

QUALITATIVE INTERVIEWS:

When enough is **ENOUGH**

Donna Bonde



About this White Paper

The purpose of this white paper is to guide market research professionals on how many interviews are needed in qualitative research. In examining the issue, both classic and contemporary research in the social sciences was consulted. In summary, although research experts disagree on the ideal number of qualitative interviews, they do agree that adequate sample sizes are impacted by project scope and resources, as well as characteristics pertaining to the target audience, researchers and research audience. Careful examination of these factors will enable market research professionals to determine whether they need more or less qualitative interviews in any given project to produce valid results.

Qualitative Market Research: When Enough is Enough
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Research by Design

Australian office

m: +61 410 331 234

t: +61 7 3342 7792

e: info@researchbydesign.com.au

www.researchbydesign.com.au

Asian offices

Singapore: +65 3108 0989

Indonesia: 001 803 015 204 5867

e: info@researchbydesign-asia.com

www.researchbydesign-asia.com

An essential component
in obtaining valid and reliable
data in any research project
is an appropriately sized
research sample.

The Issue

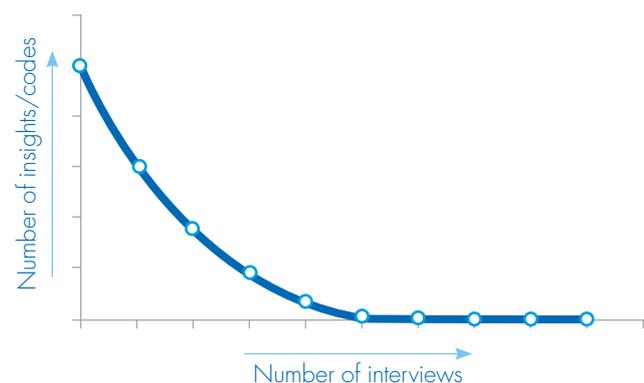
It is generally accepted that qualitative research requires fewer people than quantitative research (Atwood, 1948; Bursk, 1969; Curry, Nembhard & Bradley, 2009; M. Mason, 2010; Newman, 1957). This is because qualitative researchers are more concerned with *exploring and identifying* the full range of issues related to a phenomena, so they focus on the views of less people in greater depth (Curry et al, 2009). In fact some academics argue that a sample of one is enough to suit some types of qualitative research in some circumstances (Back, 2012; Becker, 2012; Brannen, 2012; Denzin, 2012; Passerini, 2012). In contrast, quantitative researchers are more concerned with *measuring* a particular phenomena, so they focus on the views of more people in much less depth (Newman, 1957).

Quantitative researchers can concur with each other on the establishment of appropriate sample sizes using calculations involving population size, margin of error and confidence intervals. However, qualitative researchers lack an equivalent means of objectivity. Instead, they rely on subjective evaluations regarding the quality of information obtained from interviews in building a convincing analytical narrative (J. Mason, 2012). When the qualitative researcher determines additional interviews no longer reveal fresh

insights, theoretical data saturation can be said to have occurred (Bryman, 2012; Gerson & Horowitz, 2002). It is at this stage of diminished returns that the researcher determines enough interviews have been conducted.

Figure 1 displays a typical pattern of data saturation across a qualitative sample. The majority of information comes from initial cases with less and less information being revealed by later cases and at some point no new information is observed.

Figure 1: Data saturation pattern in qualitative research



Unfortunately, data saturation can only be known after the fact, once qualitative interviews have been conducted and data has been analysed. Yet market research is typically planned, justified and costed ahead of time. This begs the question of how researchers can accurately estimate the point of data saturation without having to first conduct the research. Furthermore, how can researchers justify their decision making after a research project has concluded when questions around adequate sample size may arise? According to leading academic researchers, answers about qualitative sample size determinations and justifications arise from considering the following five factors.

1 SCOPE OF INVESTIGATION

Research scope is defined by a wide range of aspects including the nature of the research, what the research aims to do, as well as the type of research question(s) being asked. For example, research projects seeking to formulate a new theory of customer engagement or reinvent an existing market category are much broader in scope than a project wanting to understand high level themes associated with the appeal of an existing product or service.

Scope is also impacted by the complexity of the phenomena under investigation (Baker & Edwards, 2012). The more a project deals with phenomena that is multifaceted, ambiguous and/or intangible (eg: honesty and its relationship with other emotions), the broader the project scope becomes.

Charmaz (2012) also points out that the number of interviews required will be impacted by any previous or planned research. For example, a smaller sample size would be appropriate if results are strengthened by other qualitative methodology such as focus groups or other quantitative methodology.

Generally, projects with a broad scope require more qualitative interviews than projects with a narrow scope in order to fully understand the phenomena under investigation.

2 CHARACTERISTICS OF THE TARGET AUDIENCE

Target audiences can be made up of people who share many of the same characteristics; who have similar attitudes, experiences and behaviours in relation to the phenomenon under investigation. Conversely, they could also be made up of people with highly dissimilar characteristics who think and behave quite differently in relation to phenomenon of interest. Researchers refer to groups sharing similar characteristics as 'homogenous', whereas groups with dissimilar characteristics are 'heterogeneous'. The more homogenous the target audience, the sooner data saturation will occur because individual interviews are likely to overlap considerably in content (Newman, 1957; Bryman, 2012).

Another characteristic on which target audiences vary is the level of expertise held in relation to the domain of inquiry. Romney and colleagues (1986) say that provided participants possess a certain degree of expertise or knowledge on the research topic, smaller sample sizes can be justified. This is because each participant has a breadth and depth of both common knowledge and experience leading to data saturation occurring earlier on in interviews.

In short, to understand the full spectrum of cases inherent in a heterogeneous target audience, more interviews are needed than if the target audience is homogenous. Likewise, projects involving participants with low levels of expertise on the research topic require more qualitative interviews than projects involving participants with high levels of topic expertise.

3 EXPERTISE OF RESEARCHERS

In qualitative research, researchers themselves are a critical methodological instrument in the research process. Whilst being as impartial as possible they actively employ their knowledge and expertise in planning, questioning, hypothesising and analysing information gathered in interviews. As Warren (2001) notes, qualitative interviewers essentially become participants in the interview process. Therefore, the more expertise the researcher has, and the more familiar they are with the phenomena under investigation, the more effectively they can perform as a research instrument (Atwood, 1948).

Becker (2012) sees another benefit in using researchers with greater experience. He feels they are better able to judge ahead of time how many qualitative interviews are needed to evidence desired research objectives.

In short, more experienced researchers require fewer interviews to reach data saturation.



4 RESOURCES

An unlimited budget and time to conduct a research project may be every researcher's fantasy, but qualitative interviews are labour intensive and constraints relating to budget, time and accessing participants are a reality and impact sample size recommendations. Despite such constraints, J. Mason (2012) suggests it is still better to have a smaller number of interviews that are creatively and interpretively analysed, than to increase the sample size where the researcher may run the risk of running out of time and fail to analyse content properly.

Another means of countering constrained project resources involves increasing the number of moderators involved in data collection and analysis. This can often be more effective at exploring the domain of interest than using one moderator and increasing the number of interviews. This is because each interview is examined from differing perspectives, thus one interview becomes, in effect, two data sources (Denzin, 2012; Ezzy, 2002; Newman, 1957).

In brief, when project resources are constrained and multiple moderators can be involved, fewer qualitative interviews are needed to obtain data saturation.

5 RESEARCH AUDIENCE

Another important consideration in determining sample size centres on the opinions of the research audience – those who will be reading or judging the completed work (Baker & Edwards, 2012; Byrne, 2001). In market research this is likely to be clients who commission research or other key stakeholders involved in the project outcomes. Of course, sample size should not be determined on the desires of non-research professionals alone, but these audiences do play a significant role in whether research findings are accepted and acted upon. A client who is more familiar with large-scale quantitative samples may balk at a sample consisting of 12 qualitative interviews, regardless of evidence suggestive of data saturation, and may expect a higher number of interviews to be conducted.

Expert guidelines on qualitative sample size

Tabled below is a list of contemporary academic research experts providing numerical guidance on the necessary qualitative sample size to reach data saturation. In the majority of cases the experts tempered their guidelines by one or more of the five factors discussed previously. What this table shows is that views on the ideal sample size are inconsistent across experts. A few experts advocated for a wide range of cases, like Brannen (2012) who felt anywhere from 1 to 260 cases would be appropriate

depending upon the target audience, the scope of the project and the level of expertise held by each participant.

Other experts advocated for a narrow range of cases, like Guest and colleagues (2006) who believe data saturation typically occurs by the twelfth interview, with meta-themes becoming identifiable after the sixth interview provided the research scope is narrow and the target audience is relatively homogenous.

Table 1: Recommended sample size to achieve data saturation in qualitative interviews

No.	Expert(S)	Key Qualifiers
1+	Back (2012)	<ul style="list-style-type: none"> • Research scope/type of inquiry
1+	Becker (2012)	<ul style="list-style-type: none"> • Research scope, eg: one case is enough to establish something is possible
1+	Denzin (2012)	<ul style="list-style-type: none"> • Research scope/type of inquiry
1–100	Passerini (2012)	<ul style="list-style-type: none"> • Research scope/phenomenon under investigation
1–260	Brannen (2012)	<ul style="list-style-type: none"> • Target audience characteristics, eg: sample of one sufficient if case is unique and not comparable to others • Expertise of participants • Research scope (case study vs complex longitudinal)
4–5	Romney, Weller, & Batchelder (1986)	<ul style="list-style-type: none"> • Participants having high level of knowledge and expertise in relation to topic of inquiry
6–12	Guest, Bunce & Johnson (2006)	<ul style="list-style-type: none"> • Narrow research scope • Homogenous target audience
6–70	Miller (2012)	<ul style="list-style-type: none"> • Project resources • Research scope/nature of inquiry
12–60	Adler & Adler (2012)	<ul style="list-style-type: none"> • Number of discernible subgroups in target audience • Project resources
15	Baker & Edwards (2012)	<ul style="list-style-type: none"> • Participants 'information rich' in relation to topic of inquiry
20–30	Griffin & Hauser (1993)	<ul style="list-style-type: none"> • Homogenous target audience/segment • Assumes approximately 90% of needs identified
20–30	Curry, Nembhard & Bradley (2009)	<ul style="list-style-type: none"> • Research scope • Participants 'information rich' in relation to topic of inquiry
20–40	Warren (2002)	<ul style="list-style-type: none"> • Scope of research project • Characteristics of target audiences
30	M. Mason (2010)	<ul style="list-style-type: none"> • Based on the mean sample of a meta-analysis of 560 post graduate research studies

A final word

In conclusion, a definitive answer on the right qualitative sample size proves elusive. The number of interviews it takes to reach data saturation depends on a variety of factors involving scope, target audience, researchers, resourcing and the research audience.

Leading academics recommend more qualitative interviews are needed when projects are broad in scope, deal with heterogeneous populations, involve domains less familiar to the researcher and participants, are supported by sufficient resources, or when buyers and research stakeholders expect it. On the other hand, when projects are limited in scope, deal with homogenous populations, involve domains highly familiar to the researcher and participants, are limited in resources, or when buyers and stakeholders expect it, fewer qualitative interviews are needed.

Since individual market research projects are likely to be a unique combination of the five factors discussed, determining whether more or less interviews are needed on any given project will not be a straightforward matter. However, it is hoped that the information presented here offers an objective means for market research professionals to make such determinations and assists them in justifying their decisions to external parties.

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About the Author...

Donna Bonde is a market research professional with a background in psychology. Her academic research experience involved managing a multi-phased research program at James Cook University in Australia where she investigated how to measure and change people's attitudes more effectively. She was also a member of the JCU teaching staff having developed, lectured or tutored hundreds of undergraduate classes in psychology. Currently Donna assists business clients conduct qualitative research with her own consumer research consultancy called Rapture Consulting based in Brisbane, Australia.

For further information or to discuss any issues that may be solved through market research contact:

Research by Design

Australian office

m: +61 410 331 234

t: +61 7 3342 7792

e: info@researchbydesign.com.au

www.researchbydesign.com.au

Asian offices

Singapore: +65 3108 0989

Indonesia: 001 803 015 204 5867

e: info@researchbydesign-asia.com

www.researchbydesign-asia.com

