The power of small samples in qualitative research

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The conundrum

• How big, or small should a sample be in qualitative research
Four questions

• Why are samples in qualitative research that look big actually very small?
• If samples in qualitative research are really as small as I suggest, do they have to be?
• How big should a qualitative sample be for your dissertation?
• What can we do with the fragments of insight we collect through doing qualitative research?
Why are samples in qualitative research that look big actually very small?

• Mike Savage, Gaynor Bagnall, and Brian Longhurst ‘s study of globalisation and belonging has a sample of 186 participants, selected from four areas of Manchester. This sample size follows a study by Alan Wolf of middle class identity in the US with a sample size of 200.
Sample size used in study by Savage et al. (2005)

<table>
<thead>
<tr>
<th>Place</th>
<th>Sample size</th>
<th>Population(^1)</th>
<th>% population sampled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilmslow</td>
<td>44</td>
<td>30326</td>
<td>0.14%</td>
</tr>
<tr>
<td>Cheadle</td>
<td>43</td>
<td>12158</td>
<td>0.35%</td>
</tr>
<tr>
<td>Chorlton</td>
<td>47</td>
<td>13512</td>
<td>0.34%</td>
</tr>
<tr>
<td>Ramsbottom</td>
<td>47</td>
<td>14635</td>
<td>0.32%</td>
</tr>
</tbody>
</table>

\(^1\) source: 2001 Census Profile Data

Two observations: First, the sample sizes are very small. And secondly, the choice of sample size is informed by quite a different logic to that of well described quantitative sampling strategies (Bowley, 1906; Gorard, 2007).
If samples in qualitative research are really as small as I suggest, do they have to be?

• In short, YES, for two inter-related reasons.
  – First, we must consider the sheer bulk of data generated. Savage and colleagues collected 1.5 million words of transcript from their 186 participants.
  – Associated with this we are not interested to collect ‘data points’ but elaborations of social processes and interactions. We are seeking out ‘information richness’, to use MQ Patton’s (2002) phrase.
How big should a qualitative sample be?

<table>
<thead>
<tr>
<th>Bertaux and Bertaux-Wiame (1981) Analytic induction</th>
<th>15-30</th>
<th>Depends on the variety of structural experience – based on research with bakers (homogeneous group) bakery owners (heterogeneous group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guest et al. (2006:79) Grounded theory</td>
<td>12</td>
<td>‘For most research enterprises … in which the aim is to understand common perceptions and experiences among a group of relatively homogeneous individuals, twelve interviews should suffice.’</td>
</tr>
</tbody>
</table>
How big should a qualitative sample be (for your dissertation)?

<table>
<thead>
<tr>
<th>Adler and Adler in Baker and Edwards (2012)</th>
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</thead>
<tbody>
<tr>
<td>30</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>20</td>
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</tbody>
</table>
Why is 30 ‘acceptable to external powers’?

‘Consequently I believe that the tables at the end of the present paper may be used in estimating the degree of certainty arrived at by the mean of a few experiments ... where the distributions are as a rule of a ‘cocked hat’ type and so sufficiently nearly normal’ (Student, 1908:19)
OK, if $n=30$ may be pseudo-quantitative nonsense, then how about 12 or 20?

• These numbers are not helpful either. Adler and Adler do seem to be trying to work out the resource issue.

• There numbers are guided by their experience of doing exploratory, inductive research.

• And consideration of what is considered adequate by Institutional Review Boards.
Your dissertation, review (marking), and sample size

A given—you are severely constrained by time, your capacity to recruit, collect, transcribe, and analyse insight, and the word-length of your dissertation.

• Yet, you want to do good and interesting research that is rigorous and valid.
Important issues to consider:

1. Who or what do I need to address my research question?
2. Where can I find *information richness*?
3. Based on this work, what cases shall I choose?
4. What are the implications of these choices for the claims I can make from my research?
Small $n$ studies (Xmark=76%, $n=3$)

Four upper-middle class families known to the student, with children aged <6yrs, six meals recorded to learn about meal-time interaction.

Three experts on disability and abortion interviewed on the telephone, a chief executive of a voluntary organisation advising disabled women, a disability activist, and an academic who has written extensively on the issues investigated.

Three sisters from the same Muslim family in Wales, two wore hijab, one didn’t, three in-depth one-to-one interviews
What can we do with the *fragments* of insight we collect through doing qualitative research?

- As we have seen from Mike Savage and colleagues’ work, even apparently big samples are really very, very small.
- They provide *fragments*, samples of 1 or fewer.
- Each of these fragments is a rich elaboration of experiences. They are not single data points, but detailed stories that elaborate on events and experience.
- Your job is their interpretation and explanation.
Conclusion

• It is not the number of cases that matters, it is what we do with them that counts. Sample size is frequently used to determine the quality of qualitative (and quantitative) research design, as Emma Uprichard (2013: 7) observes. But this criteria should be rendered meaningless ‘without further explanation as to what, how and why [it] may matter in the first place.’
In planning dissertation research

• You have resource constraints
• You want to say something useful and interesting, and you want to show off your research skills
• Choose cases carefully
• It is not the size of your sample that matters, but what you do with it that counts
• How big, or small should a sample be in qualitative research?—You tell me a convincing tale that relates what you claim to who or what you investigated!
References

• Student (1908). The probable error of the mean. *Biometrika*, 6(1), 1-25.