the researcher with qualitative research, and so on. Specific to number 20-60 is the most frequently observed range of sample size in qualitative research which of course is determined by the aforementioned factors.

KEYWORDS

Qualitative research; interview; sample size; novice researcher; research participant.

INTRODUCTION

As pointed by Bryman (2012), one of the problems that the qualitative researcher faces is that it is challenging to define how many people will be interviewed prior to actual data collection. Due to this fact, sample size determination in qualitative research has been the subject of persistent debates (Vasileious et al. 2018).

This review was made in an attempt to answering the question ‘how many interviews is enough for one qualitative research project?’ This question always tricks researchers while planning a qualitative research proposal, especially if the research is needed to be funded. To solve this trick, we have exhaustedly referred to various materials and got quantifiable suggestions and scholarly advice about how to reach on a decision regarding the number of interviews or sample size in qualitative research. Though, different experiences are there, still the issue of ‘how many’ is persistently controversial among qualitative researchers. The majority of scholars especially novice practitioners responded to this frequently occurring question saying no universally guiding rule to decide on the required number of interviewees to reach data saturation, rather ‘it depends’. But, this also raises another insight among researchers urging them to look for different things, i.e., on what circumstance would be making the decision about the required number of respondents depends on. According to Baker and Edwards (2012), Julia Brannen has suggested that the most important issue in deciding ‘how many qualitative interviews are enough?’ concerns the purpose of the research, the type of research question to be addressed, and the methodology it is proposed to adopt. Among many things raised, what the researcher desire to do, the nature of the research, selected strategy, the purpose of the study are some among many different circumstances on which the decision will be made depending on.

We hope this review paper may satisfy readers and steer towards clear guideline and may help them to be systematic and consider different factors upon which they can depend while deciding the sample size for particular qualitative research.

Question: How many interviews are enough for one qualitative research project?

When we think of sampling in qualitative research, commonly, our focus tends to revolve around the concept of non-probability, particularly purposive sampling. In the purposive sampling technique, the researcher does not seek to sample research participants on a random basis, this is because the goal of this sampling is to sample research participants strategically, so that the selected participants are relevant to the research questions that are being asked. In purposive sampling, the study site and unit of analysis within it (organization or people) are selected because of their relevance to the research questions. Therefore, while sampling participants the researcher keeps the research questions in mind, because, the research questions indicate what units need to be sampled. Research questions are likely to provide guidelines as to what categories of people need to be the focus of attention and therefore sampled.

Though, purposive sampling procedure in qualitative research gives freedom for researchers to select the participant based on the research questions asked, what is difficult is obtaining a defined sample size. As pointed by Bryman (2012), one of the problems that the qualitative researcher faces is that it is challenging to define how many people will be interviewed prior to actual data collection. Thus, it is practically impossible to correctly know, how many research participants should be interviewed before theoretical saturation has been achieved.

Due to this fact, sample size determination in qualitative research has been the subject of persistent debates (Vasileious et al. 2018). Different scholars Baker & Edwards (2012), Vasileious, et al. (2018), Morse (2000), Kindsiko & Poltimae (2019), Sim, et al. (2018), and Creswell (1998) also attempted to look for a numerical guideline that may help to support researchers in deciding the sample size for their qualitative study. However, still the issue lacks a concrete guideline which is clear and easy for less experienced researchers. No universal rule dictates the maximum and the minimum number of interviews for one qualitative research. Therefore different scholars employ various mechanisms and techniques to decide on the number of interviews. According to Guest et al. (2006) various pieces of literatures explain only how to select respondents and issues to be considered while selecting respondents or provide readers with factors to consider when deciding the numbers of participants rather than providing the actual required number. Pieces of literature also argue that sample size in qualitative research can be justified by 'theoretical saturation'. According to Dawson (2002), if the proposed research requires the use of purposive sampling techniques, it may be difficult for the researcher to define at the proposal stage how many research participants that the researchers intend to contact. Rather they are advised to use the chosen procedures of sampling until a 'saturation point' is reached.

However, as per our experience and review 'sampling until saturation is achieved' may not satisfy the need of those who are facing difficulty to decide on the sample size before data collection. This is because data saturation can be recognized only in the course of data collection. Thus, this can't be a way out to the problem if the research is required to be funded. Therefore, the issue of obtaining an actual number of samples for a particular qualitative study before data collection remains doubtful and tricking for researchers especially less experienced researchers. Guest et al. (2006) stated that individuals designing research need to define how many interviews they should budget for and write into their proposal before they enter in the actual study. According to Kindsiko & Poltimae (2019), researchers are also required to provide clear methodological plans that are as detailed as possible in their proposal which may determine budget allocation. Therefore researchers have to give clear information about the proposed research participants, who are these participants to be interviewed, strategies for interviewing, and for how long. However, as we have learned from our experience and pieces of literature the problem of defining a justifiable number prior to data collection remains unsolved. Also, factors that are needed to be put under consideration while deciding a desired

number of the interview are recommended by various works of literature but not summarized in an easy way to help researchers who are less experienced. Thus our review work is an attempt to address this gap by guiding researchers towards an easy way that may help them in deciding a sample size relying on factors that can contribute to the size of the sample.

In this review work, we have attempted to illuminate the most recommended factors that need to be considered to decide on the justifiable number of research participants prior to data collection or at the proposal stage. This may help readers and researchers to understand issues which are recommended to be considered and realize upon which the decision of the sample size can depend on.

Morse in her two publications attempted to refer to different factors to depend on while deciding the desired number as stated hereunder.

Estimating the number of participants in a study required to reach saturation depends on several factors, including the quality of data, the scope of the study, the nature of the topic, the amount of useful information obtained from each participant, the number of interviews per participant, the use of shadowed data, the qualitative method and study design used. (Morse, 2000, p. 3)

According to her study, there is also more issue to be considered upon which the decision can depend on:

It also depends on the investigator how theoretically smart, how well these data are theoretically sampled and verified, how well funded, how much time allotted, and how patient she is and how hard he thinks. With too few participants or too little data, analysis is more difficult as patterns are more difficult to identify. With too little data, replication may not occur: Variation is scattered, and important features in these data may be missing or overlooked. (Morse, 2015, p. 1317)

In summary what we can learn from the two works of Morse is that there are many critical factors that we need to consider while deciding on the sample size like; the range of the study, the nature of the subject under investigation, study design used, investigators experience, how well these data are theoretically sampled and verified, budget, and time allotted.

As literature reveals Morse (1995) in qualitative research, there are no available guidelines or references for the prior estimation of the amount of sample size required to reach saturation. Thus, as per our experience and review of various published and unpublished research works, we recommended researchers to depend on the following factors that may contribute to the estimation of sample size.

Summary of recommended factors that can contribute to the size of the sample

Composition of a sample

The characteristic of a sample affects sample size. The homogeneity or heterogeneity of sample composition determines the size of a sample for particular qualitative research. According to Kindsiko & Poltimae (2019) large size of sample size is often found at the expense of homogeneity across the respondents; that means, conducting interviews in different countries, across all levels of organizational hierarchy, and also different socio-economic backgrounds. Bryman (2012) also pointed out that, as more comparisons between groups are required, the more interviews will need to be carried out. Therefore, if several comparisons are intended to be made between males and females, different regions, organizations, age groups, and different types of research participants in terms of locally relevant factors, a larger sample is likely to be necessary. Thus, the composition of the sample ultimately determines whether and how soon we reach saturation in information flow (Kindsiko & Poltimae, 2019). To this end, as the characteristics of the sample population are heterogeneous, more likely the size of the sample increases.

The scope of the study

This implies that the broader the scope of the study, the longer it will take to reach data saturation. This means a broader scope requires much more research participants, more interviews, more data sources, and much more work (Morse, 2000). Thus, the wideness or narrowness of the scope of the study affects the size of the sample. As the scope is large so does the size of the sample. Concretizing this point Bryman (2012) argued that, as a rule of thumb, if the scope of a qualitative study is broader, it is true that the more interviews will be conducted.

The nature of the topic

If the subject under investigation is easily noticeable and clear, and the information is easily obtained in the interview, fewer research participants are required compared to the study where the subject under investigation is complex and tough to understand. Topics which are not easily noticeable and new have more valid contribution and require experienced analyst. Such topics are also requiring more data, more research participant, and more data sources. Therefore, if the topic is not easily noticeable or if participants are feeling uncooperative to talk about the topic, it is recommended to increase the number of participants (Morse, 2000).

Quality of data

We know that some participants can reflect on the topic and express themselves better than others. Some participants may have more time to give the researcher and be less distracted, whereas some may simply be more articulate, have more experience in the topic, or be more willing to share these experiences with the researcher. If data are on target, contain less dross, and are rich and experiential, then fewer participants will be required to reach saturation. It is clear to the researchers is that some research participants are capable to reflect on the topic under study and can express themselves better than others. Some participants may have also given sufficient time to the researcher, some may more articulate the topic, have more

experience in the topic, or more interested to share experiences with the researcher. In that case, data obtained from such participants is clear, empirical, and quality, thus fewer participants will be required to reach data saturation (Morse, 2000).

Research design

Some study designs require more participants than others. For instance, cited in (Bernard, 2013), Morse (1994) Suggested at least 6 participants for phenomenological studies and approximately 30-50 participants for ethnographies and grounded theory studies. Thus, it is also critical to consider the type of research design when estimating participant size.

Research Designs and Sample Size

Narrative research.

In this type of study, the researcher studies the lives of individuals and asks one or more individuals to provide stories about their lives (Creswell, 2007). According to Chase (2005) narrative design is a mode of inquiry in qualitative research and it has a specific focus on the stories told by individuals. It is understood as the study of an individual and her or his experiences as told to the researcher or found in documents and archival material. The procedures for implementing this research consist of focusing on studying one or two individuals, gathering data through the collection of their stories, reporting individual experiences, and chronologically ordering (or using *life course stages*) the meaning of those experiences. Thus, for narrative research since the subject of the study is an individual the sample for the interview is 1 or 2 persons.

Ethnography

Is a strategy of inquiry in which the researcher studies an intact cultural group in a natural setting over a prolonged period by collecting, primarily observational and interview data (Creswell, 2007). The research process is flexible and typically evolves contextually in response to the lived realities encountered in the field setting. In ethnography, once the investigator selects a site with a cultural group, the next decision is who and what will be studied. Most often the sample size for ethnographic research in social science ranges from 30-50 participants. In this design the ethnographers rely on their judgment to select members of the subculture or unit based on their research questions.

Grounded theory

Is a strategy of inquiry in which the researcher derives a general, abstract theory of a process, action, or interaction grounded in the views of participants. This process involves using multiple stages of data collection and the refinement and interrelationship of categories of information. With regard to sampling cited in Bernard (2013), Morse (1994) suggested approximately 30-50 participants for grounded theory studies.

Case studies

Case studies are a strategy of inquiry in which the researcher explores in depth a program, event, activity, process, or one or more individuals. Cases are bounded by time and activity, and

researchers collect detailed information using a variety of data collection procedures over a sustained period.

Phenomenological research

Phenomenological research is a strategy of inquiry in which the researcher identifies the essence of human experiences about a phenomenon as described by participants. Understanding the lived experiences marks phenomenology as a philosophy as well as a method, and the procedure involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning. In this process, the researcher brackets or sets aside his or her own experiences to understand those of the participants in the study.

Numerical suggestions of sample size depending on the type of research design

A lot of scholars have attempted to indicate the actual number of sample respondents for a qualitative inquiry. In their explanation, they have referred to the number differently for different qualitative research designs. Some research designs need a large sample size others relatively require a small number. According to Bernard (2013) there is growing support that 10-20 key research participants are enough to uncover and understand the major issues in any study of lived experience. Cited in Bernard (2013), Morse (1994) suggested at least 6 participants for phenomenological studies and approximately 30-50 participants for ethnographies and grounded theory studies. In the same fashion Bernard (2000) cited in Guest et al. (2006) has suggested 30-60 interviews for most ethnographic studies, whereas, Bertaux (1981) labeled 15 as the smallest acceptable sample size in qualitative research.

Creswell (1998) recommendation also ranges between 5 and 25 interviews for a phenomenological study and 20-30 for a grounded theory study. To Kuzel (1992) as cited in (Guest, Bunce, & Johnson, 2006), taking sample heterogeneity and research objectives under consideration 6-8 interviews are enough for a homogeneous sample and 12 to 20 when trying to achieve maximum variations. But none of these scholars' are attempted to give substantial rational/evidence to support their recommendations (Guest, Bunce, & Johnson, 2006). Finally according to Guest et al. (2006) 6-12 interviews are enough for one qualitative research project. But the essential point we have to remember is that 6-12 interviews will not be always enough to achieve the desired research objective because purposive sampling has to be carefully selected, and 12 interviews will likely not be enough if a selected sample is relatively heterogeneous, the data quality is poor, and the domain of inquiry is complex. Thus we will probably need a larger sample if the goal of our research is to assess variation between distinct groups or correlation among variables. On the contrary if the research aims to understand common perceptions and experiences among groups of relatively homogenous individuals, 12 interviews will be enough.

Warren (2002) cited in Bryman (2012) makes a fascinating statement that, for a qualitative interview study to be published, the minimum number of interviews required seems

to be between 20 and 30. However, while guided by this we may require exceptionally considering a narrative research design which is based on a life story interview, where just 1 or 2 interviewees will be needed to accomplish the research.

However, Bryman (2012) argued that by no means all practitioners would agree with Warren's figure. This is because, Gerson and Horowitz (2002) cited in Bryman (2012), write that 'fewer than 60 interviews cannot support convincing conclusions and more than 150 produce too much material to analyze effectively and expeditiously'. Finally, what we can understand from the differences of numerical suggestions is that how difficult it can be to try to specify minimum sample sizes. In general, what is recommended is that; the size of the sample in qualitative research should not be too small as it may result in difficulty in achieving data saturation, and at the same time the size of the sample should not be too large as it may result in difficulty in undertaking a deep analysis (Bryman, 2012).

CONCLUSION

There are ranges of opinion about obtaining appropriate sample sizes for qualitative research. To this end researchers especially inexperienced or novice researchers are stuck with the issue and puzzled about how to justify the sample size they defined before data collection. When we sum up the review, though there are various suggestions and attempts in solving the problem, what we found very important and guiding researchers especially less experienced researchers is identifying and clearly defining factors that can contribute to the size of the sample. Therefore, as per our study the decision on 'How many' is depended on several factors ranging from the nature of the selected group; is it relatively homogeneous or heterogeneous, the scope of the study, the nature of the topic, quality of data, the type of research design, the type of research question, available resource, the time available, the domain of inquiry is diffuse or vague, to, the experience of the researcher with qualitative research. Besides according to (Bryman, 2012) it is also the orientation of the researchers and the purposes of their research will be significant to decide on a justifiable sample size.

The issue of acceptable minimum sample size is also another issue that needs to be considered while deciding on sample size. According to Warren (2002) cited in Brayman (2012), for a qualitative interview study to be published, the minimum number of interviews required seems to be between twenty and thirty. However, there are also different views concerning minimum sample size, Gerson and Horowitz (2002) also recommended that interviews fewer than 60 cannot support convincing conclusions and more than 150 produce too much material to analyze effectively and expeditiously. Here what we understood from these scholars' opinions is that there is no agreement even on the minimum requirement. However, as we able to become certain from our review work is that, researches with a large and heterogeneous sample are more likely to be published in notable leading journals.

Moreover, Bryman (2012) advised that, rather than relying on others' impressions of suitable sample sizes in qualitative research, researchers certainly better to be clear and

confident about the sampling method they employed, why they used it, and why the sample size they achieved is appropriate.

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