

Focus Groups – What are They?

I.G. CHESTNUTT AND K.F. ROBSON

Abstract: The use of focus groups has become common in many spheres of research, including dental research. This article provides an update on the history of focus groups, defines focus groups in the context of academic research and highlights their possible uses. Practical advice is provided on the conduct of focus groups and ethical considerations are discussed.

Dent Update 2001; 28: 189-192

Clinical Relevance: In addition to describing recent examples of the use of focus groups in dentistry, this article will aid appraisal of reports of focus group research and provide a basic understanding of the processes involved for those considering using this research methodology.

There can be few readers who are unfamiliar with the concept of a 'focus group': it seems that the term occurs almost daily in the print and broadcast media. This situation is largely due to the use of focus groups by the major political parties. However, the concept of the focus group is frequently abused and there is a lack of understanding about the general principles underlying this academic research method. This paper aims to define focus groups, to outline some basic principles underlying focus group methodology and to provide some recent examples of their use in dentistry.

HISTORY OF FOCUS GROUP METHODOLOGY

Focus groups as they are now known

I.G. Chestnutt, BDS, MPH, PhD, FDS (DPH) RCS (Edin.), DDPH RCS (Eng.), Senior Lecturer and Honorary Consultant in Dental Public Health, and **K.F. Robson**, BSc, MSc, PhD, Lecturer in Behavioural Sciences, Dental Public Health Unit, University of Wales College of Medicine, Cardiff.

have their origins in the 1940s¹ and were first used to determine audience responses to live radio broadcasts. Although developed in an academic setting, over the next four decades their use was largely limited to market research, testing consumer responses to products and services, either existing or proposed. In the early 1980s, the potential for wider use as a qualitative research method in the social sciences was recognized and focus groups are now commonly used in academic research, including dental research. Their use in commercial circles continues – for example, it has been estimated that businesses in the United States are purchasing focus group research worth over \$1 billion per year.² Focus groups have found favour with political parties and other groups keen to be apprised of public opinion.

WHAT IS A FOCUS GROUP?

As the name implies, a focus group is a collection of individuals who are brought together to discuss a defined (or focused)

topic or group of related topics. However, a focus group is not simply a grouping of people who happen to be available, discussing topics in a haphazard manner: the organization, conduct, analysis and reporting of a focus group discussion has to be thought out and planned as carefully as any other piece of scientific research. In contrast to other methods of group interviewing, an essential element of focus group methodology is the interaction between group members, building up ideas and the concepts discussed.

Central to the focus group concept is the nature or character of the data generated. Krippendorff³ has defined two types of data:

- *Emic data* arise in a spontaneous or natural form, generated at will by the participants of the group.
- *Etic data* are the researchers' imposed view of the situation; their preconceptions.

Focus groups are designed particularly to encourage the generation of emic data (ideas, views, concepts) from the interaction of the participants and with minimal influence from the research team. As such, they are particularly useful for exploratory research when relatively little is known about the subject of interest.

USES OF FOCUS GROUPS

Given their ability to generate background information or provide novel ideas, focus groups are frequently used as the first stage in a research programme. The situations in which focus groups are most commonly used have been outlined by

Stewart and Shamdasani⁴ as:

- obtaining background information about a topic of interest;
- generating research hypotheses that can be subject to further research and tested using more quantitative approaches;
- stimulating new ideas and creative concepts;
- evaluating perceptions of a programme, service or product;
- learning how respondents talk about the subject of interest. This can aid the design of questionnaires, survey instruments or other research tools that could be employed in more quantitative research;
- interpreting previously obtained results.

As an example and by way of explanation, suppose a researcher was interested in evaluating the public's view on access to dental services. Generation of a questionnaire to be given to the public using input only from the research team risks missing details that are important from the public's perspective. Focus group discussions before designing the questionnaire will enhance its quality and relevance by allowing issues not considered by the research team to be incorporated. Furthermore, focus group discussions may also give the researcher insight into the appropriate categories, priorities and vocabulary of these issues as they relate to the research population.

Focus groups can also be used effectively after the questionnaire has been completed to explore findings in greater depth, explain interpretations and understand apparent contradictions in the data.

Finally, although focus groups are often used as part of a multi-method design, there is no *a priori* reason to assume that they need validation by other methods.⁵

CONDUCTING FOCUS GROUPS

Practical considerations in conducting focus groups include:

- selection of participants;
- where the discussions should take place;
- the role of the moderator;
- data recording;
- data analysis; and
- presentation of the results.

Selection of Participants

There are two important considerations in selecting participants: their relevance to the topic being researched and group dynamics. The options for selection are:

- to recruit a group of strangers who share characteristics relevant to the research that will determine them as a group; or
- to recruit a pre-existing group, such as classmates or a work team, who will have a shared experience to draw on.

However, it should be remembered that members of an existing group will have established relationships, which may both affect the responses and be affected by things said in the focus group.

While participants should be of relevance to the topic under investigation, they are not representative of a particular population or subgroup and typically a *convenience sample* is used. It is, however, necessary to give consideration to group dynamics (how participants interact) in selecting participants.

The fields of social psychology – and particularly the subfield of group dynamics – provides a substantial body of research as to how people behave and interact within groups. The selection and recruitment of participants for a focus group is a critical task. For example, in a group containing both managers and workers, the latter may feel inhibited and not fully express their opinions, or conversely may exploit the group situation to air collective grievances. In working with such a group, a combination of groups containing managers only, workers only and a mixture of both is likely to yield a broader spectrum of information. In a recent study of the perceptions of adolescents of oral health, single-sex and mixed-sex

groups were used to encourage discussions of aesthetics and attractiveness.⁶

Size of Group

The number of individuals in a focus group discussion is important. A group that contains too few people will not achieve 'critical mass', running the risk of missing the opportunity for exchange of ideas between members and leading to insufficient interaction or the failure to challenge the views of a dominant individual. Too many participants makes management of the discussion difficult, and quieter members of the group may be deterred from sharing their views. A large group also makes transcribing the data troublesome. Ideally, groups should consist of between six and eight participants, although groups have been reported as small as three and as large as fourteen.

The validity of focus group data is not dependent on the number of participants or number of groups conducted. The number in groups will depend on:

- the comparisons the researchers may seek to make (e.g. by sex or region);
- considerations of productive group dynamics (whether single-sex groups may be appropriate for a sensitive topic);
- practical considerations relating to the cost and time involved in recruiting, conducting, transcribing and analysing focus group data.

How Long Should the Group Discussion Last?

Researchers should specify to the participants in advance how long the focus groups should take, and must stick to this schedule out of courtesy. The time required will vary between projects and research groups – dentists, for example, may have greater time constraints than other groups. Whether participants are receiving payment or not will also affect how long they can reasonably be asked to stay. However, generally speaking, the researcher should schedule a time slot of 1–2 hours, and this must include time for introductions, equipment testing and debriefing as well as the discussion itself.

It is important that all participants are able to attend for the whole session, because group dynamics will change as people leave.

Where Should the Focus Group be Held?

In the USA, focus groups are often held in professional facilities, complete with a separate room with viewing facilities where the sponsor of the work can observe the group without interfering. However, in a non-commercial setting, much less formal surroundings are suitable – such as a staff common room or community centre meeting room. An important element in choosing a location is an environment conducive to discussion and conversation. Thus a relatively informal atmosphere, free from interruption by callers, telephones (fixed and mobile!), or background noise that will impair the quality of the audio tape is required. The choice of venue will depend on the participants (e.g. a focus group involving elderly people would not welcome a room above ground floor level). The room should also be furnished appropriately. Participants should not sit in rows, or around long tables, but in an even circular formation (with or without a table), which is more conducive to equitable discussion.

The Role of the Moderator

It may be appropriate to recruit a moderator who is separate from the research design team to conduct the focus group: principal researchers on a project can be too expert and inadvertently lead the discussion in particular directions, or may not have characteristics that best encourage open discussion. Pugsley⁵ decided that her focus groups on sex education with sixth-form students should be moderated by a researcher closer to the age of the participants to ease any discomfort with the discussion. Having a separate moderator also allows the researcher to observe the group and record valuable non-verbal data that the moderator may be too involved in the discussion to note.

The role of the moderator, as a non-

participant, is to facilitate the group, keeping the discussion on track and ensuring it covers the topic or topics of interest. A focus group moderator who is well trained in group dynamics and interview skills has an important role in encouraging contributions from all members of the group.

The Interview Guide

To ensure that the group is not distracted from the purpose of the research, it is essential that the moderator has an interview guide. Drawn up by the research team before the discussion group or groups are held, the guide is designed as an *aide memoire* to ensure all subject areas of interest are covered; it also acts as a prompt to discussion. It is definitely *not* a questionnaire, should contain general points only and should not be overly structured or directive. In the guide, discussion points should not be listed as questions, to prevent them being repeated verbatim. A good moderator should be able to weave the questions in naturally as part of the discussion.

It is good practice to begin the discussion with a general question and then narrow down as the discussion proceeds. Similarly, important topics should be raised relatively near the beginning of the discussion, in case they are sidelined by other issues raised by the group. In facilitating the discussion the moderator needs to strike a balance between what is important to the members of the group and the research agenda. It is also very important to allow individuals to respond in their own words using their own categorizations and connections.

Discussion can also be aided by the use of props. For example, a can of cola, a packet of sugar-free chewing gum and a toothbrush, produced by the moderator in the course of a discussion of the prevention of dental caries, helped stimulate debate.⁶

Data Recording

Conventionally, the discussion is recorded on audio-tape, although in commercial and sophisticated academic settings video recording has also been carried out. Recording of the discussion is important,

and it is vital that all participants can be clearly heard and recognized. Getting participants to introduce themselves ensures that their contribution to the discussion can be noted. In exchanges between individuals it is also helpful to annotate the transcription to indicate who is speaking. This can be facilitated by a moderator's assistant making contemporaneous notes. If the workings of the group are only audio recorded, useful information on non-verbal communication and group interaction is lost, but this can be offset by an assistant making notes to aid later interpretation of the recorded data, and their presence may be less obtrusive and intrusive than having video equipment in the room.

Data Analysis

The first step in analysing the focus group data is to produce a transcription of the audio recording (1 hour of audio-taped focus group discussion takes approximately 8 hours to transcribe, and produces over 100 pages of transcript). In academic research, tapes must be transcribed to avoid the risk of selective and superficial analysis. Discussions may be messy and chaotic, but should be transcribed and analysed as they were spoken.⁷ If attempts are made to convert the spoken word into grammatical written English, potentially useful information contained in half-finished sentences, interrupted thought processes or even expletives may be lost.

To an extent, the analysis employed depends on the use for the research findings. It may be that a simple descriptive narrative highlighting new findings may be sufficient. There are a number of approaches to the rigorous analysis of qualitative data,⁸⁻¹⁰ a comprehensive review of which is beyond the scope of this paper. Whichever approach is adopted, analysis must always be conducted in a systematic and rigorous way. The volume and complexity of data produced from focus group research can be efficiently handled using one of several qualitative data-analysis software packages, such as NUD*IST, or Atlas-ti. Generally, such software allows the coding of text according to meanings

and themes, the retrieval of instances of these codes and the building of relationships between codes in the development of theories about the data.¹¹

A great deal of the scepticism about the value of focus groups probably arises from the perception that the data obtained are subjective and difficult to interpret. Data extraction by more than one researcher can help overcome bias. It should be remembered that data derived using this methodology are not intended to be definitive or to produce projectable statistical results. Convention dictates that findings of focus groups are confirmed using more quantitative approaches. Thus, returning to the example of a study on access to dental services, a questionnaire developed following focus group discussions could be administered to a larger and more representative sample of the population and appropriate, quantitative statistical analysis employed. However, focus group research has more than one use – it can be used either as a stand-alone method, or to validate data using other research methodology as a pilot exercise or as a complementary data source.

Reporting the Results

It is important that the written accounts of any qualitative research provide a clear account of the processes of data collection and analysis so that readers can follow and judge the conclusions drawn by the researchers. Thus, reports need to contain sufficient extracts of data to allow the reader to judge if interpretations put forward are supported, and this often means that reports of qualitative research are longer, as the data are difficult to summarize.¹² When speech is reported from focus groups it can be edited to make it more readable,⁷ but not to the extent that it distorts the original data.

THE ETHICS OF FOCUS GROUP RESEARCH

As with all research, ethical considerations are important. Participants should be fully informed as to the purpose and expectations of the

discussion and it is good practice not to put undue pressure on participants to speak. At the outset, moderators need to confirm that participants are happy to share their experiences, should set out the ground rules and emphasize that anything participants might hear during the meeting should be kept confidential. Any data reported or quotations should be anonymized. Sometimes participants will leave a discussion in a distressed state, possibly because they have disclosed sensitive information about themselves or have felt harshly criticized. Although the researcher ultimately has some responsibility for such reactions, he or she must not do anything beyond lend a sympathetic ear and suggest appropriate counselling services if necessary. It is also important to try to avoid things being said which subsequently may damage working relationships or lead to recriminations when the research is over.

THE USE OF FOCUS GROUPS IN DENTAL RESEARCH

Focus group methodology is increasingly being used in dental research. A diverse range of topics have been investigated, including the following:

- the perceptions of parents and head teachers of dental screening;¹³
- the views of adolescents on orthodontic treatment;¹⁴
- the attitude of males to marketing communications from dental service providers;¹⁵
- public perceptions of water fluoridation;¹⁶
- the attitudes of dental staff to the provision of dental care for underprivileged children.¹⁷

CONCLUSIONS

Applied appropriately, data from focus group discussions can provide valuable information, particularly in subject areas where investigators do not have an adequate understanding of all potential influencing factors. This article has

summarized the key features of focus group methodology and aimed to provide readers with a basic understanding of the principles and practice of this research methodology. However, before embarking on a research project using focus groups, readers should study some of the excellent texts now available on the subject^{4,7,9} and seek assistance from colleagues already experienced in the technique.

REFERENCES

1. Merton RK. The focussed interview. *Am J Sociol* 1946; **51**: 541–557.
2. Morgan DL. *The Focus Group Guidebook; Focus Group Kit 1*. Thousand Oaks: Sage, 1998.
3. Krippendorff K. *Content Analysis: An Introduction to its Methodology*. Beverly Hills, CA: Sage, 1980.
4. Stewart DW, Shamdasani PN. *Focus Groups: Theory and Practice*. Newbury Park: Sage, 1990.
5. Pugsley L. Focus groups, young people and sex education. In: Pilcher J, Coffey A, eds. *Gender and Qualitative Research*. Aldershot: Avebury, 1996; pp.114–130.
6. Chestnutt IG, Taylor MM. Intergenerational influences on oral health and use of dental services. *J Dent Res*, 2000; **79**: 552.
7. Bloor M, Frankland J, Thomas M, Robson K. *Focus Groups in Social Research*. London: Sage, 2000.
8. Coffey A, Atkinson P. *Making Sense of Qualitative Data*. London: Sage, 1996.
9. Miles MB, Huberman AM. *Qualitative Data Analysis. An Expanded Sourcebook*. London: Sage, 1994.
10. Lofland J, Lofland LH. *Analyzing Social Settings. A Guide to Qualitative Observation and Analysis*. London: Wadsworth, 1995.
11. Richards TJ, Richards L. Using computers in qualitative research. In: Denzin NK, Lincoln YS, eds. *Handbook of Qualitative Research*. London: Sage, 1994; pp.445–462.
12. Mays M, Pope C. Quality in qualitative research. In: *Qualitative Research in Health Care*. London: BMJ Books, 1999; pp.10–19.
13. Evans DJ, Hillman L, Nunn J. Views of parents and head teachers on the school dental screening service in a north of England city. *Community Dent Health* 1999; **16**: 26–32.
14. Bennett ME, Tulloch JF. Understanding orthodontic treatment satisfaction from the patients' perspective: a qualitative approach. *Clin Orthod Res* 1999; **2**: 53–61.
15. Ashford RA. An investigation of male attitudes toward marketing communications from dental service providers. *Br Dent J* 1998; **184**: 235–238.
16. Hastings GB, Hughes K, Lawther S, Lowry RJ. The role of the public in water fluoridation: public health champions or anti-fluoridation freedom fighters? *Br Dent J* 1998; **184**: 39–41.
17. Lam M, Riedy CA, Milgrom P. Improving access for Medicaid-insured children: focus on front-office personnel. *J Am Dent Assoc* 1999; **130**: 365–373.